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EDITED BY

Dr. U. RAMA RAU & U. KRISHNA RAU, M.B., B.S.

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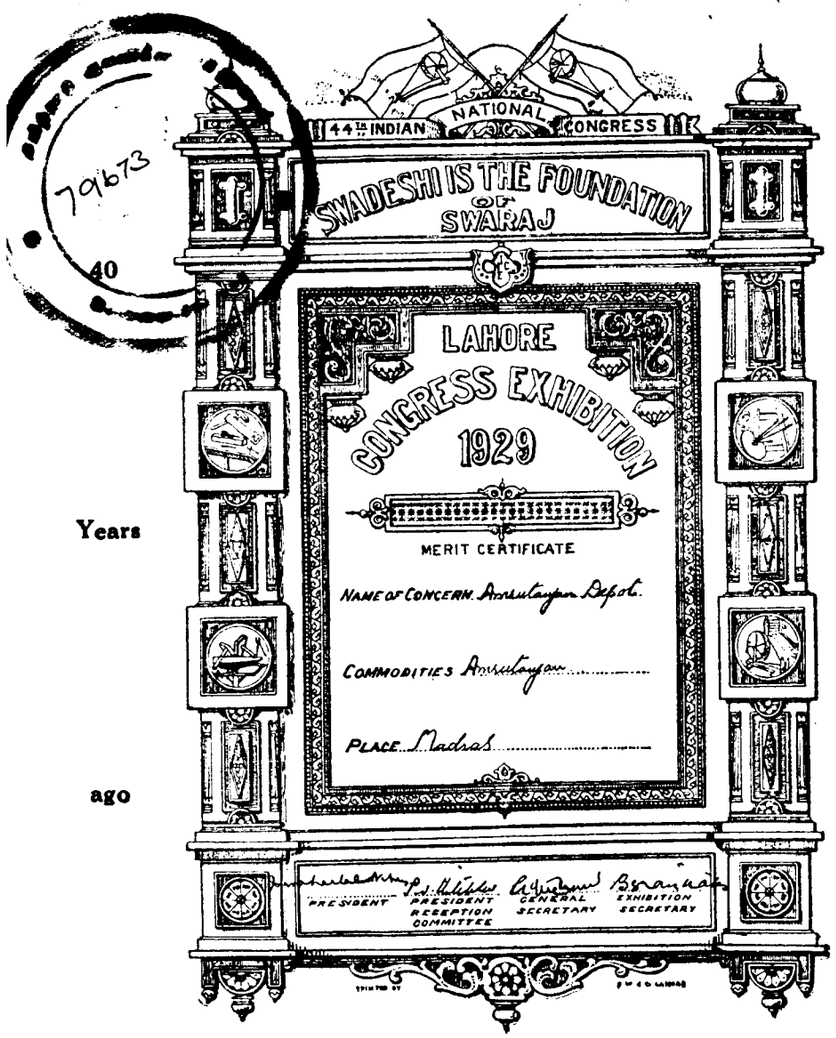

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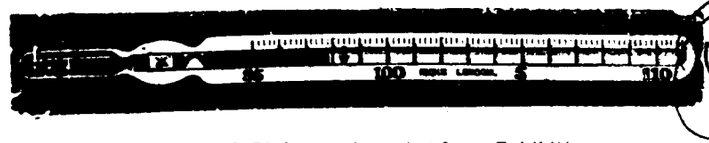

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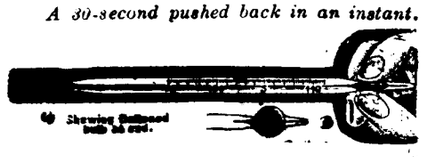

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Original articles

HISTORY OF SYPHILIS IN INDIA*

BY

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CIVIL SURGEON, H.E.H. THE NIZAM'S MEDICAL SERVCE.

History of syphilis in India can be traced from the old documents. The Ayurveda, or the medical precepts of the venerable Dhanvantri collected by his disciple Sushruta, contains several curious passages which show that the disease was an ancient one. The word used at that time probably was "Upadansa" and this Sanskrit word probably means the syphilitic virus. The book gives, not only the description of the disease, but also the therapeutic measures employed. According to Hessler, Ayurveda dates back at least a thousand years B. C., as the name Sushruta was celebrated among the Hindoos many centuries before the Christian era.

Under the heading 'Nidanasthana' there is a chapter which treats of ulcer. Here, the author begins by explaining that these

*Specially contributed to the Antiseptic.

ulcers are caused by bad nutrition, or by contact with woman in sexual act, and the description runs as follows :—

"*Lingarsas (Figwarts or condylomatous growths about the genitals)*:— The deranged and aggravated Vayu etc., finding lodgment in the genitals, vitiate the local flesh and blood, giving rise to an itching sensation in affected localities. The parts become ulcerated (through constant scratching) and the ulcers become studded with sprout-like vegetations of flesh (warts), which exude a kind of slimy, bloody discharge. These growths, excrescences generally appear on the inner margin, or on the surface of the glans penis in the form of soft, slender vegetations of skin, resembling the hairs of a small brush (Kurchaka). These vegetations ultimately tend to destroy the penis and the reproductive faculty of the patient."

Bhagarsas :—" The deranged Vayu etc. of the body, lodged in the vaginal region of a woman, gives rise to similar crops of soft polypi in the passage. They may crop up isolated at the outset, and (by coalescing) may assume the shape of a mushroom or an umbrella, secreting a flow of slimy, foul smelling blood.

The deranged Vayu, etc. may further take an upward course, and findi: .' a lodgment in the ears, nose, mouth and eyes may produce similar warts in those localities. Warts, which crop up inside the cavities of the ears, may bring on ear-ache, dumbness, and a foul discharge from those organs, while those (cysts) cropping up in the eyes will obstruct the movement of the eye-lids, giving rise to pain and a local secretion and ultimately destroy the eye-sight. Similarly, such growths in the nostrils produce catarrh, excessive sneezing, shortness of breath, headache, nasal speech and the complaint known as Putinasya. Such vegetations cropping up in and about the lips, palate or the larynx, tend to make the speech confused and indistinct. When appearing in the mouth, they impair the faculty of taste, and diseases which affect the cavity of the mouth follow. The excited Vyana Vayu united with the aggravated Kapham, produces a kind of hard papillomatous growths on the skin (about the anus) which are called the Charmakilas (papillomata) 15."

This text clearly reads like a condensation of the symptoms of the secondary period. The Vayu described therein was nothing but a virus, which takes its point of departure from the penis, where it manifests itself as a local itching. From here the text leads us to the upper regions and describes the mucous patches on the mouth, ulcers on the eye and ears. Probably this means the tertiary lesions where the depressed nose and the perforation of the palate are so well described.

During this time the Hindoos had also noted the venereal swellings, which they termed Upadansa in a general way. This swelling they found on persons addicted to sexual excess and again that this swelling could be contracted from a woman having no apparent disease. This is just the thing seen now-a-days; the lesions are not always plain; a woman may serve as a transmitting agent—that is to say, contain the virus of a syphilitic, and transmit the disease to one or several before she is contaminated. Sushruta explains that venereal symptoms owe their variety to different humours, and according to this theory when all humours act, there are seen the sores on the penis. In his succeeding chapter XIII, he calls the disease Kshudra-Roga, (literary means minor ailments) and describes it thus :—

"The shameful disease numbers forty—the round ulcer, the prominent pustule, the stone-like excrescence,.....the alterations of the nails, the scales on the head, the bubo,—the ulceration on the feet, the alopecia, the papules of the youth, the stricture of the anus....."

Sushruta describes all these phenomena as appertaining to one general disease and thus ends this long chapter.

How did syphilis come to India? The date of the birth of this disease is in itself a controverted question. There is now-a-days a tendency to trace its origin to Africa; but others concede that it has its ancient origin in China because a medical treatise exists in China named Nuei-King and some secular documents edited by Emperor Hoangty who lived in 2637 B.C. If this disease existed in such a prehistoric time, probably it must have been carried all over the world, but for want of manuscripts, its history has slumbered. The present day excavations with the help of anthropology has lent its powerful support to the partisans of the ancient origin by demonstrating upon the prehistoric skeletons the undeniable traces of syphilitic alterations. Parrot and others have traced skeletons in Peru before the Spaniards discovered America. But how are these proofs superior to those derived from written documents? From a consideration of simple presumptions, to discussion of texts, to interpretation of terms, and the accounts of authors, it occurs to me that they are all opposed to one another. Syphilis existed in India in prehistoric times and if as every thing would lead us to suppose, it existed equally in other parts of the world, than we are justified in considering it as one of the most ancient diseases of man, but to trace the origin from the past records of the world or with the help of anthropology to write the history of syphilis is, so to speak, to trace the history of humanity.

BALDNESS
ITS CAUSES, PREVENTION AND TREATMENT*

BY

U. VENKATA RAO

Medical Practitioner, "Sudarsana" Thambu Chetty Street, Madras.

A brief history of the hair, its anatomy and physiology.—The whole body is covered with hair to a greater or less extent and in the scalp the hairs are thicker and more abundant with deeper roots and larger supply of glands, nerves and blood-vessels. In infants the scalp covering is very thin having downy hairs, the glands open externally and the blood-vessels are in a dilated state. Hence the child's scalp is more exposed to infection than the adults and special care must be taken to prevent the hair of the children infected by parasites. In the adult the hair is slanty, oblique, the connective tissue of the scalp is thicker and the sweat glands are more than the sebaceous glands. Women's scalp has deeper hair follicles and a greater supply of sebaceous glands than men's. In old age the skin of the scalp is thicker, blood vessels are few and the glands degenerate and shrink. It is the blood-stream which nourishes the hair and anything that interferes with the normal feeding of the hair from the blood-stream causes disease. Thus the hair is liable to degenerate from within by diseases of the blood or nervous system and from without by parasites and disease germs.

Uses of Hair.—The hair is the natural means of pretection and defence of the head from the heat and humidity of the atmosphere ; it is an organ of touch ; it protects the head against blows and being a non-conductor of heat it preserves the heat of the body. The eyebrows act as a defence to the eye by turning the perspiration of the brow to the outside of the eye socket and thus prevents its access to the eye. So also the eyelashes, the hairs of the nostril and ears prevent dust, insects and other foreign bodies entering the organs. The hair also improves the personal appearance, softens the hardness of the features and also covers blemishes. The parts covered by hair are more sensitive than those that are without it.

Anatomy of the hair.—100 parts of dry hair have 5/10 to 7/10 parts of incombustible substance containing 23 p.c. alkaline sulphate, 2 to 10 p.c. oxide of iron and 40 p.c. Silica. Dark hair contains more iron. The hair substance contains carbon 50,

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hydrogen 6·36, nitrogen 17·14, oxygen 20·85 and sulphur ·5 and also a certain quantity of oily substance varying in colour as the hair. Fair hair contains less carbon and hydrogen and more oxygen and sulphur ; brown hair has more carbon, less oxygen and sulphur, while the white hair of the aged contains more phosphate of lime.

In each follicle one or more hairs exist either fully developed or in an immature state, The sebaceous glands open directly on the surface of the epidermis or on the follicle. The sweat glands are deep down. The blood and nerve supply is furnished to each individual part. The hair is a thread-like horny structure like nail, but soft and pliable varying in length from an inch to a yard or more and in diameter 0·15 to 0·32 m.m. In form it is round, oval, kidney, bayonet-shaped or flat. The colour is white, blonde, red, brown or black. It consists of bulb, hair root, hair shaft and point and the coverings are medulla, cortex and cuticle. The bulb is cup-shaped and fits over the upperpart of the papilla like a ball and socket joint. The hair root includes the bulb and extends from the bottom of the follicle to its mouth at the level of the skin. The hair shaft is the portion of the hair which projects beyond the skin and terminates as a point which again tapers into a needle-like end. The hair has its papilla ; the Sebaceous gland has its supply of blood-vessels in connection with that of the follicle and the sweat glands have a circulation all their own. "The relation with the adipose cellular tissue, the connective with the vasomotor nervous system which controls the blood-supply, explain those organic or visceral reactions, either diffuse or localizsd, be it by the influence direct from the vasomotor nervous system upon the papilla or by indirect action influencing the quantity or quality of the excretion or the secretion of the Sebaceous or Sudoriferous glands.

The Papilla is like a nipple or button placed at the bottom of the root hole or follicle. Its function is to give birth to and develop young hairs and creating cells for the different layers of the hair. The papilla also destroys and gets rid of the hair that has lived its life. Through its blood and nerve supply the papilla is the connecting link of the general circulation, nervous system and the hair. "Its relation to the nerves explains the role that hair plays as an organ of protection and defence in man and also the development of the hair at the same period as the mammary gland and generative organs changing of the skin and its dependant parts, the loss of hair during pregnancy and baldness in old age. Hence also the reaction upon the hair of all nervous troubles and maladies, of 'goose skin' and cold sweats in fright, hair on

end in horror, loss of hair and blanching following quickly upon mental emotion or terrible wounds ".

The sebaceous gland is separated from the sweat gland by the erector pili muscle, which straightens the hair and thereby compresses the sebaceous gland releasing the oily fluid which it contains. Also being attached to the shaft of the hair it forms a compressible bag lining the wall unconnected with the hair, so that when the muscle contracts the hair is bent and the gland compressed, facilitating the flow of sebum and perspiration,

Types of Hair.—(1) Soft long hair formed on the head, beard, pubes and the axilla.

(2) short stiff hair—formed on the eyebrows, eyelashes, nostrils and ears.

(3) lanugo hair or down formed on the surface of the body.

Hair centres or whorls.—Wilson describes as follows :—" The hairs of the head radiate from the crown with a gentle sweep, behind towards the left and in front towards the right. The centre of the forehead is a median vertical line from which the hair passes to the right and left, the lower border of the growth forming the upper half of the eye brows."

Anatomical peculiarities of the hair.—Two or three follicles may send their hairs through a single month.

Twin Hair—Two hairs in one follicle.

Bayonet Hairs.—A spindle shaped thickening of the hair-shaft within a short distance of the point. Common in the scalp of persons beginning to get bald.

Club Hair-Bed Hair or Beethaar.—This is secondary to a papillary hair and all hairs go through this stage before they fall.

Shedding of hair.—The hair loosens from its papilla and mounts up to the middle of follicle regions, where for a time it remains attached to the sides of the follicle and grows. The lower part of the follicle collapses and the papilla grows smaller. The lower end of the old hair becomes broom-like and knob-shaped. The hair then easily falls out.

Colour of the hair.—Depends on diffused pigment, granular pigment, air contents and the superficial character of the hair. The cortex or the outer covering of the hair is formed by rows of cells resembling tiles. Pigment or colouring matter is produced in the corium. In hair of lighter colour, the cells of the cortex have no pigment, whereas in the cortical cells of dark hair, yellow to brownish black pigment is found.

Length of life and growth of hair.—Each hair has it own length of life. The life time of eyelashes is about 130 days and that of

an hair in the human head is from 1 to 6 years. Hair grows faster by day than by night and quicker in warm weather than in cold. Shaving and cutting the hair stimulates its growth and makes it coarser. " The hair of a young woman grows at the rate of about ¾ inch a month. When it has reached the length of about 10 to 14 inches its rate of growth is reduced one-half and towards the end of its normal life its growth is scarcely perceptible."

Number of hair.—The average number of hairs to the square inch is about 1000 in the scalp and there are 80,000 to 150,000 hairs on the head according to the character of the hair.

The curliness of the hair is influenced by the moisture in the atmosphere as the hair is very hygroscopic. The hair is elastic and can be stretched from ⅕ to ⅓ its normal length. A healthy adult hair is strong enough to sustain a weight of two to four ounces without breaking.

Malformation of the hair.—The arrest of development comprises downy hair, curved hair, atrophied hair, canites and trichoptilosis.

Lanugo or downy hair.—The hair is reduced in all its parts and in pigmentation. Found in congenital or acquired baldness temporary or permanent baldness due to faulty nutrition.

Curved or crooked hair. Found in ichthyosis with swelling and knots.

Cavities—white hair. Here the pigment disappears or found here and there enclosed in migratory leucocytes.

Trichoptilosis. The hair is bifurcated at the extremity.

Split hair and knotted hair. They are trichorrhexis nodosa and trichoptilosis. " The former is characterized microscopically by swellings here and there in the form of a brush, caused by the bursting of the hair ; trichoptilosis, also called trichovodoris and aplasia moniliformis is very much like the former. Swellings are seen here and there and some constrictions".

Atrophied Hair. Microscopically thin, short, pointed, little or not coloured, dry, fragile, downy, curled and coming out easily.

Another form due to malnutrition described by Sabourand as an exclamation mark-shaped like a crooked needle without pigment and spreading out of the shaft like a broom.

Loss of Hair. The normal loss of hair is not noticed much. Every time a hair drops out of its follicle there is growth of a new one. The new hair pushes forwards and upwards within the follicle and opens the follicle detaching the old hair from its hold which is removed by comb or brush or by force. Abnormal loss

of hair may be due to local causes or from an anomalous condition of the body; infections and alopecia of neurogenous, toxic or cicatricial origin and that from atrophy.

BALDNESS (*Alopecia*)

This usually begins at the temples; more rarely on the crown of the head where it commences as a circumscribed circle covered with short and kinky hair; gradually the spot grows larger with some very fine lanugo hair. The skin in the bald spaces is not atrophic or wasted, but the hair thins out, gradually the alopecia is seen at the back of the head with the hair less dense and white for the most part and by the age of fifty the baldness is complete. The scalp becomes glossy white and tense. Crown baldness extends as a star usually towards the forehead with branches, so that the bald area is bordered by a more or less distinct fringe of hair. There are four kinds of Baldness :—

(1) *Congenital Alopecia.—Alopecia adnata.* Occasionally children are born without hair or with only scanty hair. In many cases the hair grows after a time, but in some the baldness is permanent. In such cases there are also abnormalities of the nails and delayed or defective dentition. There may also be a family tendency to congenital alopecia.

(2) *Premature hair loss.*—This is often hereditary commencing at the age of thirty. In many it developes rapidly, the hair falling out simultaneously upon the frontal portion of the scalp, the temple and the summit of the crown, leaving for a while a tuft of hair over the forehead and a band from ear to ear. The full grown hairs fall out first, replaced by weak, slow growing ones, later by down which also disappears leaving a bald surface. There is also local sweating, itching, excessive oily secretion of the sebaceous glands and branlike scales.

(3) *Senile baldness.*—Here is a progressive loss of hair commencing from the age of 40 or often later. This is a normal evolution of the scalp leading to atrophy of the papilla, bulb and loss of hair. The baldness starts at the vertex and increases progressively in a circle round the remainder of the head. A few hairs may be present for a long time in the centre of the front part of the scalp, The top of the head presents a smooth, brilliant ivory—like surface. Men suffer more than the women.

(4) *Symptomatic baldness.*—The causes may be local or general. The local causes are bad hygiene, accidental injury, friction, compression, skin affection. The general causes are acute maladies or chronic infection and toxic diseases.

(a) *Baldness due to lack of care.*—Neglect or too frequent shampooing, accumulation of dust from street and workshop, frequent rubbing with alcohol, ether or bay rum, vaselines or pomades containing some irritants ; the constant wearing of stiff caps, hats or turban, or masses of false hair by keeping the scalp always covered, thus depriving it of proper ventilation destroys hair; by pulling the hair in a direction opposite to the one in which it grows from the follicle; by employing impractical and badly chosen combs and brushes and by the use of Hydrogen peroxide and colouring matter all these end gradually in total destruction of hair. Extreme dryness, excessive transpiration, accumulation of decayed skin in the scalp or adhesive oily secretion promotes loss of hair especially in those disposed to hereditary baldness.

(b) *Traumatic Baldness.*—An insane impulse to pull out hair due to a certain amount of itching-known as Trichotillo mania.

(c) *Baldness due to friction.*—By long continuous bed rest of children and bed ridden patients, the scalp upon the back lower portion of the head is denuded of hair. The head resting on the pillow in the same position for a long time causes the hair to fall out and stunts its growth. Certain styles of dressing and the use of hair pins exert pressure on the sides and temples and cause loss of hair.

(d) *Baldness due to Scratching.*

(e) *Baldness due to accident.*—Due to a wound made by some blunt instrument which may injure the nerve of the part. Usually oval in shape.

(f) *Baldness from Burns.*—This may be from boiling water inflamed ether or alcohol, or from acids (sulphuric acid—criminal or accidental) or due to cautery or blistering agent. The result is a scar. Roentgen rays cause baldness generally at the temples and round the ears by destroying the hair tube and papilla.

(g) *Cicatrical Baldness*—baldness from Scars—Circular baldness with a line or patch of depression—sometimes shaped like a tape or stripe and the hair is flattened, depressed and adherent to the bone. The surface is uneven, honey combed less polished and shining.

(h) *Baldness caused by epilation and Electrolysis.*

(i) *Baldness caused by skin affections and inflammation.*—Almost all skin diseases cause baldness. All eruptive fevers cause the hair to come out. Local skin diseases as erysipelas, herpetiform or exfoliative eczema, psoriasis, lichen ruber planus,

all bulbous eruptions and scleroderma cause temporary as well as permanent loss of hair.

(j) *Baldness due to general diseases.*—Pulmonary phthisis, Diabetes mellitus, syphilis cause premature baldness partly by its general debilitating effects and partly by its direct action on the hair follicles.

(k) *Baldness due to acute diseases.*—In many acute diseases as enteric fever, scarletina, the hair comes out in bundles, tufts and locks. It does not break, neither deformed nor atrophied, often dry scales are found and sometimes oily ones and crusts. An attack of erysepelas extending over the scalp causes the growing of hair stop suddenly and the hair falls out in masses. The irritation may be so violent as to hinder new growth of hair and result in permanent baldness.

(l) *Baldness of chronic diseases.*—Visceral (utero-ovarian, ovarian, gastro-intestinal, hepatic), nervous diseases and digestive disorders are often followed by much loss of hair. This form of alopecia is slow, progressive, persistent and diffuse.

Loss of hair after the use of Acetate of Thallium.—This drug is used to check excessive perspiration in Phthisis. A week's use of the drug causes the hair to fall suddenly not only from the scalp but from all over the body. In a month's use of the drug the hair has disappeared.

ALOPECIA AREATA

Here the baldness appears as spots in patches confluent or isolated extensive or less so, diffused in form and appearance. The bald areas appear suddenly, spread slowly, eccentrically or only on one part of the periphery. The hair fall is rapid with the bulb, the root is dried up, shrivelled broken hair is seen on the periphery of the patch. These hairs have their ends frayed like a brush, dark of colour, thining out towards the lower portion ending in a swelling looking like an exclamation mark. They fall out easily without break. The bald spot is pink is colour and a little oedematous. After a while the skin shrinks, turns ivory white, smooth, soft to the touch and pliable. The bald areas are often found near the vertex, occiput and temples. The beard, the eye brows and the eyelids, the pubic or the axillary hair or even the hair of the arms and legs may be affected.

Area celsi—Seen chiefly in children and very resistant to treatment. It is an extensive bald area reaching from temple to temple, from occiput to frontal bone leaving a fringe of hair like a crown.

Alopecia declavens.—Here there is a total destruction of almost every hair upon the scalp and body only a few tufts are left here and there.

The course of Alopecia Areata is variable. Mild cases recover in two to six months under suitable treatment, but relapses are common. Both sexes are equally affected. Frequently found in children and early adult life and is more common in dark haired people and may occur in several members of the same family. According to professor Joseph (Berlin) the cause of the disease is due to some disorders of the trophic nerves regulating nutrition of the integument. Bad treatment. headaches, eruption of wisdom teeth, otitis media are other causes. Nerve shock due to severe accidents and diminished secretion of the thyroid gland (Hypothyreosis) may cause the disease. This is also associated with trigeminal neuralgia, worry, anxiety, nervous shock, influenza. leucoderma, congential syphilis, tuberculosis, the menopause etc.

DISEASES CAUSING BALDNESS.

Seborrhœa.—This is the commonest cause of early baldness This includes all disorders of the scalp which cause desquamation except psoriasis be they dry or oily. There is a mild inflammation of the scalp followed by desquamation.

Seborrhœa Sicca or *Dry Seborrhoea.*—Pityriasis simple or Dandruff may be local or general, spontaneous or intermittent covering collar and shoulders with white dustlike scales, especially after combing and brushing the hair or after scratching due to severe itching of the scalp provoked by the disease. It is due to subacute inflammation of the scalp followed by insufficiency of sebum or to disturbance of glandular action. There is always some disturbance with the circulation and nutrition of the scalp. Over-work, want of proper nourishment, sickness, lack of care, too frequent shampoos will increase the condition and end in great hair loss.

Seborrhoea Eczema is another form of Seborrhoea described by Hebra.

Symptomatic dry Seborrhoea. Found in most general skin diseases due to interference with the vascular nervous system.

Seborrhoea oleosa. Oily Seborrhoea. More or less oily layers are seen in the scalp, Ordinarily a slight amount of fat is on every scalp, but when this secretion becomes excessive, when much perspiration and loss of hair on the frontal bone and at temples are seen then oily Seborrhoea is suspected. Oily Seborrhœa and Saborand's Seborrheoea—excessive Sebura with crusts and desquamation may occur together. At the same time a greasy

condition of the skin of the face particularly on the wings of the nose is noticed. Generally there is acne in its different forms before the appearance of Seborrhoea. Later on much hair is lost, the scalp becomes more and more atrophic, shines brilliantly and at last becomes dry.

Eczema Seborrhoicum of Unna. This manifests itself by a greasy desquamation, the scales come off in circular patches on the scalp and found on the frontal hair border and the peri-auricular space. These are thick, shiny and resemble psoriasis scales; below a reddened scalp is found. The hairs traverse the scabs, but do not come out. Eczema is found in other parts of the body as the front and back part of the chest, This Seborrhoea is due to the invasion of the hair follicles by the micro-coccus-a variety of Staphylococcus.

Pruritus in Seborrhoea is a very unpleasant symptom. A nervous affection with many varieties and different degrees and may be due to Diabetes mellitus, nephrites or affections of the liver. Toxins generated in diseases as cancer of the stomach and other gastro-intestinal diseases pseudo-leukæmia, lympho-Sarcoma and lympho-granuloma: certain foods and drinks, alcohol, coffee, berries etc. "Neurasthenia, hysteria, uterine, ovarian disease, gravidity of the uterus, acute infectious diseases like typhus, meningitis, acute and chronic and tuberculosis will in many cases cause intolerable itching and scratching, eventually causing bald areas upon the scalp."

Abscess of the scalp.—These are common in children. Among the new born they are coincident with the other abscess of the body. They are related to a cachetic diathesis or follow an infectious disease or connected with tuberculosis. Among older children and adults it accompanies an infection on the scalp.

Ulcer.—Due to specific bacillus or to their toxints and related to tuberculosis and syphilis, form pyodermates with localised seborrhoea, pustules and necrotic acne especially at the edge of the forehead, These leave behind cicatrices more are less extensive and diffuse.

Acne.—Mostly found on the forehead and temples and often on the scalp also. This is an eruption of scattered, flat red, firm papules which after a while show yellow centres which are crusts and when removed a deep hollow is seen. After healing depressed white scars are left. The hair is destroyed and never grow again. Seborrhoea is also often found on the scalp.

Acne keloid.—These are pustules appearing on hair border or on the back of the neck close to the hair follicle and around them. Slowly these increase in number and size and enter the region of the scalp and even the crown. After a while the mass softens and on cutting an ill-smelling and semifluid pus is found. Gradually the swelling hardens and appear like keloid. Hair is seldem seen on the growth and takes years to heal.

Acne necrotica—acne rodens or Acne varioliformis Hebrae.—An affection of long duration, tenacious, persistent with the cicatrices and bald spots left behind. Common among young women. "It is a pustular acne occupying the region of the temples and the border of the scalp, more or less confluent. Around the orifice of the follicle there exists a red protuberance; in the middle of the summit is a pustule from which a hair issues. The focus opens like a crater, a naval closed by a yellowish green crust sunk deep which rises up leaving a scar and indelible depression. The hairs are wasted, the follicle bruised, and the papilla destroyed.

Carbuncle.—This looks like a cluster of closely situated furuncles with severe general and local symptoms—high fever; depression, headache and pain. Very soon the carbuncle increases reaching the size of the palm of the hand. Generally this appears at the nape of the neck near the hair border where the hair is destroyed.

Folliculitis—Alopecia Inominata.—Inflammation of the hair follicle ends with loss of hair. It is a bacterial infection with a superficial inflammation of the epidermis due to staphylococci and more soldom streptococci into minute wounds or abrasion of the skin. First a minute vesicle is found whose contents change into pus and soon becomes yellow covered by brown crust. The hairs are glued together. Children mostly suffer.

Infective folliculitis.—Symptomatic folliculites. This is characterised by a cicatricial depression surrounded by a reddish circle with a zone of alopecia.

Furnucle.—An infection by staphylococci on the scalp causing loss of hair. Generally this is found at the hair border at the back of the neck where abrasion of the skin is easily caused by friction for the use of defective collars. This is often associated with pediculus capitis in lower classes of people. Uncared for children suffer most from furuncles with eczema.

IMPETIGO

Impetigo contagiosa of Tillbury Fox.—This occurs as large blisters becoming rapidly pustular covering the entire head. "These pustules show themselves under the form of concretions of yellow matter, hard, adhering to the hairs, pasty and entangling them without changing them. Under the crusts there exists a diffuse suppuration due to streptococci contagion."

Granular Impetigo.—This is characterised by the presence upon the hairs in certain places of yellow crusts, greyish, irregular dry, hard, adherent to the hairs. Found chiefly at the back of the neck like a hard mass out of which the hairs issue; on pressure pus gushes out. Among the hair parasites are seen and on the hair as nits. There may be much itching from the shoulder to the back. Below the crusts the scalp is excoriated red. The hairs near the pustules are destroyed,

Tubercular diseases of the scalp.

1. *Lupus.*—Generally appears on the face near the hair border and invade the scalp,

2. *Strophuloderma.*—Usually found on the posterior part near the ear whence the tubercular process extends from mastoiditis of tubercular origin or from Tubercular glands on the nape of the neck. Ulcers and fistulous passages are formed gradually.

3. *Tuberculosis cutis Propria.*—Miliary Tuberculosis. This form of ulcerating tuberculosis rarely appears on the scalp.

Lupus Erythemotodes.—Bare patches of white, atrophied skin are seen on the scalp.

Ringworm—Alopecia Trychophytica.—Generally children's disease disappearing at the age of puberty. There are two varieties.

1. *Microspory.*—A circle of scales--spots looking as if strewn with ashes--on and near them are numerous greyish white stumps of hairs and remains of broken hairs. This is caused by the fungus destroying the hair and making it break. The hair is discoloured. This is common in children and is very contagious and persists for a long time, Increasing along the circumference and by confluence or merging with other patches, the baldness increases. There is much itching,

2. *Microsporic Trichophyty.*—Here the hair is broken and not discoloured. The skin shows little change. It is smooth with very few scales—common in adults and less contagious but there is severe itching. The causes of Ringworm of the scalp are the various forms of fungus growths and the chief diagnostic signs are the dry scaly layer, hair stumps and intense itching, It takes a long time to cure.

Favus.—This is characterised by discs depressed at the centre, a sulphurous yellow colour, miliary form, forming cups with a hair in the middle which has lost its lustre. The hair is grey, atrophied, crooked and easily pulled out. The bulb is swollen, transparent with unpleasant odour like that of a mouse. There are thread and irregular spores among the hair crusts. Later on

depressed cicatricial areas are seen. There is atrophy of the hair follicle, so that no new hair is formed. While it is spreading at one part it is healing at another. The disease may spread very rapidly and very extensively—even the nails may be affected. It is commonly acquired from one of the lower animals as cats, dogs, mice or fowls. There is growth in the hair or on the skin, a fungus called Achorion Schouleina.

Tinea Tousurans—Herpes Tensurans.—A disease of the hairs of the scalp due to fungi leading to a temporary patchy baldness. This begins as a red scalp spot which slowly extends centrifugally. Then a patch is formed—a roundish area without hair, the surface scaly with here and there stumps of broken hair. There may be one or several patches. Sometimes the hairs break off very close to the mouth of the follicles and then the patch looks like an area of dark spots "*Black-dot Ringworm*" often a perfectly bald area is found "*Bald Ringworm.*" Generally the inflammation is slight, but sometimes it may be severe involving deeper tissues. There may be swelling of the scalp with a number of pustule on the surface with discharge and the hairs almost wanting. There may be pain also. This is common in children and is known as *Kerion.*

Tinen Barba—Tinea Sycois—Barber's itch. Begins as a red, scaly itching spot. This enlarges and the centre cleares up to form a ring or remain a roundish patch: the border raised and on it are papules or pustules. It may affect the hair follicles. This is generally limited to the chin and may involve the whole beard region and even the upper lip. It may persist for years. This commonly results from the use of a razor or shaving brush used for some one suffering from the disease.

Sycosis Vulguris.—Mentagree.

This is folliculitis of the hairy parts of the face, especially of the beard due to a micrococcic infection and sometimes a fungus. Some populae appear in the beard and develop into pustules and through its centre a hair is seen to pass. The pustules increase, the hairs become loosened and fall off. The disease extends occupying the whole of the hairy parts of the face. In chronic cases the follicle is destroyed and permanent loss of hair will result.

Cavities.—Premature grey hair. This may be congenital or acquired. Premature greyness goes hand in hand with loss of hair and beginning of baldness "Greyness is the discolouration of the hair, determined by the morbrid compression that the layer of hardened epidermis, the plug and the hypertrophied Sebaceous glands exert upon the hair scalp, by obstructing the pigment granules. Baldness is the

expression of the death of the hair by atrophy of the papilla caused by the insufficiency of the normal circulation either by toxins or by the progressive compression consequent on the hypertrophy of the sebaceous glands and to the increased development of the layer of adipose tissue," Too frequent use of water to the hair, alcohol, alkalies, acids and antiseptics cause first greyness and then baldness. This is not so frequent in women as in men, as the women do not wash their head as often as men and do not wear such long tight hats, caps etc which constrict their heads very much impeding free circulation of the scalp. To avoid every obstacle to the liberty and activity of circulation in the scalp the cap or hat should be light and soft and ought to be ventilated, No alcoholic solutions should be used for washing the hair, because they harden the teguments and diminish their vitality, rendering the comidons harder and more resistant. Moreover by the use of alcohol the scalp is deprived of its oily coating its natural protection. Shaving the head is also injurious as it renders the head more sensitive to heat and moisture- a cause for future baldness With the same end in view the hair should not be cut too closely. Besides rheumatic and gouty tendencies, thyroid influences and change of arteries, change the fluids of the hair and end by exhausting its vitality. This is a very potent cause of premature hair loss and early greyness. Severe physical or mental strain may be the cause of greyness. An attack of severe illness as enteric fever or scarlatina may cause greyness. A great nervous shock may cause blanching of the hair as also mental diseases as melancholia.

PREVENTIVE TREATMENT.

The Hygiene of the scalp.—The style of wearing the hair, the food,the manner of living, the want of exercise, occupation, cares and ambitions act upon thenutrition of the scalp either directly or indirectly through the nervous system and general circulation.

Preservative hygiene.' It is better to keep the man's hair short. Cutting it short or half-short strengthens the hair and clipping gives the hair an abnormal direction and pulling it favours its falling out. Hats or caps should not be tight and constantly worn on the head as by depriving the scalp and hair of air causes greyness and baldness. One must be careful in going to the hair dressing saloon or Barber's shop. These have been the headquarters for spreading hair and scalp diseases. Such diseases as ringworm, favus, pityriasis, syphilis, acne, impetigo, furuncle, cycoses etc., have been acquired in barber's shop. Those attending the hair cutting saloon must see that the barber washes his

hands and cleans his nails well before he lays his hands on them. The clothes of the barber must be clean; the towels he uses must be fresh from the laundry or sterilised. Better to use one's own cup, brush, soap and comb which should be cleaned and well disinfected before and after use. The razors, shears and hair clippers should be dipped in boiling water before use. It is safer to avoid the barber's shop especially when one sees a case of skin disease there.

In women the loss of hair is largely due to their mode of dressing. The more, the style, the more the nutrition of the hair is impeded. The hair must not be pulled and twisted and bent at right angles and should not be tightly tied. Too many pins or combs should not be used. The hats should not be tightly worn as this deprives the hair of air and the pressure round the head may impede circulation. These are to be worn only when absolutely necessary. False hair is to be avoided as also crimping and curling the hair with hot metal appliances. Both morning and evening the hair should be combed and brushed slowly and gently after dividing it into several strands. At night it should be loosely braided and allowed to hang over the shoulders for some hours during the day. Neither the hair nor the scalp should be moistened frequently with cold water as this changes the colour of the hair and may give rise to chills or local congestion. The hair should be well dried with a dry towel always rubbing the same way. Normally the hair is smooth and glossy. It is neither greasy nor dry. The scalp normally is white and smooth, neither greasy nor hard. It does not soil nor moisten the fingers. So one's object must be to maintain the hair and scalp in this condition.

Conservative hygiene.--The head should be washed as soon as the scalp is dirty at least once a week or so for ladies, using soap, soapy preparations, alkaline mixtures and preparations of ammonia.

Shampooing.—This is done as follows.—Thoroughly wet the hair with warm water. Take a good soap, make a thick lather on the hands and rub vigourously into the scalp. Wash out with a copious stream of water. Rinse well with cool water. Then rub the hair dry with clean hot bath towels. Care should be taken in drying the hair especially by women who should sit before an open fire or in the sunlight and should not dress the hair till it is perfectly dry. After the hair is dried, if it remains dry, easily broken and difficult to comb, use a little cocoanut oil or olive oil on the palm of the hand and rub in gently before combing.

Curative hygiene.—Each variety and colour of hair should have its own particular care.

For dry hair.—Dry hair becomes very brittle, breaks, falls out easily and scabs are formed. Repeated washings are bad for dry hair. Only very occasionally the hair should be washed using soap or alkaline substances. No alcoholic preparations are to be used. Only oily substances should be applied to the hair using hand or soft brush. Olive oil, cocoanut oil, almond oil, vaseline etc., are the usual ones applied. The dry hair is often associated with anæmia, dyspepsia, malnutrition, utero-ovarian and nervous troubles, so the general condition must be improved. The scalp must be toned up by the use of irritantts and tonics as pilocarpine, cantharides, quinine etc.

For oily hair.—Oily hair is always associated with a greasy condition of the scalp-oily seborrhœa. The hair should be washed often with alkaline or soft-soap. Alkaline preparations such as borate and bicarbonate of sodium and ammonia preparations are to be used. It is also advisable to powder the scalp with oxide of zinc, starch and orris root powder leaving it for sometime and then brushed.

For dryness of the scalp.—In addition to those methods mentioned for dry hair, some preparation of tar, carbolic and salicylic acid with some oily base as vaseline and lanoline must be used to atimulate the circulation of the scalp.

For oily scalp.—Soapy washes, use of alkalies, friction with oil or with alcoholic lotions, friction with ether and alcohol, pomades with a base of glycerine and lanoline with sulphur and salicyclic acid are to be used.

For perspiring scalp.—Wash often with luke warm water diluted with alcohol or aromatic vinegar. Eaude cologne may be used. Friction with the brush dipped in solution containing salicylic acid or naphthol and apply pomades of salicylic acid. If the perspiration is excessive powder the scalp with starch or orris root powder. In men keep the hair short and in women they should be aired as much as possible.

Simple pityriasis or Dandruff.—Dandruff accompanies dryness of the scalp and hair. It increases by cleansing the head too often or using irritating lotions, social habits, confined life, want of exercise, overwork, illness, nervous troubles, distrubance of nutrition, gastro-intestinal disorders &c. chlorosis, utero-ovarian diseases and several disorders increase the dandruff. Therefore appropriate general treatment to mitigate these disorders must be adopted. The local treatment for dandruff is the same as for dry scalp. Avoid the use of alcohol. Use mercurial preparations, lotions of sulphar, oils, vaselines, pomades containing sulphur, tar or salicylic acid.

Combs and brushes.—The comb should be coarse and have large teeth apart. A fine comb should be used only for the removal of vermin. The brushs should be moderately stiff having higher bristles at the centre than at the edge, the same placed as bunches not too close. These should be kept clean and each must have his or her own brush and comb.

GENERAL THERAPY

The chief aims are:—

1. To overcome the cause.
2. To combat the symptoms.
3. To facilitate the growth of the hair.

To overcome the cause—externally—hydropathy, massage and electricity. Internally-organic extracts, antitoxic, constitutional specific or according to the symptoms soothing, mitigating or tonic remedies, vasomotor tonics, antiseptics, derivative or substitutive. The local treatment—medical, surgical, chemical, physical agents as heat, light, quartz lamp, electricity, high frequency and roentgen rays—surgical—scarification, curetting, scraping, epilation, cauterizing; specific remedies as emollients, detergents, resolvents, antiphlogestic, soothing, substitutive, reducing, specific and glandular extracts. Energetic remedies are often required because of the depth and persistence of the disease and the scalp tolerates better than the rest of the integument, but it has its own idiosyncracies also which must also be considered to avoid artificial eruptions as from the use of mercurial and other preparations

Therapeutically the treatment is the same for Alopecia, Seborrhœa and Pyodermitis. For Alopecia use exciting remedies. For Seborrhœa the aim of treatment is to loosen the scales and prevent reforming again. The remedies are spraying, washes, lotions, soaps, oils and ointments. The use of alkalies removes the oiliness. To modify the circulation and promote fall of scales use tar, iodine, mercury, keratolytic remedies as salicylic acid, sulphur, ichthyol, pyrogallol, formol; detach the epidermis and regenerate.

For Pyodermites use physical agents or minor surgery as cauterisation, curetting, electrolysis and then emollients as wet packs, lotions, sprays, dissolvents as plasters and antiseptics as mercury, sulphur etc.

For regrowth of hair.—Use mechanical agents as friction and massage; physical agents as electricity in the form of continued and interrupted currents, auto-induction, static douches, light, quartz lamp, Finsen light, high frequency and chemical agents-irritants specially acids which stimulate the circulation of the scalp.

ELECTRO-THERAPY.

1. *Vibration.*—Use the brush applicator and stroke from the forehead back through the hair. From the temples stroke back over the ears to the back of the neck. The soft rubber teeth of the applicator should reach through the hair just as a comb does and rub and massage and knead the scalp directly.

2. *Franklinization.*—Used as baths and static douches. The patient seated on an insulated stool, is subjected to a positive or negative shock for 15 to 20 minutes every day or every second or third day. The negative shock has exciting effect and the positive one a sedative effect.

3. *High frequency.*—Here the patient is not insulated. The treatment is given with one pole with pointed metal handle, cones brushes or plates.

4. *Rœntgen rays.*—Now in much use by the Dermatologists. The non-affected parts must be well protected.

5. *Radium.*—In the place of x-ray. radium is also much used now.

6. *Finsen light.* Here the concentrated light is deprived of its heat rays and is now much used in lupus, alopecia areatate.

7. *The quartz lamp.*—Kromayer's Quartz lamp is used for treating irritations and itching skin affections especially for ringworm and alopecia areata.

8. *D'Arsenoval Tesla High frequency current.*- is also very successfully used in scalp diseases.

9. *Nagelschmidts' quartz lamp.*—A modification of kromayer's lamp is now very popular in hair and scalp therapy. It is an electric arc in mercury vapour in a quantz tube inclosed in a spherical lamp body, mounted on a stand or hanging device and with a Rheostat. Many cases of alopecia areata, alopecia seborrlœcica, prematura and senile and seborrhœn capites have been successfully treated. Not only the itching and pain disappeared, but the scales removed, the hair regenerated and new normal hair appeared.

GENERAL TREATMENT.

The loss of hair is believed to be the result of some toxin—often a species of bacteria. Sometimes the toxin may be due to the ductless glands. If the injurious bacteria cannot be identified then a specific opsonin (gland extract) must he employed. The toxin may be related to thyroid, suprarenal or hypophysis and a corresponding extract should be administered. The general constitution must be strengthened. Fat must be avoided as it has been observed that with increasing weight there is a decrease of hair growth.

All gastro intestinal disorders must be set right, constipation corrected, moderate exercise in sunshine is required. Small doses of arsenic may be taken if there is no contra indication. Quinine and iron may be advantageously combined.

PROF. LASSAR'S TREATMENTS.

" Washing—For about 10 minutes rubbing with soap and hot water, afterwards a thorough drying with hot towels.

Disinfective.

Sol. Hydrargyri Perchloridi	0·5 in	2000
Glycerine		
Spirits colonicusis	*a a*	500

After a few minutes, friction of the scalp with

Beta naphthol	0·25 to 0·5
Alcohol Absolute	200

The head should be rubbed with this hair lotion till quite dry and in condition for the following oiling.

For oiling	
Acid Salicylic	1
Tincture Benzoas	2
Olei Provincialis ad	500 "—Lassar.

Local cure.—Daily rubbing of the Scalp with a strong mixture of Spirits containing Acid salicylic 5, oleum Ricini 3, Spirits vini Rectificati 200. Rub either with the hands, cotton or clean sponge for one or two minutes. If there are scales and itching of the head use a little eaudecologne. By continued rubbing a reddening of the hair is noticed specially in blonds. Then use the following mixture. Amyl nitras 20, Liquor arsenicalis 1, Spirits of wine 100 and Distilled water 95. Continuous treatment must be the the chief aim in treating chronic hair loss. Hair Tonics may be used such as containing Resorcin 5, oleum Ricini, spirits Rectificatus 200. To remove the odour of alcohol a few drops of Etherial oil may be used. A little pyrogallal may be added. This hair tonic should be used for dark hair. For blond hair use a mixture containing camphor 3 to 10, chloral hydrate 5 to 10 and spirits Rectificatus 200. A few drops of Eaudecologne or liquor ammonia or menthol may be added. For oily hair formaldehyde solution 1 to 5 or Tincture of Cantharides 10 minims may be added.

TREATMENT OF SPECIFIC DISEASES

Abscess of the Scalp.—Treatment is surgical for large abscess—cautery for small ones. Antiseptic spraying with borated or Carbolic lotion followed by moist aseptic application as cold cream, emollintine, Boric ointment etc.

Acne.—Rub with white precipitate ointment 2 p.c. or with Unguentum carboni's detergens. Disinfectants as acid carbolic, thymol, camphor oil, gaultheria must be applied to the scalp. Combs and brushes must be disinfected.

Acne Keloid.—Remove the hair by epilation and scarify followed by antiseptic washes and mercurial ointment or red Iodide of Mercury oitnment 1 in 5 or 10. Photo theraphy with Radium and Kromayer's Quartz lamp are very useful.

Acne Varioloformis (Necrotica)

Keep the parts clean—Rub with white precipitate ointment or Unguentum Carbonis Detergens. If healing is slow use Quartz lamp. Internally give codliver oil. iron and arsenic.

Alopecia Areata.—High frequency electricity often exerts a very beneficial influence, but the best is the use of Nagelschmid's Quartz lamp, If not available, use irritants as Phenic acid 4, acetic acid 2, alcohol 50, glycerine 50 and then apply an ointment containing Salol, and Vaseline 20. Lithanthrol is a useful remedy. Pure carbolic acid is also applied or chrysorobin ointment 1 in 8 of Petrolatum is rubbed energitically both night and morning or a saturated solution of chrysarobin in chloroform is painted. Good results are obtained by using a strong solution of iodine—liquor Iodi Fortis B.P. is the best repeating at intervals of one or two weeks. This will stop the local spread of the disease. Internally give cod liver oil, iron and arsenic—lead out door-life.

Alopecia cicatrisata.—Paint the surface with strong solution of Iodine once a week or so and in the interval rub a strong antiseptic ointment as unguentum Hydrargyri Iodidi Rubri I in 4.

Alopecia Prematura.—Maintain the vigour and strength of the body. For Anæmia give iron, codliver oil, phosphates and tonics. Live in the open air as far as possible. Sleep with windows wide open. Play games as tennis, golf. Practice deep breathing. Work in well ventilated rooms. Apply massage to the scalp. Use brushes with larger bristles in the centre to increase blood supply to the scalp. Vibratory massage does good. Electricity with D ' Arsenoval Tesla High frequency current is useful. But by far the best is the use of Nagelshmidts ' Quartz lamp.

Alopecia Seniles.—Improve general health. Regulate diet, correct constipation, give tonics and invigorating foods, correct gouty diathesis, shave the head at intervals. Static Electricity. Quartz lamp treatment are to be continued for a long time. Besides, the following Jackson's mixture is very useful,

Pilocarpine Nitrate	1.33
Spirits odorata	16

Aqua Rosa	
Alcohol absolute	a a 250

Rub in with the finger tips both morning and evening. If alcohol dries the hair too much, use a little olive oil or sulphur cream.

Alopecia syphilitica.—Besides the general specific treatment, locally use alkaline lotion containing soda bicarb 1, borax 1 and distilled water 300 and then rub an ointment, containing salicylic acid 1, Sulphur Precipitated 10, Lanoline 50 and Vaseline 50.

Barbers Itch or Sycosis-Tenea Barbae.—Use epilation regularly. Use Roentgen Rays. Rub with ointment of mercury or sulphur to which a little Resorcin is added.

Burns.—Apply carron oil and later Picric acid compresses 1 in 100.

Eczema Seborrhoicum Unna.—If the eczema is dry, scaling, oozing and crusting with pustules cut short the hair and apply hot moist poultices sprays of antiseptic lotions and cover the diseased parts with rubber tissues removed every two hours, washed in cold water and applied again. The affected parts must be rinsed daily with weak antiseptic lotions.

Erysepelas.—Creolin, carbolic acid. bichloride of mercury, alcohol, Tincture Iodine etc., have been used as lotions, salves etc., but with little success. Ichthyol 10 to 50 p. c. salve as collodion or mixture is the best. Compresses of liquor Alumini acetici 1 in 9 of water, liquor plumbi, boracic acid solution and ointment as 2 p. c. borated vaseline are frequently employed. Adhesive plasters cut in strips and applied on the border line of the erysipelas hyperaemia by Bier's method, hot air from an alcohol lamp or better electric hot air by means of "Folin" are used. Anti-streptococcus serum subcutaneously or better intravenously has given very good results in many cases. For the loss of hair, the usual treatment after the disease is cured.

Favus.—Crop the hairs closely. Wash scalp with hot water and green soap. Epilate and apply Tincture Iodine in solution 1 to 4 or bichloride of mercury solution 1 p. c. Roentgen Rays act better in this disease. Even one application has cured many cases. Parasiticides should be applied an ointment of copper oleate 1 to 5 of hanoline and lard. This should be rubbed thoroughly for 5 minutes twice daily till irritation occurs and then emollients as cold cream or boric ointment applied.

Folliculites.—Clip the hair surrounding the patch and epilate the border hairs, use the Paquelin cautery and antiseptic lotion. It is better to remove the hairs from the diseased follicles. Wash with Tincture of green soap and hot water and apply mild

antiseptic lotion and rub the affected parts with ointment of ammoni ated mercury, sulphur or salicylic acid.

Ichthyosis. Remove the scabs with alkaline lotions or soap and and hotwater rubbing an oily mixture. Apply an ointment of vaseline and 2 p.c. Salicylic acid or 5 p.c, Sulphur. ichthyol. Resorcin, naphthol etc. Internally give thyroid Extract.

Keratosis Pilaris. Remove the papule by the vigorous use of green soap and hot water in an alkaline bath. After the bath anoint with almond or olive oil, vaseline, lanoline or cold cream. Sometimes it is necessary to use a mercurial ointment or sulphur salve. Internally give codliver oil.

Impetigo. Use mercurial ointment. Unguentum Hydrargri ammoniati is the best and gives quick relief.

Lupus Erythematasus. For mild attacks use solution of liquor alumini acetate 1 to 9 of water, Liquor plumbi 2 to 5 p.c. boracid acid solution. If there is scaling remove by using 2 to 5 p.c. Salicylic acid ointment at night and left till morning and use the former lotion during the day. If need be the ointment may be strengthened by adding 5 to 10 p.c. sulphur or 2 to 5 p.c. Resorcin. Mercury as plaster is applied twice daily and the parts painted with Tincture Iodine. Internally give small doses of Quinine dhrt iceaily. The general health must he improved. Fresh air, good feeding, iron and cod liver oil are very useful. Paguelins cautery has been used with success. Other measures that are often used successfully are :—

1. Application of X-rays pushed to the point of producing mild erythema.
2. Radium applied on a flat applicator for half an hour.
3. Ultra-violet or Finsen light.
4. High frequency current using a flat hammer shaped vacuum electrode.
5. Freezing with solidified carbon dioxide or liquid air for 10 to 20 seconds at intervals of three weeks.

Ringworm. Hair should be closely cut. Wash with green soap and hot water and rub with benzene. Epilate the hair on the affected parts. Use Roentgen's rays. The best remedy is a 10 p.c. Chrysarboin ointment applied thickly on the shaved or closely clipped scalp three times a day. Tincture Iodine also may be applied. Hydrargyri ammoniati ointment 1 in 5 of lanoline and lard is also used. Coster's paste containing Iodine 1 and creosote 3 is also applied every night for a week. It kills all the spores, but should not be continued long as it forms a crust. An ointment containing Acid Salicylic, Acid Benzoic and vaseline is very useful. Internally give iron and arsenic for the anaemic. Correct digestive organs and give big doses of quinine continuously, A vaccine prepared from the growth of the cultures made of the fungus and injected every alternate day has cured a large number if cases. Auto-Vaccine properly prepared is very good. Along with the vaccine treatment local treatment must he persistently carried out. X-ray has been found of great use in chronic cases and must be carefully applied.

Sycosis vulgaris. The Hair should be closely cut. Epilate the hair on every affected follicle or use X-rays to remove the hairs. Then apply antiseptic ointment. The best is Unguentum Hydrargyri Ammoniati, double the B. P. strength.

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THE EARLIEST RECORD OF CAESAREAN SECTION & GENERAL ANAESTHESIA.

(With a foreword on the earliest history of these recorded so far.)

BY

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Before I cite here the earliest record in history of Cæsarean Section and General Anæsthesia, I give a synopsis of the early records of these, so far recorded by the historians of Medicine.

History of Cæsarian Section.

The word is derived from Latin, *partus caesareus,* from the *root, cedere*—to cut. The Roman Law, codified by Numa Pompilius ordered that the abdomen of a dying pregnant woman nearing term should be opened and delivery of the living child effected. This law, *lex regia* (royal decree) became changed to *lex caesaria* under the emperors and the procedure itself was named Caesarean operation. The child thus delivered was called a *caesone.*

That the word had no connexion with the birth of Julius Cæsar thus, nor did it originate in his reign (B.C. 100–44), is apparent from the following.

1. The above *lex caesarea.*
2. This law was in vogue before the time of Julius Cæsar.
3. The mother of Julius lived many years after his birth and was not dying before he was delivered.

*Specially contributed to the Antiseptic.

4. The word is believed in some quarters to have a connexion with Caesar, a priest long before Julius, as its originator.

The operation had been performed before his time by Jews and the child delivered through the flank of the woman, the operation being called Jotze Dofan. The operation as the classical Caesarean section, done through the abdomen by the Jews was called Kariyath Habbeten.

Starting from the earliest obstetrical records downwards we find mention in the Egyptian Papyrus, Kahun, 2200-2100 B. C., in Sushruta Samhita 2000 B. C. (according to some who believe Sushruta's father Vishwamitra to be the contemporary of the great Rama who lived, according to Sir W. Jones at about 2000 B. C.) or according to others, the 6th century before Christ.

As we descend to later times, we come to King Assurbanipal of Assyria and Babylon (668-626 B. C.), Hippocrates (460 B. C). Plato (429-337 B. C.). Aristotle (384-323 B. C.) Herophilus (300 B. C.), Calen's period (130 B. C.—201 A. D.), and Celsus (both Romans) 30 B. C.—50 A. D. (who performed internal podalic version on dead child), Bhagbata 2nd cent. B. C., Charak 2nd cent, A. D.; also the Byzantine (Turk) Oreibasios, the Arabic surgeons Rhazes, Abui Kasim, Avicenna (who used forceps for delivery, whether on living or dead child, it is unsettled.)

Thus in tracing the history of Cæsarean section of the earliest times (so far recorded here), we find that the operation was performed generally on the dying woman alone, or at least there is hardly a mention anywhere that it was done on a living woman.

It is only when we come to modern times, that we find the first records of Cæsarean section done on living women:—In 1500 A. D.. J. Nufer (a Swiss swineherd) succeeded in delivering his own wife thus after all midwives and barbers (the surgeons then) had failed. In 1540, Christ Bein reported one such delivery. In 1581 F. Rousset published 15 cases including some deliveries effected on dead persons. Before this, however, Bishop Faulus of Meiranda in Spain reported in the 13th century. The first authoritative record, however goes to the credit of J. Trautman of Wittenberg in 1610 A.D, on a herniated gravid uterus.

HISTORY OF GENERAL ANÆSTHESIA.

The first mention is made in Homer's Odyssey where Helen is depicted as dropping into the wine cups of the soldiers a drug which was "an antidote of grief and pain," which led to "oblivion to all evils.....No tears shed at death bed, or by pregnant women giving birth to child, or when the sword is buried in the bosom of.....",

Herodotus (484 B. C.) refers to the use of vapours of hemp. References are also made by Galen (134 A. D.) and Lucian (25 A. D.) the later, to the use of Mandragora of the belladona group. Other references include Talmud (Jews). the Bible, Egyptians, Assyrians, Chinese (cannabis) Shakespeare (in Cymbeline) &c.

Coming to the Indian history, we find references by Sushruta and Charaka to the use of wine, and in Bhoja Prabandha (989 A. D.) in Buddha's time, to the use of Sammohin, a general anæsthetic inhaled.

Coming to modern history, we find the first references e.g. Priestly in 1772 and Davy 1804 regarding nitrous oxide, Simpson 1847 re. chloroform, and C. W. Long 1842 re. other.

After giving a list of these records which are thought to be the earliest records of Caesarean section and Anaesthesia, I now give a much earlier record which, strange to say, I find our modern medical historians have not so far touched upon. It is recorded in Shahname, the epic and authentic collection of Persian historical records by the poet historian Firdausi who took 30 years to collect historical facts from previous writings in different languages and also from old traditions. Just as Herodotus has given us the history of more recent times (although tinged with some patriotic exaggerations in favour of his own people), so Firdausi has traced the history previous to this, of the prehistoric times as they are called. The latter history has been corroborated by Zoroastrian (Vendidad), Jewish and Hindu scriptures of old, as found by many modern learned savants of the West, and also by archeologists &c.

I quote verbatim from the translation of Shahname (with the original Persian text) by the Kutar Brothers, Vol II of 1914 (printed in Shahnamah Press of Frere Road, Karwar St. Bombay).

In this, the mother Rodabe of the Persian Hercules Rustom, when nearing term, "felt her belly getting exceptionally big and her body very heavy and swollen (pressure signs), her face pale, with no sleep at night, she weeping and crying day and night that "somebody has put stones under my skin, or what is inside (the belly) is made of iron". One day she became unconscious after a prolonged and unsuccessful labour. Her husband Zal was informed of this. He arrived at her bed and wept. Then he remembered the wise saint Simorgh (mistaken by some as a fabulous bird) whom he invoked by burning a feather given to him by the latter before. At this, "the air became thick and dark" and the saint appeared from nowhere. The saint composed him by saying, that there was nothing to fear of, but that on the con-

trary, he should rejoice for to him was surely going to be born a mightly pehelvan (strong man) and a very noble and famous son.

The saint orders him thus:

" Be yavar yeki Khanjare abgoon,
" Yeki marde binadele poorfusum.
" Noo Khostin be maye mahra must kun
" Ze dil bimo andishera pust kun.
" To bengar ke binadel afsun kunad
" Ze pehlooe oo bachche birun kunad
" Shigafand nihi gahe sarve sahi
" Ne bashed mar oora ze dard agahi
" Vaz bachchae shir biroon kashad
" Hameh pehlooe mah dar knoon kashae.
" Vazan pas bedoozad kooja kard chak
" Ze del door kun tarso timaro bak.
" Geyahi ke guyum abashiro mushk.
" Bekubo bakun her se dar sayeh Khushk.
" Besayo beyalae bar khastghish.
" Bebini hamandar zeman rastgish.
" Beran mal azan pas yeki parre man.
" Khujaste buwad sayeh farre man."

TRANSLATION

" Bring a sharp dagger and call a clever wiseman. At first make Rodabe (the moonlike) unconscious by means of a wine, and remove from her mind all sorrow and anxiety. Then you will observe the wiseman show his skill taking out the child *from her belly by opening below the ribs*, without paining her at all. As he will deliver the child thus, the mother's flanks will be besmeared with blood. Then he will stitch up the wound. You do not fear at all nor be anxious about her safety. Then as I direct you, you pound a root (of certain herb) with milk and ember in a mortar, and let the mixture dry in the shade. Then apply it (after rubbing it) on the wound and she will be relieved and will recover. Lastly pass this feather (I give) over the wound and all will be well."

Further up, the description goes on thus :—

" Bayamad yaki moobede chireh dast.
" Maran mahrokhra bemaye kard mast.
" Bakafid birauj pehlooe mah.
" Batabid mar bachchera sar ze rah.
" Chunan bigazandash berun avarid.
" Ke kas dar jehan in shegafti nadid.
" Yeki pachche bood chun gawe shirafsh.

" Babala bulando badidar kash.
.....
" Shaban ruz madar ze mae khafte bood.
" Ze mae khofteho dil ze hoosh rafte bood.
" Haman zakhmagehash phoroodukhtand.
" Badaru hame dard bespukhtand ".

TRANSLATION

" There came a skilful wiseman (philosopher, doctor). He made the moon-faced (Rodabeh) unconscious by means of *wine* (a certain *medicated* one). He easily *opened the abdomen* of Rodabeh and making the child's head straight, delivered it without harming it at all. None ere this has seen such a thing. The child was brave-looking like a lion, of unusual length and beautiful to see..... .....

The mother remained unconscious under the influence of the anaesthetic for one day and night and while she was thus not in her senses, the wounds were stitched up. By means of an ointment applied, all her pain disappeared ".

THE TIME OF RUSTOM

Though the dates of these prehistoric times, naturally are not certain to a year, famous historians give us a rough idea of the time of Rustom born as above. He was born many years (about 700 years) before Zoroaster, the Persian prophet.

Pliny (the Senior), Plutarch, Diogenes, Aristotle &c., compute the time of Zoroaster as at least five thousand years before the Trojan War (B. C. 1184) i.e. 6000 B. C. While others like Herodotus put down a lower figure, the consensus of opinion puts down the date to more modest and lower figure of at least 4000 B. C. Taking this figure as the most probable one, Rustom's birth by Caesarean section can be put down to about 5000 B. C. at least.

According to the Law of Periodicity in the history of the earth (and Universe), periods of zenith and nadir, of civilization and savagery alternate each other; and there are many authentic references that the present day height of civilization existed also some thousands of years ago, the relics of which we find in the great architechural ruins in certain Pacific islands, the savage relics of the great Maya civilization of America, and the inimitable relices of Egypt. China, India, and Persia &c.

THE VALIDITY OF THIS RECORD.

That the Shahnameh is not the product of a poet's fancy but an earnest conscientious collection of historical facts—a colossal effort by the most renowed historian of his time Firdausi Tusi,

who devoted 30 years to compile and compose this epic at the instance of Mahmud. the King of Gaznav (situated between Kabul and Kandahar of now) and for a big prize offer from the king (about 900 years ago). This is also acknowledged and corroborated by famous and more modern historians e.g. Xenophon (whose writings bear out the truth of Firdausi's work rather than of his own fellow-citizen Herodotus ') and Warner who replies to some sceptic critics thus :—

" No other great poet ever imposed such strict limitations on himself or so sternly adhered to them as did Firdausi. He put himself at the mercy of his authorities and where they fail him, as they do sometimes in this portion of the Shahname, he makes *no attempt to invent incidents* but leaves a blank and passes on. This is a proceeding for which the poet should be praised rather than blamed."

Finally, to those who still are puffed up with the vanity that this age of high civilization had no equal before in the history of the world, I shall quote Felkin's wonderful discovery of the high technique with which the savage isolated natives of Uganda (the relics of a prehistoric unrecorded civilization) performed Caesarean section thus.

" After making the woman unconscious by means of banana wine (which was also used as antiseptic), a quick incision was made in the uterus (and the abdomen), the cord cut and placenta removed. The cervix was dilated from above, the uterus massaged and compressed, and the peritoneal civity cleansed by raising the patient up. The abdomen was closed by pin and figure-of-8 sutures. The wound was dressed with crushed herbs. The temperature subsequently did scarcely rise more than 101° and the wound healed up in 11 days ".

SUMMARY

1. The earliest record of Caesarean section, about 5000 B. C. at least, is found in Shahname (the Persian history) of Firdausi, where a description of the birth of Rustom, the Persian Hercules, by this method is given.

2. The earliest record of general anæsthesia being effected by means of a medicated wine is found in the above.

3. The earliest cases so far recorded, of Caesarean section being performed on a living woman have been not before the 13th century A.D. as reported by Bishop Paulus of Mairanda, in Spain. Before this, even the classical Caesarean section had been performed on dying woman, to save the child in the womb, before and after Julius Caesar's time.

DIAGNOSIS AND TREATMENT OF "ASTHMA"*

BY

DR. SREENIVASAN L. M. S. *Karaikudi.*

The disease asthma has such a wide and varied etiology that its treatment cannot be given under any fixed, specified or well defined lines. Certain cases of asthma are manifestations of anapylaxis ; some are of bacterial origin while others are caused by unknown factors not easily detectable.

Diagnosis is easy—the chief symptom of dyspnoea due to bronchial constriction and consequent poor aeration of the lungs. This has to be diagnosed from 1. Bronchitis 2. Renal asthma 3. Cardiac asthma. Other signs and symptoms of these conditions help the diagnosis.

Treatment. -In the treatment of this disease, every effort should be made to set right the predisposition. Diet and habits of the patient should be well ascertained and anything in these, that produces the attack, should be avoided.

In the case of the inhalatory type proper treatment of the asthmogenic area of the nasopharynx should be resorted to—like the removal of the polypi, adenoids or the cauterisation of nasal septum.

When the offending protein can be found out an avoidance of the protein causing the reactions is the best way of combating the attack. This is easily done if only the causative agent is located and removed. In the case of food proteins there should be no difficulty as the offending article of diet can be easily given up.

Treatment by vaccines either auto or stock—injections made every 5 to 7 days has given relief in bacterial cases. Here great care has to be taken to avoid general reactions.

Focal infections of nose, its accessory sinuses, throat, teeth, alimentary tract etc. may produce the attack and a minute and thorough examination of these organs should be done and any defect found removed or the disease detected treated.

Selection of suitable climate and surroundings will benefit the patient and help him to avoid the causative factors. Special care should be taken regarding diet especially at nights. No solid meal after 3 or 4 p. m.

During attack :—Adrenalin Chloride 1-1000 hypodermically 5 to 7 minims; in bad cases morphia injection. Stramomium cigarettes. Inhalations of turpentine, chloroform, amyl nitras, or

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* Paper read before the Chettinad Medical Association and specially sent to the Antiseptic by Dr. T. S. Shetty for Publication.

ethyl iodide. Fumes of paper dipped in strong solution of Nitrate of Potash. Benzyl Benzoas internally. Peptone injections.

Between attacks:—Ephedrine or Ephetonin tablets. Iodide of Potassium in 3 grain doses three or four times a day. Auto or stock vaccines. Preparations of Arsenic—injection of Sodium Cacodylate or Neosalvarsan has done good in some of my cases.

General health of the patient is kept up by tonics. Injection of Sodium Morrhuate solution, Optarson, oral administration of Iron and Arsenic have given good effect.

Breathing exercises are of great value.

To remove from the environment of the patient all causative factors that can be removed, and to immunize him against all those that cannot otherwise be controlled will be the best rule to follow in treating these cases. The success in treatment depends greatly on the perseverance and patience of the doctor and the patient respectively.

CHILD BEARING AFTER MENOPAUSE.*

BY

DR. CHARLES HOOPER, *Idaho U.S.A.*

The menopause, popularly known as the "change of life", denotes that period in a woman's life when the menstrual flow ceases and she becomes incapable of bearing offspring. This period occurs somewhere about the fiftieth year of a woman's life.

I have just stated what are commonly accepted as facts. But is what I have stated true? There is a well-authenticated case in medical records of a woman of sixty or over who bore twins. I have myself read in the press of several cases of women of seventy or over who bore offspring.

Again, is it true that the cessation of the menstrual flow denotes inability to bear offspring? It is distinctly stated of Sarah in the Old Testament; "It ceased to be with Sarah after the manner of women (Genesis 18:11), in other words, she had ceased to menstruate. Yet she bore Issac after her "change of life" had taken place. Undoubtedly the Scriptures record this noteworthy event in order that women may not feel that the "change of life" automatically cuts them off from having offspring, and that they may hope for offspring even after the "change of life" has taken place.

In my opinion, the "change of life,"—which is an undoubted occurrence—has been brought about in civilized life through an interplay of psychological causes which have themselves been

*Specially contributed to the Antiseptic.

caused by the exigencies of civilization. I will proceed to explain my meaning.

If women were to bear children even up to old age, the world would soon be unable to support or even to contain the myriads of people who would be born. Again, a woman of sixty or seventy years of age who bore a child would not be likely to live long enough to give her child the years of care and training that children in civilized life require. Furthermore, bearing, nursing and caring for children in her old age would prevent a woman from giving necessary ministrations to the progeny she bore in her youth, and to her grandchildren. Again, the bearing of many children requires a large income, which not many people have.

These reasons—and doubtless there are others—have acted psychologically on the subconscious mind of the race, and have brought about the "change of life". The only real reason why the "change of life" occurs around the fiftieth year is the fixed belief of women that it must inevitably occur about that time. A woman who had faith strong enough to disbelieve in the inevitable occurrence of the "change of life" could bear offspring at an advanced age, provided she kept physical strength. Naturally her faith would have to be strong for she would have to go counter to all popular belief and all medical theory. But I am absolutely convinced that a strong enough faith could prevail against the "change of life". It is well known that men of eighty or more have begotten offspring. Why, then, should women, who bear the chief part in bringing offspring into the world, be automatically prevented at a certain age from bearing offspring? The females of animals bear young to an advanced age. There is no valid reason why a woman could not do likewise.

The menopause offers a striking example of the power of mind over body. A thought has made the menopause. A thought could do away it. The race as a whole has not sufficient faith to overcome the menopause nor would it be wise, perhaps, for the race to do so but individual woman who had that kind of faith that moves mountains could bear children long after the age when the menopause is supposed to occur.

I desire to emphasize the fact that the menopause is not a natural phenomenon in the sense that it is inborn in women from the beginning of the life of the race; but that it is an acquired characteristic. A function may be acquired just as a function may be disused, e. g., the function of the mammary glands in man.

Cases & Comments

A CASE OF SUBACUTE COLON BACILLUS INFECTION

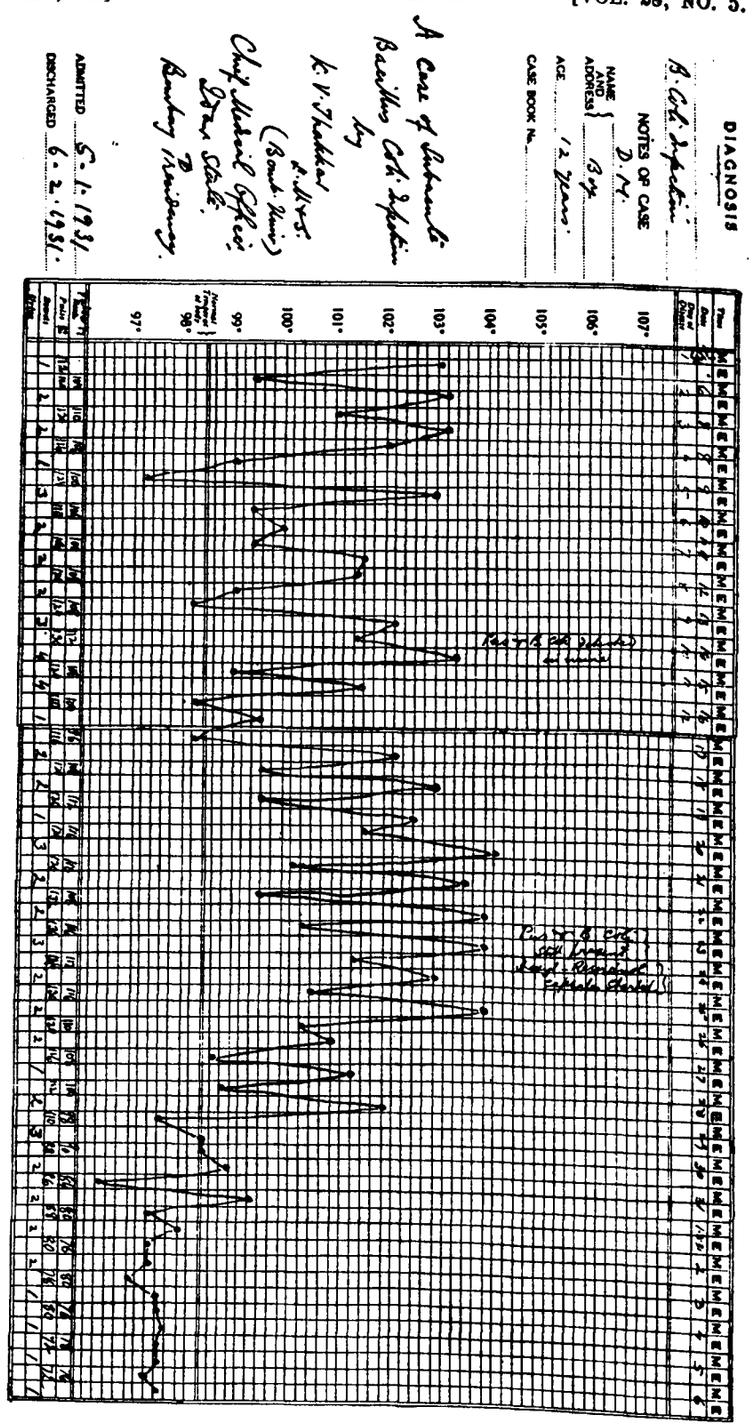
BY

K. V. THAKKAR, L. M. & S. (BOMBAY UNIVERSITY.),

Chief Medical Officer, Idar State, Himatnagar.

D. M. Boy aged 12 years had been keeping indifferent health for some time with a slight occasional rise of temperature. On 29—12 –30 he had an attack of fever 103° with rigor. He was treated with quinine mixture and had no fever for the next six days. On 6—1—31, however, he again had an attack of fever 103° in the evening with a rigor and enlargement of spleen. He was treated with Sinton's alkali and quinine treatment, but the fever would come down to 99° or 98·4° in the morning and would go up to 103° in the evening. The boy at this stage complained of general abdominal pains which he was not able to locate for some days. Later on, however, he pointed to the region of the urinary bladder as the site of pain. The fever continued in spite of the alkali-quinine treatment and it soon became evident that one was dealing with some other infection than malaria and one's thoughts naturally turned to the most common continued type of fever due to one of the typhoid group of organisms. But the clinical course and symptoms did not favour such a diagnosis. In spite of the high daily range of temperature, there was not that dull look of typhoid toxæmia at anytime nor the slow pulse of typhoid and the tongue was too clean for a typhoid or a paratyphoid infection. As the fever continued there were practically two daily rises of temperatures preceded by severe chills ; the fever 98·4° or 99° in the morning would suddenly go up to 103° or 104° by about 12 noon and would drop to 99·5° or less in a couple of hours ; it would again go up in the evening to 102° or 103° to again come down to about 100° at night. These marked up and down rises, associated with rigors, suggested a picture of severe sepsis and these along with the location of the pain to the bladder region suggested an infection of the genito-urinary system. The urine on examination showed the following findings :—

Colour	...	Pale yellow
Transparency	...	Turbid due to pus
Reaction	...	Highly acid



Temperature chart referred to on page 331.

Specific gravity	...	1022
Albumin	...	Present
Sugar	...	nil

Centrifuged deposit showed under the microscope a large number of pus cells and coliform bacilli with staphyloccocci.

Although no blood or urine culture was made to confirm the diagnosis, it was pretty clear that one was dealing with a B. coli infection of the genito-urinary system of a subacute type. The patient was pleced on alkalis and the milk diet was continued with orange juice etc. But as this had no effect on the course of fever and the urine continued turbid, the patient was placed on hexyl-resorcinal (caprokol) capsules, at first 6 and later on 8 capsules per day, all alkalis and diuretics being stopped. This had a really remarkable effect on the course of the temperature which came down by lysis on the 5th day from the commencement of the hexyl-resorcinol treatment, and went up only once after that to 99·5 on 31—1—31. The urinary findings also changed remarkably. The pus cells and staphylococci disappeared within a week after the hexyl-resorcinol was started ; the coliform bacilli, however, took a fortnight longer to disappear. I was unable to find any on 28—2—31 in spite of a most careful search. The patient is clinically free from all symptoms and continues to take four capsules of caprokol daily, to guard against a relapse.

The temperature chart is appended herewith.

REMARKS

Sir James Roberts has remarked about the common occurrence of B. Coli infection of the kidney (*I. M. G.* Feb. 1927, article on two forms of infection of the kidney) and Col. Barnardo has referred to B. Coli infection as one of the fevers that have to be borne in mind in the diagnosis of the typhoid group of fevers, with which it is very liable to be confused (*Indian Medical Gazette*, July 1927, special article on "Difficulties in the early Diagnosis of the Typhoid group of fevers").

B. Coli infection is thus very common and it is one of the pyogenic organisms with special tendency to localisation in the urinary tract and pelvic organs. It is common for mixed infections to occur specially with the staphylococcus and streptococcus. Pain, chills and fever and frequent painful micturition (which was absent in the above case) are the three characteristic symptoms of upper urinary tract. The temperature curve is extremely irregular with wide daily swings and chills. It may be interimittent, remittent or ralapsing in type. Chills in infants and children are often due to infection with B. coli. and this

should always be borne in mind in cases of continued fever accompanied by chills and wide daily variations of temperature. The urinary findings clinch the diagnosis as none of the other continued fevers are characterised by pyurea or bacillurea (*Tices System of Medicine Volume IV*).

TREATMENT.

No one treatment is in my experience successful in all cases. In my first case, the fever was of the relapsing type with a pyrexia of five to eight days and remissions of seven to fifteen days. The whole gamut of alkalis and urinary antiseptics failed to do any good to the patients; the cure came, though tardily, as the result of a course of auto-vaccine injections, the vaccine being prepared from a urine culture. My second case (reported in the *I. M. G.* November 1927) in an infant of six months was cured with alkaline treatment only. A third case improved to some extent under alkalis and hexyl-resorcinol was used in the latter stages. As regards urotropin, I have found it a complete failure in these cases ; it was administered with acid sodium phosphate in two of my cases with no result. In this last case, therefore, when alkalis failed I at once put the patient on hexyl-resorcinol. Once established, the B. Coli infection takes time to be thoroughly eradicated and continued treatment and watchfulness for weeks are necessary,

TWO CASES OF MEDICO-LEGAL INTEREST.

BY

CAPT. SHYAM LAL, B.A., M.B.,

Civil Surgeon, Ballia.

(1) A case of Medico-Legal and as well as of medical importance. A Hindu male aged 23 was brought to the Ballia District Hospital for treatment with the following injuries at 8 P.M. on 26-1-31.

One incised wound 3″ x 3″ about square in outline in the region of the scrotum. The margins of the wound were clean cut. Lower part of the scrotum with the two testicles intact were completely severed. The wound was cleaned, stitched and dressed by the Medical Officer I/c District Hospital. Next morning I examined the man, meanwhile the matter was reported to the Police and papers were received for the report of his injuries. The Police also brought in an envelope the two testicles and the scrotum cut off.

According to the statement of the injured he was sleeping in the afternoon, when another boy aged about 20, came, removed the cloth from over his private parts, caught hold of his testicles and the scrotum and cut it off with a razor. The pain roused him up. He chased the person and caught hold of the accused, but he bit him and as he himself had got weakened by the loss of blood, the accused got himself freed and ran away.

I suspect some love intrigue at the bottom of it but the matter is under the Police enquiry and no opinion can be given beforehand.

The wound got entirely healed up and the man was discharged as cured on 17th Feb. 1931.

Points of importance from the medical point of view :—

(1) No doubt the man has lost the power of sterility or procreation. But now the question is how far the man will retain potency or the power of sexual intercourse.

Sajous mentions in his Cyclopedia that if castration is done after the attainment of puberty, potency can be retained for a considerable time. If it is a fact, how far and how long will the potency or power of sexual intercourse will remain ?

(2) Will the implantation of the male sex gland help in keeping the power of potency permanently ?

I have never seen such a case and medical men who have personal experience of such a case or cases will kindly enlighten me on the above point.

SECOND CASE.

Sometime ago an old woman between 60 and 70 was sent to me for examination and report whether the woman had given birth to an issue or issues. The interest of the case lies in the peculiar circumstances under which the Court sent the case for examination.

Her husband was living and was a few hours older than she. Her husband was asserting that he had no issue from her, while she was stating that she had one son and three daughters from the alliance. The son had died while very young, 3 daughters grew up and were married ; one of them had since died and two were still living.

The father wants to disown these children and transfer his property to some distant members of the family while the mother sticks to these daughters of hers.

The case is *Sub-Judice.*

The woman was examined by me along with the Lady Doctor Miss Sukh and from the following points I came to the conclusion that probably she had an issue or issues.

1. Lenia albicantes were present in the upper part of both thighs and lower part of the abdomen.

This sign by itself cannot be relied upon for, lenia albicantes can also be found in :—

(1) Sometime after menses due to irritation about the pubis.

(2) Tumour (uterine or ovarian) or inflammation of the uterus and the tubes can cause them.

(3) Pregnancies ending in abortions can also produce them.

2. Posterior Commissure absent—it is a more reliable figure.

3. The cavity of the uterus was 3″ long. It is also very reliable. In old age gradually the uterus gets contracted, and then the sign loses its importance. One cannot say that the contraction of the uterine cavity is original or has occurred afterwards due to old age.

4. The cervical opening was transverse.

I am thankful to the Lady Doctor Miss Sukh for the help she gave me in examining the woman.

A NOTE ON THE TREATMENT OF TRACHOMA

BY

DR. KEWALRAM B. ISRANI, L.C.P. & S.,

Daharki (Sind.)

Trachoma is an inflammation of the conjunctiva which originates by infection and produces an infectious purulent secretion. Due to its chronicity the conjunctiva developes a hypertrophy and consequent roughening for which it has derived its name.

The disease almost always affects both eyes and causes sensitiveness to light, lacrimation, sticking together of the lids, visual disturbances and smallness of the eyes.

It is generally of two forms :—

A papillary form : The conjunctiva appears velvety from formation of new papillæ but if the latter are large, it looks studded with granules and nodules or its thickening is great and the Meibomian glands are no longer visible. It is most marked on the upper lids.

2. *Granular form* :—These granules which form in the depth of the hypertrophied conjunctiva show through its superficial layers pushing it to form hemispherical swellings and are grey translucent, roundish granules and look like grains of boiled sago. They are principally found in the retrotarsal folds arranged in rows like string of pearls.

If proper care is not taken, the hypertrophy of the conjunctiva gradually increases until it has reached a certain height after which Nature comes to help to decrease the hypertrophy ending in cicatrical state of conjunctiva with contraction. The more the hypertrophy of conjunctiva the longer the duration of the disease which in most cases is counted by years and more striking is the subsequent contraction.

The object of the treatment, therefore must consist in checking the hypertrophy of conjunctiva, to shorten the duration of the disease and to diminish its evil consequences.

Complications and Sequelae:—Disturbances of sight as a result of ulcerations of cornea, panus, pterygium, trichiasis, symblepheron posterior, distortions of the lids, Xerosis conjunctiva, ectropion, exuberant granulations and generally at the spot of lacunae, pinguccula, iritis, iridocyclitis, hypopyon and oedema of the lids.

Etiology :—Trachoma originates exclusively by infection from another eye affected with trachoma. Infection takes place by transfer of secretion and contagion by means of atmosphere. In all probability the secretion owes its infectious character to a micro-organism as to whose nature however, the investigations have not as yet been concluded. Thus the virulence of trachoma varies directly as the infecting amount of secretion. We have thus seen families affected under insanitary conditions. Transfer of secretion from one eye to the other may take place through the finger or the medium of sponges. towels handkerchiefs, common antimony pot etc., etc.

Irritative conditions like smoke, dust of earth, chillies and snuff, heating of seed oils, are some of the pre-disposing causes, since they not only cause congestion of the lids and sponginess of the adenoid tissue, but also induce the patients to rub their eyes frequently.

Trachoma finally varies in its geographical distribution i.e., tropical climates and low lands.

Differential Diagnosis :—Trachoma is to be diagnosed from Follicular Catarrh and B. Conjunctiva, syphilis nodules resembling follicles found round small round bodies as plant hair or caterpillar hair, Parinaud's disease of conjunctiva, Spirotrichosis and blastomycosis, inclusion of conjunctivitis and desquamatic epitheliosis.

Therapy :—The object of the treatment is two-fold i.e. to do away with the inflammatory complications and the increase of secretions which are associated with them and to further the disappearance of the conjunctival hypertrophy.

Silver.—Silver nitrate can be used from grs 2 to 10 to an ounce of aqua. In milder forms it is feebler in action and is therefore employed in all recent cases with violent inflammatory symptoms and great secretion or in corneal ulcers when the solution does not come in contact with them.

When the disease has become chronic and hypertrophied, we can apply grs. 30 to 60 to 1 oz. on the everted lids with a camel hair brush or a swab of cotton on a wooden probe (but not metal probe to avoid disintegration of silver nitrate) and immediately wash the excess with normal saline solution grains 3 to 1 ounce. This should be done every alternate day giving a day of rest and should not be tried when there is the least doubt of iritis.

Protorgol can be used in strengths varying from grs. 2 to 60 to 1 oz. of dist. water. In milder forms it can be applied on everted lids without washing them with any saline solution or Boric lotion as in case of Silver nitrate.

The market gives many qualities but the best one is that produced by Bayer Company.

Argyrol:—Grs. 5 to 120 to 1 oz. of water acts like Protorgol, but is less irritant and decreases the secretions (purulent, meibomian or watery) much better and earlier. It is very soothing and astringent but at once gets into the nose and throat, making the parts bitter, but informs that lacrymal sac and ducts are patent, Argyrol original may be used.

Silvol and Neo—Silvol:—These are organic preparations of silver of P. D. & Co., though mostly used for gonorrhœa are still being used for the eyes. They are astringent and non-irritant but work slowly. They contain 25% silver and can be used in various strengths varying upto 50%.

2. *Copper Sulphate*:—It can be used when the inflammatory symptoms are absent. It is best used to remove the hypertrophy of conjunctiva. For this purpose it acts much more energetically than silver nitrate. It can be used in various strengths according to the degree of hypertrophy of the conjunctiva and may be kept up for months and even years until every trace of hypertrophy has vanished and the conjunctiva has become free from congestion and appears smooth throughout. At first the application is made every day but when only slight remains of hypertrophy exist it is sufficient to make the application every other day or it may be replaced by alum pencil. If need be we can apply the pure coppersulphate pencil on the everted lids avoiding erasing of conjunctiva and wash the lids with saline solution.

In the end we can prescribe for him an ointment of copper sulphate ½ to 1% or of copper citrate 1% which the patient himself can rub into the conjunctival sac.

Another effectual substitute for copper stick is copper sulphate in glycerine 10%. This is diluted with from 15 to 60 parts of water and then dropped in the eyes 3 or 4 times a day. But if aqueous solution is used it should be freshly prepared every day.

℞

Copper Sulphate	...	...	grs. 2 to 10.
Glycerine	...	...	ʒiv.
Aqua ...	...	...	ʒiv.

Copper sulphate may be first dissolved in water and then the Glycerine may be added and the solution used as drop.

Lipis Devinus:—It is a mixture of fused copper sulphate alum, and Pottasi nitras and it can be used as pure stick to the granules.

Dr. Zambelletes Cupro-Argentic ointment:—It is potent drug got in 2 to 5% strengths and can be used when the action of silver and copper citrate are needed at the same time i.e., in subacute stage.

There are many other unimportant preparations of silver and copper in the market.

To sum up we should treat a recent case with silver solutions until the inflammatory symptoms have disappeared and the secretion has diminished and then the Blue-stone. At any rate we must avoid using the silver for too long a time on account of argyrosis.

3. *Acid Tanic*—5 to 25% solution of glycerine of tannin may at times replace copper treatment.

4. *Mercury*:—Hydrarg Perchloride 1 in 100 to 4000 is used when there is no inflammation, but lot of hypertrophy. We can apply 1 in 50 on everted lids every alternate day and if it irritates the eyes may be washed with saline solution. But immediately after scraping of granulations 1 in 100 may be applied as caustic; but when mildtype is required 1 in 2000 to 4000 to 10,000 may be used as wash.

Hydrarg perchloride or biniodide 1 in 3000 are universally being used as eye lavage immediately before cataract operation.

Mercurial preparations are mostly used when there is great cicatrial contraction of conjunctiva and then ointments are preferable e.g. Ung. Hydrarg oxidi flava or White mercurial precipitate ointment from ½ to 1%. Hydrarg ointments are still more used after lid operations and in blephritis.

5. *Acid boric*:—It can be used as pure as dust or 1 in 10 to 50 lotion as wash at any time during the whole period & hot boric fomentation during inflammatory stage to bring down inflammation or in very chronic stage to bring forth chemosis. It may be used in various strengths in ointments.

6. *Borax*:—It can be used in various strengths mixed with white vaseline in Xeroris—a sequelæ of trachoma.

7. *Milk*:--It is frequently instilled in Xerosis and trachoma.

8. *Glycerine*:—It is very often used as adjuant and solvent of many chemicals and rarely in Xerosis because of its hygroscopic and lubricant effects.

9. *Liquid Paraffin*:—It may be used in Xerosis or after lid or conjunctival operations.

10. *Jequirity*:—When trachoma is chronic and the pannus old 3 to 5% fresh infusion of jequirity may be applied to the everted lids very thoroughly two or three times a day till after two or three days the inflammation has reached the desired height. We now allow the inflammation to run its course simply keeping the part clean: when the inflammation has completely subsided the cornea is found to have gained in transparency as compared with its former state and sometimes to a considerable state.

11. *Oleum Cadimum*:—It is though a lubricant yet very astringent and therefore can be used when there is watering of eyes, gritty sensation, heavy lids, and photophobia. It can be best prescribed during the period between inflammatory and hypertrophy stage. Every or alternate day it can be applied on the everted lids with a glass rod or cotton used an a probe as far as solvent for Argyrol original.

℞

Argyrol original.....grains 30 to 60
Oleum Cade.....ounce one (1).

Argyrol does not directly dissolve in oleum cade but requires to be grinded in a pestle and mortar for several days before it becomes ready for use. Solution can be much helped by warming oleum cade or the mixture. It is a certain cure for lacrymation in a day or two and can conveniently replace Blue stone.

The tears form a soapy substance with the oil liberating argyrol which is in fine molecules. Argyrol working as soothing antiseptic astringent is being washed away along with any discharges in the eyes with this soapy substance. There is generally intense irritation for a few minutes and much watering of eyes which passes off quickly if the eyes are opened and closed a few times and then swabbed with thin clean muslin cloth. One application makes all styes

disappear. It can be applied at all ages with surprising good results and effects. About ten applications are enough for ordinary Trachoma cases. Scarring is much less than with any other remedy. Applications should not be made with any force but with light touch.

Imitation of argyrol cade salve can be prepared by replacing glycerine for oleum but it is never so efficacious though convenient in preparation chemically.

12. *Oleum Chaulmoogra*:—Doctor R. Gubbay, Superintendent Zenana Hospital, Jammu, states "Two years ago I commenced to use chaulmoogra oil (obtained from Smith, Stanistreet & Co: Calcutta) and the results have been so encouraging that I now use it almost to the exclusion of other applications; the lids feel lighter, the gritty sensation is less troublesome, the sticky discharge decreases and vision is clearer.

Mode of application—The swab on the probe soaked in oil is applied on the everted lids and fornices. The soapy mixture of oil and tears causes irritation for a few minutes and watering of eyes passes off quickly without injuring cornea or conjunctiva. The application may be made daily or every alternate day and about ten to fifteen applications clear up the condition. Scarring is much less. Acute cases react to oil applications showing swelling and œdema of lids which disappear with care, hot fomentation etc.

13. *Acriflavin*;—It may he used 1 in 2,000 to 4000 and applied on the everted lids with a swab stick and rubbed slowly. It is not so irritant nor causes much cicatrisation, but causes much discharge and infectious secretion. It should be applied all the period round starting after the acute iflammatory stage and may be applied every or alternate day. First one or two applications may cause chemosis and swelling of the lids, which subsides by stopping applications for a day or two.

14. *Lime Juice*:—It forms the main ingredient of many domestic (native-Indian) prescriptions of eye salve and some physicians have gone so far as to apply pure lime juice on everted lids of hypertrophied trachoma. It causes intense irritation and thus helps cure by chemosis & caustic action. It may cause swelling of the lids which disappears in 24 to 48 hours and after which the eyes look healthy, the inflammation disappears, secretions and watering stop, gritty senations and photophobia vanish and the lids look light and open well. If the juice is very irritant the eyes can be washed with a mild alkaline solution of sodi bicarb gr. 2 to 1 ounce.

15. *Myrobalans*:—(Or Triphla). At night one pieced myrobalan shoud be put in 1 lb of water (well) and next morning the infusion so obtained can be used as astringent lotion for washing the eyes or the lotion may be put in eye bathglass and the eyes washed and bathed many times a day. It helps to stop watering or gritty sensation in trachoma.

Triphla—a combination of three indigenous drugs is used as myrobalan in the from of decoction.

16. *Saffron*:—Colour-Prepared in mild solution is very often used in India and helps to bring down inflammatory stage. The mode of its action is not known.

17. *Ratan jot*:—It is otherwise used to give red colour to oils, but when dried, powdered and put in eyes in hypertrophied stage helps in the cure of trachoma. It irritates for a short time but gives relief soon, and can be used every day prior to day sleep.

18. *Hurba*:—Its infusion is very commonly being used in India. The drug is put in some pukka earthern pot (hemisphere or cone shaped-cover of a jar) and soaked in water. The dust in the drug is being absorbed by the earthern pot. After three hours the solution is strained and pressed out from drug through muslin cloth and two drops of it put in each eye. The process can be repeated, the solution being freshly prepared every day. There is generally intense irritation which lasts for about five miniutes and then the eye could be bandaged with cold wet mud pads in summer and dough pad in winter and then go to sleep. One feels miraculous relief after sleep and feels himself as if completely alright. 6 or 7 applications generally are enough for an ordinary type of trachoma, and may be applied at any stage of the disease. The drug seems to contain some acid in it which is both irritant and astringent. It helps in healing of corneal ulcer and relieves mild attacks of iritis. This drug is worth trying.

19. *Camphor*:—It is a common ingredient of many native antimonies (medicated) and helps to cool the eyes. It may be used 1 in 50 to 100. Lotion of the same strength may be used after getting up from sleep.

20. *Rose water*:—(Acquired by distillation). It may be used as eye lotion or wash to cool the eyes. It is used in all antimonies and large quantities of it are allowed to dry in the process of preparation of antimonies in pestle and mortar.

21. *Black antimonies*:—It is mainly being used as base material for many medicated medicines. It serves the same process as eye lashes, is the cover against the piercing rays of the sun. Black antimony absorbs the white, yellow and red rays of the sunshine and this takes away the hot effects of the sun rays.

22. *Black antimony to serve as base material*:—Various other raw materials (drugs) in India are being used in various forms e.g. Aritha (washing-nuts), Pot nitras fused, Coral sea forth, Fine true pearls, White pepper, Powdered clay, Ammonium chloride Fulfuldaraj, Kandmal, Rhubarb, Cardomoms Mastaki, White jiro.

23. *Acid cinnamic*:—It can be used subconjunctivally 1 in 100 one C. C. as astringent stimulant.

24. *Potassium Permanganate*.—1 in 500 as eye wash.

25. *Saline solution*:—(Gr 3 To 1 oz) It may be used as eye wash after silver applications to neutralize the excess of it and hypertonic solution to bring forth chemosis. Saline solution can be used sub-conjunctivally too.

26. *Zinc sulphate*:—Grains 2 to 10 per 1 ounce of aqua. It can be used as soothing astringent in inflammatory stage of trachoma and aids silver applications if a drop or two are immediately put after. It decreases the amount of purulent and watery secretion of eyes.

27. *Alum*:—It can be applied pure as stick to the granules every day or twice a day on everted lids. Powdered or excicated alum can be used as drop in solution from gr 2—10 to 1 oz of aqua distillata. It works as astringent collyrium and may be used, as lotion gr. 1 to 1 oz. The alum can be used as raw or excicated.

28. *Hydrogen peroxide*:—It is a good antiseptic and deodorizer. A drop or two of pure or 33% to 50% hydrogen peroxide can be put in the eyes or applied on the everted lids with stick swabbed during the hypertrophic stage of trachoma alternating with any other medicament; then used every third or fourth day. It causes stinging irritation of the eyes and then after about five minutes the eyes may be washed with water when they will find themselves refreshed and cool. It can serve a life friend of trachoma patients after their usual treatment is over i.e. a drop may be put in the eyes whenever there is any redness, gritty sensation, discharge of mebomian secretion or pus discharge.

29. *Magnesium sulphate*:—This is cheap and in abundance in every dispensary. It is not irritant in its powerful osmotic action. It can relieve the lymphatic circulation in eyes in a short time and it can thus reduce the chemosis and hyperaemia very easily and sooner than any other drug and hence it proves highly efficacious in acute inflammatory stage of trachoma.

℞

Magnesium sulphate..... .....1 oz
Sterelized water (rain or distilled)...10 oz

The eyes should be washed and flushed out with this cold lotion by an irrigator twice or thrice a day and pieces of lint soaked in the solution placed on the eyes during intervals.

30. *The Indian Medical Journal* gives following useful prescriptions;

℞

Cocaine hydrochloride.....½ gr.
Acid boric.....gr 12.
Sodium borate... .....gr 10.
Camphor water.....dr 2.
Distilled water.....oz 1

This is an agreeable and soothing collyrium to use after silver nitrate zinc sulphate, or other irritating drops.

℞

Acid carbolic.....gr 1.
Ext. hydrastatis liq.....m 3.
Liquid hazeline.....dr½
Acid boric.....gr 10
Distilled water...ad.....oz 1.

The drops have a momentary sting which is replaced by cool pleasant sensation.

31. Doctor H.R. Gostorn M.D. Tola Kauses states:--Anaesthetise the eye with 1 to 2% solution of Butyn and render the tissues ischaemic with solution adrenalin hydrarg 1 in 10,000 strength as the judgment of the operator dictates. If there is too much reaction, cut down the frequency of the treatment or its strength or both. You can apply the treatment every day.

Formulas:—Use accurate graduates or employ the same dropper in making all solutions so that all strength measurements will be similiar.

Solution No 1.

Bichloride of mercury.....gr. 10
Alcohol absolute (95%).....min. 100

Sig:—This 10% is the mother solution as all the strengths are measured by the bichloride co-dfficient, as it is the irritant.

Solution No. 2:—

Sodium iodide.....gr 25.
Cadimium iodide.....gr 15.
Dist: water.....gtt D.

This solution should be alkaline, if it is not; add sufficient iodide to make it so.

Solution No. 3:—To solution no 2 add five drops of solution no 1 drop by drop until it is in solution or you have added ½ grain

of Hydrarg bichloride i.e., 1 in 1000. At first there is a precipitation of the yellow iodides followed by the red iodides of mercury which are redissolved.

Solution No. 4:—Dissolve freshly prepared insipassated oxgall, which should be warmed seperately to get it into solution. If it flocculates add sodi iodide until it clears up. Use tepid distilled water and add the oxgall until it takes up all that it will hold, then filter. The oxgall has a tendency to dissolve the fatty secretions of the eyelids.

Solution No. 5:—Take of solution no 3, whatever amount you may desire and add solution no 4 until you have desired amount of solution of whatever strength you may desire to use e.g.

Sol: no 3.....dr 1.
Sol: no. 4.....dr 10.

This gives a 1 in 10,000 solution of the bichloride. If it is desired to make the solution more astringent add cadimum iodide. If the solution precipitates it is not sufficiently alkaline so that it will be necessary to add sufficient sodium iodide to make it perfectly clear and alkaline.

After the disease is eradicated, the eyes run profusely and then use the following to dry them up.

℞

Aceto-tartarate of aluminum.....gr 1.
Cocaine.....gr 1.
Aqua distillata..... ..oz 1.

Sig:—Instil into eyes several times a day as indicated. If this treatment is too active use argyrol 3 to 6 on alternate days.

32. *Mercury Cyanide*:—Either Cyanide or Oxy-cyanide may be used in strength of 1 in 3000 to 4000-min 10 to 15 may be injected subconjunctivally after cocainising the eye the former being preferable as the latter causes unnecessary irritation. It works in the same way as jequirity infusion, causing huge inflammation of the lids, closing the eyes and then subsiding slowly. 1 in 5000 to 3000 of it can be applied twice or thrice a day on the granules by the everting of lids.

33. *Inoculation of cultured micro-organisms*:—(A paper read by H. Noguchi before the American Medical Association in May 1927). It was obtained by isolation from cases of Indian trachoma and induced in macacus Rhesus and Chimpanzee. The organism was a bacillus obtained from the American Indians in whom scar tissue was present. The disease was also inoculated successfully into the eye of a chimpanzee from one of the infected Rhesus monkeys. Considering that millions of people suffer from trachoma and hundreds of thousands blind or partially disabled by

it, this discovery if it proves to be correct is of the first magnitude as it may point the way to better treament and prophplaxis. *A.E.J.L.*

34. *Blood Letting*:—It is done by means of leeches or Heurt eloup's apparatus, they can be applied to the temples and rarely to the external surface of the lids. Blood letting is proved to have a particularly favourable action in severe iridocycitis, inflammatory trachoma, spring catarrh or inflammation of deep parts.

35. *Carbon Dioxide Snow*:—Owing to its employments in the manufacture of aerated waters liquid carbonic acid may easily be obtained in larger towns. If a jet of liquid is allowed to play from a cylinder upon the surface of a towel, the very rapid evaporation of part of liquid abstracts so much beat as from the remainder to cause it to be deposited in the form of the snow. The snow is pushed into a small wooden tube and by means of a wooden ram rod and mallet is hammered into a pencil of solid ice. The pencil is then pushed out of the tube; one end is wrapped in thick lint to protect fingers and the other end applied to the granules—the eyes previously anæsthetised by cocaine. This burns up the granules. The process should be repeated several times—some granules being burnt.

36. *Ultra violet rays*:—Doctor Hurston an ophthalmic surgeon to the Tung Wah Hospital Hong Kong gives his experience of twenty years' practice in trachoma.

For all ophthalmic work Tungston arc is superior to mercury vapour type of lamp because the latter is so variable in its output of ultravoilet rays. The rays should be of long wave length. The U. V. rays unlike X'rays have their path impeded by blood and therefore two drops of adrenalin solution are put prior to light treatment.

The patient is told to close his eyes gently as if asleep, but not to screw up the lids. A nickle copper adjustable mirror is employed to focus the light on to the closed lids 2-4-8 maximum minutes twice a week. Hurston has treated 50 cases of trachoma by this method and complete cure has resulted in all. The cases varied in from granular and papillary affections of the conjunctiva without control involvement to those with serious pannus which invariably closes up provided Bowmans membrane has not been penetrated as indicated by dense corneal cicatrisation. Gratifying results with Tungston arc were obtained in perforating ulcers of cornea, incipient cataract, severe iridocycitis absorption of precipitates in the anterior chamber with restoration of vision.

Harston has found light treatment equally effective in all bacillary affections of the lids, such as hardeola, marginal blephritis Koch Week's conjunctivitis bacillus and phylactenular disease.

37. *Cod liver oil*:—It is rarely used in the treatment of trachoma in emaciated babies with instillation of few drops of it every day.

38. *Radium*:—It is used in the treatment of trachoma, spring catarrah and rodent ulcers. A tube containing six milligrammes

of radium bromide may be kept over the lids for a few minutes once a week.

39. *Surgical Treatment*:—It includes expression, grattage, curetting, excision, cauterisation, which can be studied in detail from manuals of ophthalmology.

40. *Expression*:—It can be done under cocaine with Knapps roller forceps or Graddy's expression forceps.

Before the evolution of scientific surgery the hypertrophied granules were expressed in India with two finger nails-thumb and middle-without any local anaesthesia after the lids, this process was very painful to the patient and cumbersome to the Barber gurgeon which took him large time and required parctical efficiency i.e. if granules were expressed, there was much cicatrisation after healing.

Another method in vogue then was with the Barber's hair expression forceps and it was performed in the same way as with the finger nails. The sharp and pointed corners of the forceps added to the trouble by causing unnecessary ulcers of healthy parts of conjunctiva. The process caused much bleeding which stopped of its own accord after about an hour, but the dirty methods made the conjunctival ulcers septic and hence inflammation of the lids or at times complications of cornea.

41. *Grattage*:—It consists in scrubbing the granulations with or without previous scarification with a stiff tooth brush soaked in 1 in 500 Hydrarg Perchloride lotion or any other lotion above mentioned until all the granulations are removed.

In India the granules are rubbed with squeezed Dog-Fly or piece of rhubarb, very painful causing irritation, swelling and chemosis of lids which subside in couple of days if left to itself and the eyes only kept clean.

42. *Curetting*: -It can be slowly done with Volkmans spoon small and then rubbed over with some caustic solution. Great care is required to see that no muscular, tarsal or deep parts of conjunctiva are removed so as to avoid later cicatrisation or ill-sequelæ e.g. trichiasis etc.

43. *Cautery*:—Thermo, Paquillin, or Galvano-cautery with fine point may be used to burn away granules but the charring should not be very deep. Immediately after cicatrisation some lubricant like paraffin liquid or vaseline may be put in the eyes.

44. *Excision*:—It consists in the removal of the fold of conjunctiva about 10 m.m broad containing granules from over the everted lids. If trichiasis exists combined excision (Kubuts) operation may be performed.

45 *Prophylaxis*:—The eyes should be kept clean with some weak antiseptic lotion. The patient should have a nourishing diet with light out of door exercise.

The physician must set a good example to the patient by washing his own hands after touching him and thus explaining to him the nature of infectiousness.

When bodies of men have gathered together and there is possibility of trachomatous infection, the routine instillation of

Zinc sulphate sol: has been used as prophylactic. Great care should be taken in the inspection of asylums, public institutions and festivals and establishments e.g. barracks, institutions schools etc.

NOTES ON TWO CASES TREATED WITH IMMUNOGEN

BY

M. BAROOA L. M. P., F. T. S.,

Sahityabhushan, Mancotta T.E. Hospital, Dibrugarh, Assam.

The following cases were successfully treated by me with gonococcus immunogen, combined. It is claimed that "Immunogens possess certain advantages not possessed by other antigens and that they probably constitute an advance in immuno-therapy".

CASE NO. 1.—A Hindu male aged 42 years, was admitted into the hospital on the 9th September, 1929 with chronic gonorrhoeal rheumatism. He had received treatment for this complaint from me on previous occasions. Once he had a course of intravenous iodine and the following after a year:—

℞

Sodii Salicylas
„ Iodii.....*aa* grs. XV.
Aqua Destil.....ad 10 cc.

To be boiled in a test tube and injected intravenously on alternate days. (*I. M. J., Nov. 1924*).

The last one was given for 2 weeks.

On this particular occasion he had a course of gonococcus immunogen, combind injections. Commencing with 0·25 cc. it was increased up to 5 cc. The injection was daily given subcutaneously. Barring a slight rise of temperature on the 1st day of injection he had no reaction and developed no untoward symptoms.

He was discharged on the 24th of the same month.

CASE NO. 2.—A Hindu female, aged 26 years, was admitted with chronic gonorrhoea on the 25th November, 1929. As the external and internal routine treatment extending over a period of 2 months had proved a failure I made up my mind to try gonococcus immunogen, combined. With this idea in view she was given 2 courses of injections in gradually increasing doses at a month's interval and irrigation was made at first with silvol lotion (10%) and then with acriflavine lotion (1 in 1,000). She had altogether 10 cc. Under this mode of treatment an appreciable improvement of her condition was visible and the discharge became less and less till it stopped altogether. She was discharged 'cured' on the 25th March, 1930. Frankly speaking, I was quite digusted with her. Indeed gonococcus immunogen, combined came to her as a heavenly balm, since then the woman has been maintaining a good health having no further troubles of the nature.

In the past I have treated a number of cases with gonococcus vaccine, but I find the immunogen giving better result.

Medical Men's Success in their Career.

"Lancet" endorses the following outlook on the part of the Editors of the "Antiseptic', as practical.

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"Health" the popular illustrated monthly on health topics edited and published by the Editors of the "Antiseptic" since 1923 in English, Tamil, Telugu and Canarese aims at educating the public in matters of health.

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THE 7th ALL-INDIA MEDICAL CONFERENCE, 1931.

The Seventh All-India Medical Conference was held in Poona this year between the 25th and 27th April and must be regarded as a grand success both from the point of view of the large number of delegates that attended it, over 300 members of the independent medical profession from all parts of India having come there to participate in the Conference, and the complete unanimity that prevailed at the Conference in all matters pertaining to the rights and privileges of Independent Medical Profession in India. The arrangements made for the comforts and conveniences of the delegates left nothing to be desired and the Reception Committee deserve our hearty congratulations, for their unstinted labours, in this direction.

The welcome address delivered by Khan Bahadur Dr. E.S. Barucha, L.M. & S., F.C.P.S., Chairman of the Reception Committee, was very interesting and informative and coming as it did from one who had grown grey in the service of the profession must be given due weight and serious consideration, not only by his own professional brethren but also by the powers-that-be. The address of the President of the Conference Dr. Jivaraj N. Mehta, M.D., M.R.C.P., F.C.P.S., was indeed a masterpiece. It was a strong condemnation of the present system of administration of the medical department in India and a challenge to the General

Medical Council of Great Britain, in regard to its treatment of the Indian Universities.

MEDICAL SERVICES.

The principal heads under which medical reforms are urgently called for are (1) Medical Services (2) Medical Education and (3) Medical Research. The I.M.S. which is purely a military service, now domineers over the civil medical department, in all its varied activities. There is consensus of opinion both among professional men and the lay public that the civil medical departmaut must be completely rid of its military control. Dr. Barucha in his address proposes a scheme for recruitment of medical men for Provincial Medical Service, which has our whole-hearted support. He says:—

"In the first place the anomalous condition of retaining military officers for Civil Medical Service to be released in times of emergencies should now be entirely abolished and in every province the Military Medical Service should be entirely separate from Civil. With the inauguration of Provincial Autonomy the recruiting of medical officers for each province will rest necessarily in the hands of the minister in charge. A competitive examination for all appointments in the provinces will be the best solution in that case. It will not only ensure the selection of the best men but it will be a true incentive for ambitious persons to continue to advance in the profession. Each province, of course, will have its own competitive examinations and I would go further as far as possible to give preference to distinguished candidates from our own medical colleges and schools to those with foreign diplomas." Dr. Jivaraj Mehta also demanded that the military side should be lopped off from the Indian Medical Service. The conference has practically endorsed their views and has urged that the transfer of the I.M.S. from the Military to the Civil side should henceforth cease and that recruitment to the I.M.S. for military duty should be by open competitive examination held in India and no more by nominations, as is being done at present. It is however, regrettable to note that at the recent Round Table Conference, certain proposals were formulated of which the system of holding simultaneous examinations both in England and India for recruitment to the I.M.S. is one. This recruitment of European doctors in the Civil Medical side is evidently intended to afford medical aid to Europeans in this country. This is again perpetuating class discrimination and caste system in the medical service. No such condition should be imposed and the new constitution should be left unfettered in the matter of recruitment to the I.M.S. and

should have complete control over the medical service, like all other services in the future.

MEDICAL EDUCATION.

Coming to medical education, the conference has suggested the immediate creation of an All-India Medical Council with adequate representation of both the graduates and the licentiates belonging to the independent medical profession and with a non-official President from the very commencement. This is as it should be and we are quite confident that such a council, if constituted, will proceed along right lines to improve medical education in this country, to provide a uniform, minimum standard of education and to remove that invidious distinction between graduates and licentiates. As Dr. Barucha observes "Again the present most invidious system of restriction and helplessness experienced by men who have no opportunity of rising from the subordinate to the higher status should disappear and hospitals and dispensaries should be kept open for all deserving men equally. To attain such an end, medical education should be so reorganized as to make it possible for any competent person to qualify from even the grade of licentiates to that of graduates and in the case of latter from their minimum qualification to the highest such as M.D., M.S., &c. and at the same time their having so qualified to be taken into consideration in all questions of their advancement. The time is gone by for the continuation of two separate classes of practitioners such as exist to-day viz., the so-called Assistant Surgeons and Sub-Assistant Surgeons. In Great Britain no such conditions exist, a L.R.C.P,, M.R.C.S. or even a L.S.A. is equally eligible for competition as the graduates of Universities for the I.M.S., R.A.M.C., and such other examinations'. In order to improve the status and qualifications of the Licentiates, it is urged that their course of instruction should be extended from four to five years in all provinces, that the existing medical schools should be improved and well equipped to meet this end, that facilities should be afforded to Licentiates to enable them with some supplementary training to appear at the University Medical Examinations. While in all the provinces in India, steps are being taken to raise the course of instruction to Licentiates to five years, that the Bombay Government should now think of reducing the course already raised to five years, to four is to say the least of it, both retrograde and unwise. Dr. Jivaraj Mehta in commenting on this, in his presidential address remarks :- 'It is impossible to understand the *raison d'etre* of such an action. Even if we want to expand medical relief throughout the country, it must be clearly understood that we must turn out

practical men trained at the bedsides and not men stuffed with theoretical knowledge. The quality of instruction in medical schools could be improved at practically no extra cost by extending the system of appointing highly qualified doctors as honorary officers in the hospitals attached to these medical schools." We are in entire accord with this arrangement and no time should be lost in giving practical effect to this scheme. With regard to facilities to be given to Licentiates to appear for M.B.B.S., the Madras University has already moved in the matter and if this move is to be effective, the condition relating to general educational qualification should be relaxed.

MEDICAL RESEARCH.

Lastly we come to medical research. We are glad to note that the Government of India have after all, decided to abandon Dehra Dun but they are trying to commit another blunder by intending to locate the central research institute at Kausali, an equally objectionable place. So far as we know, research work found a congenial soil only in Calcutta, a University centre, and many illustrious European research scholars such as Sir Leonard Rogers. Col. Knowles, Major Acton and others have emerged only from Calcutta and not from Kausali. Among Indians, we have Sir J.C. Bose, Sir, P.C. Ray, Sir C.V. Raman and others, who have a world wide reputation in scientific discoveries and they too hail from Calcutta and not from Kausali. It is highly preposterous, therefore, to suppose that a hot, enervating climate is incompatible with serious scientific research. We hope better counsels would prevail and the Government of India would not think of wasting more money on Kausali, but would, once for all, choose one of the three University centres, Calcutta, Bombay, or Madras, where clinical material is available in abundance to research workers, for close study, observation and investigation.

The All-India Medical Conference have passed as many as 25 resolutions, which will appear in extenso in the organ of the All-India Medical Association,—"The Indian Medical World", Calcutta. Besides, a number of scientific papers have been read and discussed at the Conference. These papers will also be published by the Indian Medical Association and be made available for the profession in course of time. The Indian Medical Association has come to stay in the land and is now a living force. We need not expatiate much on the need for an All-India organization of this kind. The President of the conference has in the concluding portion of his address said enough about the utility of such an organization that we find ourselves unable to add anything more to it. His exhortation to the medical profession-official or non-official, to join the Association in larger numbers and make it a powerful body, to voice forth the grievances of the Medical profession in India. as a whole, will not, we trust, fall on deaf ears. The time is now ripe for the medical profession in India, as a whole, to act in concert.

"United we stand, Divided we fall."

PROCEEDINGS OF CONFERENCE Etc.

ALL-INDIA MEDICAL CONFERENCE, POONA, 1931

EXTRACTS FROM WELCOME ADDRESS OF

KHAN BAHADUR DR. E.S. BHARUCHA, L.M. & S., F.C.P.S.,
Chairman, Reception Committee.

Dr. Barucha, in welcoming the delegates said :—

Ladies and Gentlemen, great and important changes are pending in the administration of our country. Full provincial autonomy and even a considerable amount of responsibility in the central government are practically assured. It is but meet and proper that in such changes in policy as may be brought about both in the Central and Provincial Governments the antequated policy of medical administration must be thoroughly overhauled. And our Association both at the centre and in the various branches will have not only to keep a keen watching eye on all such changes but they will have to be ready with considered schemes of their own—appropriate to the needs of each province and submit them in time to the proper quarters before any hasty step has been taken. The medical policy as existing at present though antequated—has in its time certainly done great service to the country. It would therefore be appropriate to first take a bird's eye view of the growth and development of medical education and relief during the past. I would here ask you to note that all my remarks on the subject will be referring mostly to conditions prevailing in this Presidency only. The present medical policy in this Presidency may well be considered to have begun somewhere about the middle of the last century with the establishment of the Grant Medical College and a little later, of the University of Bombay to which the College was affiliated. Previous to that medical relief was in the hands of the officers of the Military Department under whom a few candidates were being trained in the elements of medical science. After passing a very short and elementary course of study the candidates served in the military department mostly as compounders and dressers. There was hardly anything like a civil medical relief policy until after the establishment of the College. Medical education in the college in the early days was imparted both in English and vernaculars. Those trained in English received a full course of study according to the standards prevailing in those days and at the end of their course they got degrees or diplomas entitling them to practise all branches of medicine independently. On the other hand those trained in the vernaculars received only a short course of three years' training in most instances at

Government expense, after which when qualified they were employed by Government to carry out subordinate work in the districts under the designation of Hospital Assistants. Both classes of medical practitioners were necessarily in the early days quite few and not proportionate to the total wants for medical relief in the Presidency. Later on with the advance of higher education more and more men began to take advantage of the University course and some of them were employed by Government in the districts having a seemingly superior status to that of the Hospital Assistants under the designation of Assistant Surgeons. They however were ineligible for district appointments and always remained subordinate to Civil Surgeons who were members of the Indian Medical Service. Several of them after serving short periods resigned the service and carried on independent medical practice. as the field in those days for such was necessarily vast and unexplored. This state continued till 1877 when a famine of great magnitude devastated the Deccan and in consequence a severe epidemic of relapsing fever prevailed over that District as well as the city of Bombay. It was then that the paucity of medical men and the consequent inadequacy of medical relief was realised by Government. As the Grant Medical College was getting overcrowded—the Government decided to abolish the Vernacular classes and Provincial medical schools were established instead, one in each of the three great divisions of this Presidency viz. Poona, Ahmedabad and Sind Hyderabad. Education in these schools was given in English. The course however was still limited to three years and most of the students were trained at Government expense and bound down to Government for sevice for a certain number of years after qualifying. They were still known as Hospital Assistants and served in subordinate capacities in the districts. The graduates qualifying from the Grant Medical College were selected for appointments from the first class men only and the more distinguished of them were employed in the three medical schools as teachers with hospital work. They however had no chance of rising above the rank of Asst. Surgeons—no matter what qualifications and attainments they possessed, all the higher appointments both in the teaching line and in the various Civil Surgeoncies being the prize billets reserved for the officers of the Indian Medical Service. Some of you might recollect it was no easy thing at least in this Presidency in previous years to qualify for the M.D. Examination of our University. In fact in the first twenty-five or thirty years of its existence there were only three of them. Of these the first two, viz. the late Drs. Anna Moreshwar Kunte and Moreshwar Gopal Deshmukh belonged to this service of Assistant Surgeons. The former spent all his life as Mayo Demonstrator of Anatomy and the latter as Assistant Chemical Analyser to Government. These two men in their times occupied a most distinguished place in the profession, Dr. Kunte was not only an able physician and a first rate Anatomist but a profound Vedic scholar, still he could not aspire to the chair of Anatomy being only an Assistant Surgeon. Similarly there was no more able chemist then known in Bombay whose talents could stand comparison with the knowledge and abilities of Dr. Deshmukh and yet when a temporary

vacancy of three months occurred in the chair of Chemical Analyser and Professor of Chemistry-he was found ineligible-I won't say incompetent-to hold that post, for he was only an Assistant Surgeon, and an I. M. S. officer then acting as Professor of Pathology and 2nd Physician to the J. J. Hospital was placed over him. No wonder Dr. Deshmukh could not stand this glaringly unjust imputation of inferiority and resigned his appointment losing all the advantages of his service of over fourteen years. Neither were the prospects of Hospital Assistants any the brighter. A Hospital assistant in those days lived and died in that humble capacity-though he as subordinate officer in most instances bore the brunt of the work in the districts. Such was the state of affairs at the beginning of the century. Needless to say it caused a great deal of heart burning and disaffection in both these classes of officers. The Hospital assistants could not remain long silent-they started an Association to ventilate their grievances and seek redress, demanding improvements both in their course of study and status. As a result the course of study was increased from three to four years. Later on with the establishment of the College of Physicians and Surgeons, Bombay the medical schools got affiliated to that body and the pupils qualifying were given diplomas of licence from the College. They next demanded a change in their designation which was consequently altered to that of Sub-Assistant Surgeon. Not content they still agitated to have their course of study increased in order to enable them to get to the status of Assistant Surgeons and it is only recently that the College of Physicians has resolved to increase the course from four to five years-revising their entrance qualifications as also the curriculum of study.

All this time the Assistant Surgeons remained passive relying more on their superior qualifications and attainments, and expecting Government to ameliorate their condition. They had no Association of their own to speak out for them. The Indian Medical Officer cared little as to what happened to them. After many individual memorials at the beginning of the century Government released in their favour four of the least important Civil Surgeoncies from the cadre of the Indian Medical Service with the anomalous condition that their designation should still remain as Assistant Surgeons and the service of these officers be restricted to those districts only. This policy still remains the same on paper at least so far as their status in concerned. During the Great War as most of the I.M.S. officers had to revert to military duty-they being essentially officers of that department-as many as nearly three fourths of the Civil Surgeoncies were handed over to the Assistant Surgeons as a temporary measure and even at the present day a certain number of the officers of the Assistant Surgeons class continue to hold these posts but only in an acting capacity. How well they rose to the occasion and filled the gap created by the redrafting of the I. M. S. Officers to the Military Service is well known to you all as can be seen from the annual reports of the Surgeon General.

It will thus be seen that between the vested interests of the Indian Medical Service officers and the ambitious though perfectly legitimate aspirations of the Sub-Assistant Surgeons the welfare of the local graduates has always remained neglected, Within the past two decades at

least three different commissions have sat to investigate and ameliorate the grievances of public services including medical. The grievances of the local medical graduates have been in every instance completely ignored and relief if any has been granted only in the case of the I. M. S. Officers. I have mentioned these facts with great diffidence standing here as I do as one of the oldest members of the Provincial Medical Service and addressing an audience consisting chiefly of what are known as members of the independent medical profession-in as much as our friend Dr. Jivraj N. Mehta in his addrass before the Bengal Branch of our Association entitled "work before the medical association" has stated that "with Government it is often the interests of the medical services-particularly the Indian medical service that carry much weight." I ask you, ladies and gentlemen, just to consider what consideration has been given to the cause of the Local graduates in service, who now, as before, have not only to bear the enormous pressure from above of the natural and vested interests which the officers of the Indian Medical Service have been enjoying so long but also of the rapidly accumulating weight of advancement from below of that deserving body of men of the Sub-assistant Surgeon class. And as if it was not enough for them to bear, in recent years a new demand has arisen from what I would call their own kith and kin the graduates of the independent medical profession to have a share in the meagre spoils of their brethren—the assistant surgeons.

Thus it will be seen that the profession is now divided into four distinct classes of men-each with a definite interest of his own viz. the Indian Medical Service, the Assistant Surgeons of the graduate class, the Sub-assistant Surgeons and lastly that large class of medical men working independently whether Europeans or Indians, University graduates or licentiates. These conditions were not there when the medical policy was first conceived and started in the last century and it was inevitable that in the absence of qualified men in those days the whole field should have remained practically unchallenged in the hands of the Indian Medical Service officers. With the growth of the profession and the liberal supply of medical men—thanks to these same officers of the Indian Medical Service who initiated their growth—it is but reasonable to expect that there should have arisen in the country with the general cry of Indianisation all round a demand also for Indianisation in the higher grade of the medical services. An entirely new scheme appropriate to the present requirements is thus most urgently needed. In any such scheme consideration of the facts stated by me above should be given due regard. A demand from a certain section of the Profession has been made that medical relief should in future be entirely from voluntary agencies. Let us consider whether it is feasible for such agencies to work in this country in supersession of the paid medical services as hitherto. Dr. Jivraj considers this possible as also some distinguished colleagues of ours in Sind. Dr. Rewachand of Karachi had actually proposed a resolution at the All Indian Medical Conference held in December 1928 in Calcutta recommending "a new policy of gradually handing over professional work in all the Civil Hospitals and other departments to medical men from the independent medical profession equally efficient and qualified who are willing to do it honorarily and who

are specially qualified in the various branches of medical science". In moving the resolution Dr. Rewachand said, the work could be done by "a Civil Medical man" (meaning not a military man transferred from the I. M. S.) "who would be in charge of the administrative part of the work." Further he says that "Civil medical man" could be selected from the Provincial Medical service, which he "proposes to retain." It comes to this then that Dr. Rewachand wants to substitute the Civil Surgeon of the Indian Medical Service by an officer of the Provincial Medical Service. This actually is the case in a number of Civil Surgeoncies at present and during the war as stated above practically three fourths of the Civil Surgeoncies were run effectively by the Provincial Medical Officers with a substantial saving to Government. So far there could be no difference of opinion with what Dr. Rewachand suggests. He would however have in addition to the district officer certain appointments to be held in the district hospitals by honorary men who are specialists in their subjects. This also is the case in certain districts at least in this Presidency. But as Sir Nilratan Sircar points out however possible it may be in Karachi and such other places where "there is a surplus talent" these conditions may not exist in other important cities. Sir Nilratan Sircar doubts if even properly qualified men were available they would in all instances be willing to work without remuneration and would care to devote sufficient time to their work. From personal experience I can emphatically endorse this opinion; wherever possible however the arrangement suggested by Dr. Rewachand would be welcome to all.

Dr. Jivraj Mehta on the other hand in the address referred to by me above has a scheme of a different kind. He would have a paid house Surgeon with honorary officers to do the rest of the work of a civil hospital. These house Surgeoncies would be only temporary and would be recruited from junior men "every year or so". As one with the knowledge and experience of work in the mofussil for over forty years and with a certain amount of personal knowledge of the voluntary work done in the districts, I regret I cannot persuade myself to be of Dr. Jivraj's opinion. To those acquainted with medical work at headquarters in the districts any such arrangement would at once appear to be impracticable. The district surgeon has not only to give medical relief in the shape of diagnosing and prescribing medicine or operating but he is also responsible for medicolegal work including postmortems, for examining and invaliding recruits in all the varied departments of service, for attendance on Government officers entitled to free medical treatment, for advising municipalities and local bodies on questions affecting health of the district especially during the prevalance of epidemics etc. To relegate those duties to inexperienced persons and to make them responsible for emergencies is in my opinion likely to cause embarassments every now and again. In any scheme of reorganisation in the provinces, I am strongly of opinion and I say it with all the emphasis at my command that state medical service of the kind Dr. Rewachand has suggested will have to be retained at least for many years to come. It will need however a complete and thorough revision. In the first place the anomalous condition of retaining military officers for civil medical service to be released in time of emergencies should now be entirely aboli-

shed and in every Province the military medical Service should be entirely separate from civil. Then a formula must be evolved to satisfy the vested interests of those already in services. Again the present most invidious system of restriction and helplessness experienced by men who have no opportunity of rising from their subordinate to a higher status should disappear and hospitals and dispensaries should be kept open for all deserving men equally.

To attain such an end medical education should be so reorganised as to make it possible for any competent person to qualify from even the grade of licenciates to that of graduates and in the case of the latter from their minimum qualification to the highest such as M. D. M. S., etc., and at the same time their having so qualified to be taken into consideration in all questions of their advancement. The time is gone by for the continuation of two separate classes of practitioners such as exist today viz. the so called Assistant Surgeons and Sub-Assistant Surgeons. In Great Britain no such conditions exist; a L.R.C.P., M.R.C.S,, or even a L.S.A. is equally eligible for competition as the graduates of Universities for the I.M.S., R.A.M.C. and such other examinations.

With the inauguartion of Provincial Autonomy the recruiting of medical officers for each Province will rest neceesarily in the hands of the Minister in charge. A competitive examination for all appointments in the Provinces will be the best solution in that case. It will not only ensure the selection of the best men but it will be a true incentive for ambitious persons to continue to advance in the profession. Each Province of course will have its own competitive examination and I would go further as far as possible to give preference to distinguished candidates from our own medical colleges and schools to those with foreign diplomas. For that purpose a complete revision in the entrance qualification, course and curriculum in the different Provincial schools will have to be carried out. As stated above the College of Physicians and Surgeons of Bombay has already taken the first step in that direction by increasing the course of study in the Provincial Medical Schools in this Presidency from four to five years. That is a step in the right direction and deserves to be copied without delay by similar bodies in the rest of the country if not already carried out. A very urgent need is the standardisation of all medical education and bringing it on a level with that of the minimum university course. That would necessitate a further consideration of changes in the entrance qualification as well as the course and curriculum. In the Poona Medical School though the minimum requirements for entrance is only matriculation, there is no dearth of higher qualified students seeking entrance. I may here mention that with the decision to increase the course of study from four to five years by the College of Physicians, a further important change has also been carried out by that body enforcing a special examination in purely preparatory scientific subjects—like Biology and Chemistry for all candidates instead of a school certificate of having passed in those subjects as was the custom up to now. Commendable as this decision of the College is-much of its value is lost when only six months are allotted to be sufficient for the study of chemistry. Chemistry as you will all readily admit is the foundation for all

the different branches of study in medicine. How can a course of only six months in Chemistry including Inorganic, organic and practical be considered sufficient for a candidate to be able to follow the various chemical problems he will meet with in almost every branch of medical study?

My only apology to bring this matter up here is that I have noticed with no little concern for a number of years the very backward place that is being given to chemistry in our medical curriculum not only in our Provincial schools but also in the University course. In years gone by we used to be given a course of three years study in Chemistry—side by side with anatomy and physiology—the first two years being devoted to inorganic and the 3rd to organic and practical. I would here urge serious attention to be given by those concerned in framing the curricula to a more advanced course in chemistry to be made compulsory both in the University and the college of Physicians and Surgeons curricula. Further the standard to be enforced should be the same in all the different schools in the country and also the staff should be selected from the most distinguished members of the profession. This achieved there should not exist any difference between the University graduates and the college diplomates to sit for the same competitive examination as actually is the case with the examination of the I. M. S. Candidates—who sit on equal terms for competition be they mere diplomates of the Royal Colleges or graduates of Universities. The immediate concern should be a thorough overhauling of the course, curricula, staffs etc. of our existing teaching institutions and enforcing a minimum standard of qualification from all. I would suggest, that our Association both at headquarters and especially in the Provinces should take up this question in earnest for consideration and draw out a scheme to revise the present medical policy on the lines suggested by me, if my view is accepted that the paid medical service should be retained. That done it may be presented to the proper authorities with a recommendation to appoint a representative Committee to consider and report on it—taking evidence if necessary of persons best fitted to advise. Even if my view of retaining the paid medical service be considered not in conformity with the considered view of a majority of our colleagues—the Association will have to take early steps to advise Government with their opinion for any alternative scheme for their consideration and necessary action. Whatever view be taken there should be complete unanimity in every province if any weight is to be attached to the recommendations of our Association.

The military medical service in this country as you are all aware is divided into the R. A. M. C. and the I. M, S. services. The former is entirely meant for British Troops and the latter for the Indian Troops. I do not propose to say anything regarding the former, for as long as the British troops continue to remain in India they will necessarily be subject to rules and regulations of that Service all over the Empire regarding the superior medical staff. But the case of that class of officers known as military assistant surgeons stands on a different level. They. as you know, are recruited in India and educated at the expense of the Indian Government in Madras and Calcutta and come entirely from the Anglo Indian community. Some of

these are transferred to the Civil Medical Department like the I. M. S. Officers, after serving certain periods in the Military and often hold important and coveted places in that department. The ineligibility of an Indian to this service and the transfer of these officers to senior civil medical posts often in supersession to Indians has always been a grievance of great magnitude especially in Bengal and other provinces in the North and it behoves our Central Association to take up this subject for consideration at an early date. Beyond that I do not think it would come within our province to say anything regarding the R. A. M. C. service. It is different, however, when we come to consider the subject of the I. M. S. service. You are all aware that the question of Indianisation of of the Indian army and the reduction of army expenditure has been discussed time and again by the Central Legislature. To my mind a very considerable reduction can be effected if a reorganisation of the I. M. S. for military service is seriously taken in hand. Col. Bholanath has vividly described the waste in that department of service which he has called "uneconomical and unreasonable". He has given the instance of the amount of expenditure incurred for the civil population of one city in the Punjab—viz. Amritsar (which is equal in population to the whole of the Indian Army) and compared it with the expenditure of the army. Needless to say the amount spent for that civil population is only a miserable fraction of the army population. Great as the disparity is between these two expenditures it becomes more glaring when health conditions of the civil and military populations are taken into consideration; the sepoy to begin with is carefully selected by a rigid,physical fitness test and lives under ideally healthy conditions of life, therefore the chances in his case for illness are few and far between. Where then is the necessity for highly paid officers to treat such petty illnesses as malaria or shoebite, and is not an Indian medical man trained in India equally competent to carry on that work? Here then is a very fertile ground for retrenchment and I would suggest that all recruiting for I. M. S. officers should take place in India by a competitive examination held in some central places as Delhi or Calcutta or Bombay. Here, also, I need not say—the vested interests of those already in service should be adequately safeguarded.

With regard to the recent tussle with the General Medical Council of Great Britain, Dr. Barucha observed:—

Optimistic as I have always been—I see in this unwise action of the Council a true beginning of medical Swaraj in India. It has awakened the Government of India from their lethargy and every effort is being made to get the Indian Medical Council Bill passed through the Indian Legislature at an early date. We have been told that the Bill is practically ready—but is awaiting the opinion of local Governments and will be brought up for consideration during the next Simla session. I do hope that all Medical Societies and Unions in common with our Association and its branches will be given an opportunity to consider its details before its final presentation to the legislature. In the absence of any reliable information regarding the contents of the Bill—it would be premature to make any criticism at this juncture. But great care will have to be taken

to safeguard the interests of the two classes of practitioners that exist in the country viz, the University graduates and the Licentiates. This compartmental division of our professional men in India into Sub Assistant Surgeons, Assistant Surgeons and so on is described by Col. Gidney "to be wrong in principle and practice." Already there are rumours—I do not know on what foundation—that the registration on the All India Medical Council is to be restricted to the University graduates only. If there is any truth in it, I fear great dissatisfaction will be the result. It will vitiate the principle about which I have spoken above in detail to standardise all medical education and to bring all medical men on a uniform level as in Europe. I am quite aware of the difficulties that are ahead. The bill has been brought forward in reply to the action taken by the General Medical Council and the minimum qualification for registration will have therefore to be the same as that existing in the case of British diplomas and degrees. This condition unfortunately places the present licentitates in a very difficult situation indeed. But there should be no objection in the begining to include amongst the university graduates those medical men who have passed the membership or fellowship tests of the College of Physicians and Surgeons, Bombay and all such tests elsewhere in the other parts of the country, they having already satisfied all the requirements necessary for the university tests—except that instead of their having taken their whole course in colleges affiliated to the Universities, a part of their education was received in Provincial schools. Further I would suggest that provision be made in the new Bill to include later on after the changes in the course and curriculum suggested by me above are adopted in our provincial schools, all medical men qualifying under those conditions. Unless some such provision is made in the New Bill, I fear, we shall be perpetuating the same beaurocratic policy that has existed so long. but under different circumstances and the old cry "of a highly qualified junior" not being able "to aspire to the highest posts" will be repeated with greater force. My ideal is to produce a strong united body of Medical men throughout the country so that they can stand against any such attacks as have lately been made on them by the General Medical Council relying on their own merits. If need be, we can then even ignore the non-recognition of our men by the Council. And why after all, should we be so eager to be recognised by the General Medical Council and thus indirectly endorse the assumption of superiority of that body on us. Medical science is the same all over-there is enough material and more for teaching in the country. Only entrust that noble task to really worthy men, masters of their own subjects and if need be pay them liberally so that they may make our cause their own. Do not even the best of the English graduates and diplomates after qualifying proceed to other countries like France, Germany, America, Austria and others to expand their horizon and get foreign experience. Our men can do the same after a thorough grounding in our schools and colleges without hankering after foreign diplomas and what is more I should like to see the standards and reputation of our schools and colleges so raised as to draw even foreign medical men including British to take post—graduate course in our schools.

Ladies and gentlemen, I should have liked to speak on one or two other subjects. A reorganisation of the Public Health Service is one of the other problems awaiting solution and of greater importance and fraught with more difficulties owing to economic and other hindrances and the vastness of our country is the subject matter for village medical relief. I fear, however, I have already taken a great deal of your time and will therefore bring this to a close by renewing the welcome with which I began on behalf on my brethren to all the visitors some of whom have taken the trouble to come from distant places. May you return to your homes with pleasant and happy memories of this gathering and of your stay amongst us "through these days of fraternity and intimacy."

EXTRACTS FROM THE

PRESIDENTIAL ADDRESS

OF

DR. JIVARAJ N. MEHTA M.D. (LON.), MR.C.P. (LON), F.C.P.S. (BOM).

The President, after paying a well-merited tribute to those practitioners of the Independent Medical Profession who had suffered for the cause of the country in the recent civil disobedience movement and who had organised or helped in organizing hospitals for the wounded, and to the Volunteers of the ambulance corps and to the sisters of the nursing profession, spoke as follows:—

Simla Conference Re. Indian Medical Council.

1. I would first refer to the representation of the independent medical profession in the Indian Medical Council as proposed at this (Simla) conference. The number of the representatives of the medical graduates on the 'Council' has been fixed at 8 in a total membership of 27 persons. The representative character of these 8 members so far as the general interests of the independent medical profession are concerned, is further likely to be affected by a recommendation of the conference, that only those medical graduates who are of 10 years' standing, and who have had during that period some teaching experience, will be qualified to seek election from the medical graduates' constituency. A restriction of this type would effectively prevent the non-official members of the profession from successfully contesting the election, for, out of 12 medical colleges in British India, two only are entirely independent institutions, one at Calcutta and the other at Bombay being devoid of any official influence or interference. Two other medical colleges viz., the King George Medical College, Lucknow and the Lady Hardinge Medical College for women at Delhi, may be technically called non-official. But these have a strong official element either on their staff or in the Board of Management. The Indian Medical Council will, as proposed by the Simla Conference in June 1930, thus prepondarately consist of the official element, which will consequently control the destiny of the independent medical profession. The Council thus constituted can never be acceptable to the profession. The great majority of medical men are in general practice and it

is essential that they be represented in the Council to put forward their point of view.

2. The other defect in the proposed constitution is the entire exclusion of the Licentiates from the Indian Register. I think it will be a great mistake to divide the profession into entirely watertight compartments by excluding this class of practitioners altogether from the purview of the Indian Medical Council. The aim of the Council should be to maintain the standard of medical education at a high level, not only in the institutions affiliated to the Universities, but also in the medical schools which are at present sadly neglected. In my opinion the first essential is to raise the standard of medical education in the medical schools throughout India and to increase the period of instruction therein to 5 years after matriculation. I shall, however, refer to this point later. But I mention this here not only to point out that even if as things stand, the qualifications of a part of the profession might be lower, that is no reason why that part should be altogether omitted from the purview of the Indian Medical Council.

3. The third defect in the proposed constitution of the Indian Medical Council is that no indication is given in the published proceedings of the Simla Conference as to what machinery is to be provided for the proper co-relation of work between the Central and Provincial Medical Councils. In my opinion the best machinery to bring about closer contact, co-ordination and co-operation between these institutions and to avoid conflicts between the Central and Provincil Medical Councils, would be to enable each local medical council to send a representative on the Central Medical Council, instead of the local Governments sending one each, as recommended by the Simla Conference.

4. Fourthly, the proceedings of the conference do not indicate how the representatives of the medical profession are to be elected. Reading between the lines it seems that practitioners will send their representatives on provincial basis. The better method, in my opinion, would be to maintain one electoral roll for all the medical graduates in the country and also a similar one for the Licentiates. The advantages of such common rolls would lie in that the reprssentatives of the profession would not think provincially, so that the chances of a clash between the interests of the different province will be reduced to a minimum.

5. Fifthly, the President of the Council as recommended by the Simla Conference is, in the first instance at least, to be a nominated Officer. This is indeed objectionable, as the Indian Medical Council has to be not only independent of the Medical Councils in other countries but it has also to be independent of official control in India. Unless this is secured bureaucracy will triumph; and the interests of the independent medical practitioners will undoubtedly suffer.

6. Sixthly, it should be enacted in the Indian Medical Act that no one who does not possess a medical qualification registrable in India, would be entertained in the civil, military or naval medical services of the country or be permitted to act as a ship's surgeon.

In conclusion I may say that the Simla Conference's proceedings seem to have been conducted with an eye more on what the General Medical Council of Great Britain would feel or think on the matter; or how it can be reconciled to the proposed Indian Medical Council, than on a frank and fearless consideration of India's requirements only.

I have discussed this queetion of an Indian Medical Council at some length, because I regard it as one of the most urgent parts of the constructive programme our profession will have to take in hand, when our country has won her recognition as full-fledged Dominion, if not complete

independence. The year that has just gone by, has witnessed as you all know a phenomenal development in the political growth of the country. The age of petition and supplication is gone. The people have begun to realise the strength that is in them, and it now remains for the leaders to direct it in proper channels for constructive work. In many ways the development of the country, including that on the medical and public health side, will be along routes entirely different from those to which we have so far been accustomed by our rulers, or which have been charted for us by them. But for this development to be effected we must have a proper organisation of the profession.

At the present moment a much larger number of teachers are specialists in their own subjects than used to be the case when the predominant "teaching power" in this country was supplied from the 'Subjeantewala' officers of the Indian Medical Service. The bane of Medical education in India has been the case with which the I. M. S. Officers manage to get themselves transferred from one chair to another often at short periods of time. As is well known to you all, it was not unusual for a member of this service to teach botany one year, anatomy the next, and in a couple of years more to teach midwifery and ophthalmology respectively. Fortunately things are somewhat better to-day but the old instinct still persists, and even to-day the Director-General, Indian Medical Service, does not think it wrong if the professor in one special subject is transferred to a chair in another subject even in a post graduate medical College, where at least specialisation should be insisted upon in every case.

The one essential defect in Indian medical education is the lack of facility for post graduate medical education. In almost all countries great strides have been made making it easy for medical parotitioners to take general courses of post-graduate study in every special subject, nay even in the different branches of a special subject; but it is regrettable that this side has so far been sadly neglected in India. Special efforts are needed to develop post-graduate instruction in important centres. This would also necessitate the institution of special hospitals in various branches of Medicine and Surgery in big cities and in the development of special out-patient departments in our big hospitals. Even in the existing institutions much can be achieved in the way of Post-graduate instruction by a change in the existing methods of resident medical appointments, it will be a surprise to many that even at the present moment teaching hospitals exist where the resident medical posts are held by assistant surgeons and by the officers of the Iddian Medical Department (Anglo-Indian branch). It is no doubt easy for the Superintendents of hospitals to have as resident officers in their hospitals, persons who have had several years' professional work to their credit, as their own work and responsibility are thus lessened, and certainly this arrangement leaves them more spare time to give for private practice. But the system is wrong in principle in that it robs young medical graduates of the opportunity of doing practical work before they settle down in private practice or take up medical service. It also adds to the cost of hospital maintenance in that the members of the provincial medical services and more particularly of the Indian Medical Department, have to be paid salaries far higher than what would be paid to the recently qualified medical men on their appointment as House Surgeons and House Physicians. It may be urged that in the interest of medical relief in the out-lying districts it is necessary to bring the officers of the Provincial and Subordinate Medical Service to large Hospitals to enable them to keep in touch with progress in medical science. No doubt, this is desirable, but this could be done by replacing their periodical examinations, which used to be taken formerly, by a few months' intensive course of post-graduate training in one of the hospitals in the Presidency

towns. In pe teaching hospitals, however, should such officers be allowed to hold appointments. These must be entirely reserved for the training of the young medical graduates as is done in other countries.

There is yet much to wish for in the education of the Licentiates. The Licentiates themselves, for at least the last fifteen years, have been asking that their courses of study be improved, and their curriculum be lengthened to five years. But it is the officers of the Indian Medical Service, who as Principals of the schools and as Surgeons-General, have stood in their way. The College of Physicians and Surgeons of Bombay has taken the lead in this matter and has added one more year to their hospital curriculum, thus raising the total course to five years. I am glad to find that efforts are being made in Calcutta likewise to raise the period of training to five years. In Madras also a committee was appointed to consider the question about two years ago. It was presided over by the present Director General of the Indian Medical Service. It recommended that the minimum course of instruction should be five years and that the standard of the qualification should be raised "with a view to attaining a uniform high standard of training with a single minimum high standard of qualification." This will, however, necessitate considerable changes in improving the calibre of the teachers in the Medical Schools. May I also add, that the policy lately followed in Bengal of multiplying a number of such schools is not the right one: what is wanted is not too many indifferent medical schools, but that the schools we have, should be well staffed and well equipped and should be situated in big cities with large hospitals and plenty of clinical material to enable the students to have good clinical and practical experiences instead of their being located in comparatively small district towns. The funds available had much better be used in improving the schools rather than adding to their number. From what I have been told, I understand, that these schools are, barring some exceptions, poorly equipped with apparatus and poorly staffed. A great to do is, however, being made by the Government of Bombay to oppose the College of Physicians and Surgeons in their efforts to improve the training of the Licentiates and lengthening of their curriculum. And it is a matter of great surprise that when the Director General of the Indian Medical Service himself is in favour of five years, the Surgeon General in Bombay is fighting for a course of four years only for the Licentiates! And besides whilst notice was given by the College of Physicians and Surgeons in March 1927, that the new rules would apply to students joining in 1930, the Government of Bombay only woke up to the realities of the situation in February 1931!

Rural Medical Relief.

It is impossible to understaad the *raison d'etre* of such an action. Even if we want to expand medical relief throught the country, it must be clearly understood that we must turn out practical men trained at the bed-sides, and not men stuffed merely with theoretical knowledge. The qulity of instruction in medical school could be improved at practically no extra cost by extending the system of appointing highly qulified doctors as Honorary Officers in the hospitals attached to these medical schools. Those in favour of restricting the period of instruction for the Licentiates to four years say that in the interest of rural medical relief it is highly essential to turn out as many Licentiates as possible. On this plea, the period of training may as well be reduced to three years and even less! Even taking for granted that, what is urged in this connection is theoretically sound, the question would still remain if these Licentiates will settle in rural areas? My investigation shows that they do not.

The Licentiates do not at present settle in rural areas nor are they likely to settle there even if the period of training be reduced to three years. Why then try to foist in the alleged belief of expanding rural medical relief, poorly equipped practitioners in big towns and cities where these licentiates prefer to settle? The problem of rural medical relief is no doubt difficult: but the method suggested for tackling it, seems, at the best, amateurish and superficial.

It would be interesting and instructive to observe what has happened in the case of Europeans and Anglo-Indians of the Indian Medical Department who, till a few years ago, were obtaining the license of the College of Physicians and Surgeons of Bombay. The Military Assistant Surgeons petitioned for an improvement of their status, prospects and pay and wished, *inter alia* their course of study to be lengthened to five years in 1910. Sir Pardy Lukis, the then Director—General of the Indian Medical Service, supported their claims, stating " I fear time must come when the whole question of the education of these Military Assistant Surgeons will have to be re-considered under pain of their becoming a class apart from all other medical men in India ". And already by 1914, the Secretary of State sanctioned the proposal which was then estimated to cost £ 25,000/- per annum. The war came in the way, but soon after its termination, I understand, the changes have been effected at a cost much higher then £ 25,000/-per annum.

The Military Assistant Surgeons (Europeans and Anglo-Indians, thus get sanctioned what they want within four years after their petition. The Licentiates (Indians) have been clamouring for a betterment in the system of their instruction for over 15 years. The cost in their case is not so heavy and yet the Government oppose them! The Military Sub-Assistant Surgeon is to the Indian Army what the Military Assistant Surgeon is to the British troops in India; yet there is a wide difference in their standards of training! Could it not therefore be argued that Government are not as solicitous about the health of the Indian soldier as they are of the British soldier in India?

Medical Services.

I take it that many of you have a great deal to say about the Indian Medical Service as well as the Provincial Medical Service and Sub-Ordinate Medical Service. So far as the Indian Medical Service is concerned, we are all decided that it must remain a purely Military Service, and that its civil side must be lopped off entirely. As Col. Bholanath put it in his vigorous address last year " such a combination of civil and military duties, which subordinates the needs of the civil population to the requirements of the military' is unheared of in any other civilised country in the world." The need of restricting the I. M. S. Officers to the military side only has long been felt. Most of the failures of the Indian Medical Service, including those in the late Great War, are ascribable to the greed of the I. M. S. Officers for private practice, for the plums of office which they can only get on a transfer to the civil side. And on such a transfer their military faculty becomes increasingly defunct, so that on a call to rejoin their regiments in war, a failure is not to be wondered at! Surgeons-General Cunningham and Crawford who had been appointed to enquire and suggest remedies in the matter, wrote, " If re-organisation is to be attempted and that such is needed, none who are acquainted with the present system can deny, it can be effected by no partial measures. The division of the civil from the military duties must be trenchant and distinct ". This was in 1879 and yet in the year 1931, the service members are ever ready to find out ways and means of perpetuating in self-interest the civil side of this service.

Thanks to the growth of education in medical colleges and schools in the last fifty years, a large number of medical practitioners are now available in all important centres of population.. Specially qualified Indian men and women are now available in sufficient number to be appointed as Honorary Officers in important divisional or district hospitals. With a proper training of the House Physicians and House Surgeons, in the large teaching hospitals it is possible to supply annually a sufficient number of persons holding post-graduate medical qualifications, so that there will be no fear of paucity of such staff in future. It is not proposed to pension off or reduce the existing staff: A few district hospitals may be selected to start with, as an experimental measure, for staffing them entirely with Honorary medical men together with the necessary compliment of resident medical officers. One of them may be appointed to look after the medico legal work of the district, and a similar arrangement may be made for the inspection of dispensaries in the district. The money that will thus be saved in salaries can be made available for rural medical relief and particularly for sanitary improvements which are the crying need of the country. I hope, earnest thought will be given to this matter and in my opinion, time has now arried when a representative committee should be appointed to consider the whole question from every point of view.

The recruitments in the Indian Medical Service is carried on at present in a way which is most objectionable. Europeans, whatever their qualifications, are taken on with special allowances and terms which give them a fat bonus after six or twelve years' service. Indians are taken as temporary officers principally and are made to shift for themselves after a contract service of a certain number of years. Why is the recruitment not effected by holding the competitive examination as used to be a case before the War? The total strength in the I. M. S. is about 608. Taking about 27 years' service on an average the number of vacancies to be filled in will be about 25 annually. In view of the fact that about 500 to 600 medical graduates, are being turned out every year from the Indian Universities, and in view of the increased facilities which are now available for holding resident medical appointments in teaching hospitals, an ample supply of suitable candidates for the competitive examination for recruitment into the Services is assured. With the introduction of this competitive examination, various medical colleges and hospitals will vie with one another in providing special instruction for entrance into the examination, and arrangement which will also help in encouraging the development of post graduate medical instruction in India. May I add here that it has become highly necessary to institute an Army Medical College in India for the subsequent training of Army Medical officers in this country on lines more or less similar to those followed in other countries? As the questions of granting commission in the Indian Medical Service and of the training of the military medical officers fall within the jurisdiction of the military department, it is highly essential that a representive of the Indian Medical Association is appointed on the Sandhurst Committee, for the training of military which, as recently announced, is shortly going to be constituted.

Medical Research.

I would now like to refer to the organisation of medical research in the country. At the persent moment a number of bacterological institutes lie scattered in different parts of the country. They are officered largely by members of the Indian Medical Service. The cost of these institutions is borne principally by the Local Governments. The Assembly, however, votes an annual grant of Rs 7½ lakhs a year to the Indian Research Fund Association. This amount together with the interest accruing to the extent of over 2 lakhs of Rupees from the invested fund at its disposal, forms the main source from which grants are made to various institutions

or individuals for the conduct of research under the auspices of the Indian Research Fund Association. Till recently the disposition of this large amount was mainly under the control of I. M. S. Officers. In view, however, of the strong representation on the part of the medical profession throughout the country, and of the help rendered by several members of the Legislative Assembly, it has been found possible recently to have the constitution of the Governing Body somewhat widened. Thus, besides the Hon'ble Member in charge of department of Education, Health and Lands, and the Secretary to that Department, the Governing Body has on it five officers of the Indian Medical Service but only two representatives of the medical faculties of Indian Universities and three representatives of the Central Legislature. The representation of the Faculties is thus actually found to be far from adequate. And as regards the independent Medical profession, it has at present no representative on it at all. With my recent experience of the working of this Body, being one of two representatives of the medical faculties on it, I am most emphatically of opinion that the representation of the Universities, of the independent medical profession, and of non-medical, scientists on that Body requires to be considerably strengthened if just and a proper utilisation is to be made of these grants.

Governing Body I. R. F. A.

The Conference, which was held in Simla in July 1930 to consider the location of the Central Medical Research Institute and the organisation of the Medical Research Department, was of opinion that on the Governing Body of the Indian Research Fund Association there should be at least one representative of each Medical Faculty of a University incorporated by Law in India, i. e. eight representatives in all of the Medical Faculties, three representatives of the medical profession to be elected by the Central Executive Council of the Indian Medical Association; and two eminent non-medical Scientists, one elected by the Indian Chemical Society, and the other—who should not be a Chemist-by the General Council of the Indian Science Congress. I have begun to realise from actual experience that unless the non-official element is properly represented on the Governing Body, I doubt if the funds of the Indian Research Fund Association would be utilised in the way they ought to be. Though it is boasted that the Indian Research Fund Association employs as many as 62 Indians on the Research side as againt 12 Europeans, on working out the details in the ways of salaries, allowances, over-sea pay, leave and pension contributions &c., I find that the 12 European Officers cost the Indian Research Fund Association something over Rs. 25,000 a month, the 62 Indians cost likewise just under that amount. The European Research worker is thus paid on an average five times more than an Indian Officer under the same research organisation. Would the Director-General, Indian Service, honestly say that the European worker under the Indian Research Fund Association does on an average five times more useful research work than an Indian officer drawing salaries or grants from the same Fund? It is, as a matter of fact, not the case. If a promising post is to be filled in, you take it from me that every effort will be made to secure it for an European. The machinery is so well organised that directly a favourite officer reaches superannuation, a special Commission of enquiry which has been thought out well ahead, is ready at hand to provide him with a good billet, it matters not whether the officer had any previous experience in that particular line of enquiry to justify his appointment as an expert on that enquiry. Sometimes relatively raw youths are recommended for appointments on posts which should really be held by old and experienced hands. It often happens that relatively inexperienced young officers are appointed on comfortable salaries, on the ground that they are 'experts' while as a matter of fact they gain their experience at

Indian's expense. It will thus be understood why the Indian Research Fund Association affairs have till recently been kept as a close preserve. It behoves the Hon: Member in charge of the Department of Health, Education and Lands, to overhaul the constitution of the Governing Body, on the lines recommended by the Conference of last July already referred to above. Unless this is done he will get only six to eight anna worth on every rupee that is at present spent on research by the Indian Research Fund Association.

Recruitment in the Medical Research Department.

The best and the most economical method of carrying on research in any science is not to make up close preserves for a powerful service, but to entrust it to the freer atmosphere of a University. All over the world research is carried on at University centres. Research followships or grants are given to Universities or Institues or to eminent men, to train young men with an aptitude for original work at relatively much smaller salaries than are offered to the I.M.S. novitiates in research in India. If any of them makes good, he is taken up into the regular cadre or asked to work out a problem. Such a system of appointment which is economical and practical does not, however, appeal to the I.M.S. Officers in power. These Officers look askance at giving any grant in the form of research scholarships, out of the ten lakhs which are at the disposal of the Indian Research Fund Association to the medical colleges for encouraging the young medical graduates to take to research. I trust, however, that the Governing Body of the Indian Research Fund Association will support the very commendable resolution of the conference which was held in Simla last July, to institute 20 Research Scholarships of the value of Rs. 100/- each p.m. to be awarded to the various medical institutions, which are prepared to train young medical graduates with aptitude for research. To me this seems to be the most natural and economical arrangement so that from a number of such scholars the right sort of Research officer could be recruited whenever necessary, instead of, as at present recruiting the so called 'experts' from abroad at high salaries. This is also the best method of eliminating a possible misfit who by experience is found to have no *penchant* for research work.

Central Research Medical Institute.

While I am on this subject of Research it would not be amiss to refer to the question of the Location of the Central Medical Research Institute. Thanks to tho united opposition of not only the Medical Profession, but of the Universities as voiced at the Second Inter-Universities Conference and thanks to the assistance which the several members of the Bombay Legislative Council and of the Assembly, and the Press gave in the matter, the location at Dehra Dun of the Central Medical Research Institute may now be said to be as dead as mutton. And we may well congratulate ourselves on the fact that the well laid out plans of the high officials of the Indian Medical Service were at last frustrated after a struggle, which with our backs against the wall we carried for well nigh three years till we won our point. Now that Dehra Dun is down and out, efforts are being made to revlve Kasauli at a cost going well nigh to five lakhs. The reasons which prevailed against Dehra Dun are equally valid against Kasauli.

It is therefore clear that the Central Medical Research Institute, whenever funds are available for its construction, should be located in a University centre. Consequently it will be a sheer waste of public money to spend any amout in expanding the Kasauli Institute even in the guise of repairs costing well nigh five lakhs. The advantage of having the Medical Research Institutes in large University towns, both in the interest of medical education as well as of research, is a well recognised fact throughout the world.

The Public Health Institute, Calcutta.

It would not be out of place to refer at this stage to the public Health Institute which is being constructed at Calcutta out of the munificient donation of over 15 lakhs from the Rockefeller Endowment. The Institute is expected to be in working order by the end of this year and its staff will soon need to be appointed. It was at first proposed to appoint Professors on a salary of Rs. 2500 p.m. and Assistant Professors on Rs. 400 p.m. The profession put up a strong protest, as such an arrangement would never have indubed the most capable Indians to take up the Assistant Professorships. Since then the matter has been reconsidered by Government, and I am glad to note that our protest has had its effect and the grade is now changed to Rs. 450-50-1250, thus ensuring the promotion of the Assistant Professors to the Professorial grade. But while thus rectifying the original mistake, Government have perpetrated another in that, out of the six Professorships at that Institute, three posts have been reserved for the members of the Indian Medical Service. While we are urging Government to do away entirely with the civil side of the Indian Medical service, this ubiquitous service has evidently succeeded in capturing three more highly paid posts, and also in securing enhanced salaries, viz. of the Professors recruited from the service to the extent of Rs. 3000 p.m. in two cases and to Rs. 3500 in the case of the Director. At a moment when reduction is demanded by the country in the scale of the existing high salaries, here is the benign British Government in India actually proposing salaries for new appointments higher than what was thought sufficient for these very appointments two years back! Now that the matter is brought to the notice of Government, I trust the Hon'ble Member in charge of the Department of Health, Education and Lands, will move in the matter and do the needful. It should be made perfectly clear that no new vested interests should be created for this service and that not even a single post—say, even that of the Director—should be reserved specially for an officer of the Indian Medical Service.

The Drug Industry.

Of late the question of making India self-sufficient in the supply of drugs, sera, surgical instruments, equipment and dressings etc., has come to the forefront. In the great War, the profession as well as the public soon realised how suicidal it was to depend for such necessities of national life upon foreign imports. But with the termination of the war, lethargy again crept in. Thanks, however, to the great wave of notionalism that has swept over the country in the last 15 months, the necessity of placing the Drug Industry on a permanent footing in India and of manufacturing surgical instruments and appliances in this land has again been brought to the forefront. Let us hope that medical men and the industrialists will contrive measures to profit by the great national urge and to make India self-sufficient in these regards.

Ministry of Health.

A number of questions still remain to be touched upon, but it would be evidently impossible to refer to many of them in this address. There are, however, three or four which, press for attention. One is with reference to the constitution of a Ministry of Health in every Province. Medical and sanitary problems are so complex, and there is so much eeway to make up in India on the sanitary side at least, that it is highly essential to hold a Minister responsible for the pursuit of an energetic medical and sanitary policy in the country. India affords one of the largest fields for the beneficial effect of a sane policy with regard to 'Preventive Medicine'. Endemics and Epidemics are always with us in India. It will be our duty to create a healthy public opinion in this regard and to educate the masses. Efforts will also need to be made in spreading

antenatal work and in establishing school clinics. Problems concerning social Hygiene will have also to be tackled. The profesion has thus a heavy task before it in this constructive field of work and for the energetic pursuit of this work it will have to work in close co-operation with the Ministry of Health. I also suggest that as so many free Hospitals have sprung up in the different parts of the Country during the last twelve months, efforts should be made to develop them into independent medical institutions, supported by voluntary contributions and staffed by Hon. Medical Officers. It would be also appropriate here to suggest that the work of compiling text-books in medicine, surgery, midwifery, hygiene and in other subjects should be taken up as early as possible by your consulting staff of teaching hospitals and others.

Our Organisation.

Before I conclude, there is one matter to which I will draw the earnest attention of this conference and through you of the medical profession throughout the country whether they belong to the independent medical profession or to the medical services of the State or local bodies, to the urgent necessity of organising our Association as thoroughly and quickly as possible. At the last Annual Conference held at Lahore, plans were made to bring this about. In some provinces, notably in the Punjab, the Indian Medical Association has been able to make headway in either increasing its branches or in bringing about the affiliation of several existing medical societies or associations. But as the great national movement took up so much of the time of many of our active workers all over the country, either by an actual part in the civil disobedience movement or in organising ambulance corps and Congress Hospitals, that it has not been possible to push the work of flooding the country with the branches of the Association to the extent hoped for at Lahore. Before this Conference closes, I would, therefore, urge you to fix upon a definite plan of action in this connection. I take it that there will be no difference of opinion when I say that an organisation of an All-India nature is very very essential, not only to safeguard the interests of the Profession, as a whole, but also to enable the Profession to give that advice and assistance to the State and the people, in the solution of problems concerning sanitation, medical relief, medical research or education, medical services or social legislation, which a nation has the right to expect from the members of its medical profession. No doubt, there are several active, local or provincial medical associations throughout the country, some of whom have played no mean part in developing public opinion on such matters. In the reorganisation of the whole country which is now in the air, we shall, however, fail to take our proper place if we did not, in the first instance, organise ourselves into an effective All-India body. Whether the constitution of our organisation should be, to borrow the current phraseology, Central or Federal, is to me a matter of detail. But let us not fritter away our energies in multiplying a number of bodies supposedly of an All-India nature. In union lies our strength.

You will, moreover, agree with me that it would not be possible to depend for all this work entirely on voluntary workers. These workers have so far done splendidly, but the vested interests are so well organised that unless we have some paid agency to help our voluntary workers, it would not be possible for us to achieve all that we aim at. We must take a leaf from our antagonists' book, and set up a well managed and efficient Central Office. For all this it would be necessary for each and every one of us, to dip our hands in our pockets and help the cause according to our individual means.

Appreciation of the Journal.

I may add here a word of keen appreciation of the splendid work done by that devoted band of workers, who have undertaken the serious res-

ponsibility of publishing a medical journal as an official organ of the Indian Medical Association. Having already referred to the urgent need of a proper publicity department of our profession, I need hardly add more words to express my and I am sure yours also, sense of sincere appreciation of this work, which I have no doubt will prove of the utmost service to the profession.

Conclusion.

I have deliberately not expressed any opinion on the specific resolutions coming before this Conference, though on the principal matters interesting the profession as well as the country I have tried to lay out before you the necessary and pertinent facts, to enable this Conference to make up its own decisions. I have, I am afraid, taken a very great time in the process; and must have in consequence worn out your patience. The importance, however, of the subjects I have outlined before you must be my excuse, which I trust would suffice to procure me your indulgence. The Conference will, I feel confident, do ample justice in its resolutions to these matters; and tell the powers that be, in no uncertain accents, what the profession thinks, what the country needs, in all these instances; and I have no doubt that success will crown your efforts in no distant future. The way may be long and the fight may be grim, while it lasts. But the end is certain to be a victory for the cause of justice and reason. The medical profession is perhaps the noblest avocation a man might take up. Our present rulers are turning it into a nursery of parasites through the insatiate greed of the organised Indian Medical Service, to turn the most selfless posts into the most fruitful preying ground. Our fight is against this rooted parasitism; our ambition is to make the healer, as he was intended to be, a blessing to mankind, not a curse nor a self-seeking institution. Who can doubt where the victory will eventually be?

Book Reviews

Bulletin No. 5 of 1930 from The Institute for Medical Research, Kuala Lumpur; Federated Malay States. "The use of Plasmoquine in Subtertian Malaria"—By Dr. C. Russel Aimes.

This Bulletin consists of 2 parts; the first part deals with the effects of Plasmoquine on the viability of gametocytes of P. falciparum; and the second, with the effect of the Plasmoquine on the development of crescents.

PART I.

With the discovery of gametocyticidal effect of Plasmoquine, an enormons volume of literature, concerning the possibilities of this new remedy as a valuable prophylactic agent in antimalarial schemes, has begun to accumulate. Some writers have even gone to the extent of suggesting that whole districts might be rendered free from malaria, by mass treatment of the population with Plasmoquine.

In the Reviewer's opinion, there are, at least two chief obstacles, to the very free use of Plasmoquine, as a prophylactic agent. The first of these, is the most important question of cost. The high cost of Plasmoquine precludes its liberal use, in large

antimalarial schemes. Such a cost would however be justifiable, if the advantages that result from its use, are sufficiently great. This question does not seem to have been considered thoroughly, by previous workers on the subject. Secondly, the toxicity of the drug, which prohibits its use by lay people without close Medical supervision. This is perhaps a greater objection to the *more* extensive use of the drug in mass treatment and under "Field" conditions. But it could be shown by well conducted experiments that the Toxic factor could be controlled either by a modification of the composition of the drug (by combining it with some other drug) or its dosage; and if it could also be shown that despite its obvious disadvantages, the drug has a definite prophylactic value, over and above the other prophylactic methods in use at present then a good case for the extensive use of Plasmoquine, in Malarial Prophylaxis would have been made out.

It is with a view to make out such a case that the experiments reported on, in this Bulletin seem to have been carried out.

Batches of pure laboratory bred specimens of A maculatus and A philippinensis, were used for feeding upon Mt. gametocyte carriers, both before and during Plasmoquine treatment of the cases. These fed mosquitoes were dissected on the 15th day after the feed, and their Salivary glands examined for sporozoites. The results are presented in 11 tables.

From these results, the author concludes that two 0·02 gramme (⅓ grain) doses of Plasmoquine given 16 hours apart, will render nonviable *all the crescents* in the blood of a carrier. Also from a small series of cases, who received intermittent treatment with Plasmoquine, the author cautiously concludes that such intermittent treatment also, gives practically the same results as the continuous treatment. The intermittent treatment referred to, consists in giving 0·04 gramme of Plasmoquine in two doses of 0·02 grm. each, every fourth day. After a single day's treatment with 0.04 gramme of Plasmoquine, the carrier was found to be non-infective *for the next 3 days*; and this observation suggested that this kind of intermittent treatment might have the same effect as the continuous treatment.

If this intermittent treatment proves successful, on further experimental investigations, then, one of the two great obstacles to the extensive use of Plasmoquine, in Antimalarial schemes, (viz.) the question of cost, would have been removed. Only well controlled "Field Experiments" on a large scale, based on the suggestions of the author, will demonstrate the value of the feasibility of using either the continuous daily treatment or the intermittent treatment, with Plasmoquine as a prophylactic agent. The necessity for such experiments, is rightly emphasized by the author.

But pending such experiments, a tentative scheme of Malaria control, based on the well-known Gametocyticidal effects of Plasmoquine, and the experiment reported on, in this Bulletin is put forward by the author. The scheme appears to be a very sound one and as such merits a serious consideration by Malarialogists.

Antimalarial schemes are costly enough even without the use of Plasmoquine. Any suggestion therefore, which will tend to-

still further add to this high cost, is not likely to receive the attention of those who have to allot funds for Antimalarial schemes. If Plasmoquine is to be used at all in such schemes, then, to avoid the increase in expenditure, which such a measure entails, a cut has to be made in some other direction. Quinine is sufficiently costly and therefore any suggestion based on actual experimental investigation, which will render unnecessary, the use of such large doses of Quinine, as are used in the routine treatment of malarial cases, especially gametocyte carriers, is a desideratum. To this end, certain experiments, have been carried out; and finally the author concludes rightly that ten grains of Quinine twice a day is the most satisfactory dosage, in an Asiatic patient; and it is rarely necessary to give more. The Reviewer gladly agrees with this opinion of the author. Unfortunately most of the European Research workers in India, still cling to their pet 30 grs. a day dosage, although it has been repeatedly pointed out by other workers with the Asiatic patients, to the East of India, that 30 grs. a day, is not a safe dosage in an Asiatic. Further it is also noteworthy that with larger doses the excretion through the Kidneys increases proportionately, as has been pointed out by Sir Ronald Ross and the heroic doses are thus practically wasted.

After reviewing the literature bearing on the subject of optimum Dosage of Quinine, very briefly, and after detailing his own Experiments on the subject, the Author finally concludes that 20 grs doses of Quinine daily, are as efficacious as 30 grs.

Whether this reduction of the dosage of Quinine, will have any adverse effect on the patient. (i.e.) will it increase the chances of relapse? is the question next considered. Excepting perhaps the papers of Sinton, little or no literature exists on this subject. The experiments of Sinton together with the previous work of Acton and others, indicate that the so called relapses after short (1 week) courses of Quinine treatment, are in reality Reinfectious. It is reasonable therefore to assume that a short one week or ten days' course of Quinine treatment, in a M.T. case, is quite enough to render the patient uninfective to carrier species of Anophelines.

The optimum dosage for preventing gametocyte formation, is next considered. Quinine, although it has no direct gametocyticidal effect, still, exercises a very marked influence on the number of gametocytes, by cutting off the asexual source of supply of these. But with the advent of a direct gametocyticidal agent (viz.) Plasmoquine, the question now is:—"Is it really necessary to continue to give increased doses of Quinine now as before? Or to put it in another way, when we have a direct gametocyticide, can we not, with safety reduce the dosage of an indirectly active agent? Does the available evidence justify the cutting down of the dosage of Quinine, so as to make it possible for plasmoquine to be added, without materially adding to the cost of treatment? To this, the author rightly replies in the affirmative.

As a sort of compromise between the old "Ideal" method of prolonged Quininisation, and the fashionable modern cut and dry seven day period of treatment, the author outlines his own scheme

of treatment, which deserves to be adopted as a routine in this country:—

(i) Patients with M.T. malaria should be treated in Hospital *for at least 10 days* and if possible, the treatment should be continued outside the Hospital, for another 20 days.

(ii) The standard treatment throughout, should be 20 grs. of Quinine Hydrochloride, daily, combined with Plasmoquine 0·04 grammes per day (divided into 2 doses of 0.02 grms. each) and administered once in 4 days. Sinton's alkaline mixture may also be combined with this.

(iii) In the treatment of Pernicious types of malaria, the dosage and method of administration of Quinine, are left to the choice and experience of the physician. But, when the need for such extraordinary and heroic methods of treatment is over, the standard treatment outlined above, should be adopted.

A very short summary and conclusions, together with 16 references to original papers, finishes the first part of this Bulletin.

PART II

"*The use of Plasmoquine in Subtertian malaria.*"—Before detailing the experiments, the author discusses the following questions, as a preliminary:—

(i) The production of crescents and the effect of quinine on it.

(ii) The life span of the crescents.

(iii) What percentage of quinine treated cases become crescent carriers?

To answer these questions, the author has to briefly review the work of previous observers on the subject and this review is still further summarised to aid the memory of the readers Briefly, they are:—(1) crescents developing in the bone marrow from the asexual forms take 10 days to mature; (ii) they first appear in the peripheral blood, between the 5th and 8th day from the commencement of the fever and in quinine treated cases, they reach their maximum number on or about the 10th day, (iii) The No. of crescents produced is directly proportional to the No. of Trophozoites present in the blood 10 days previously. (iv) The life span of the crescents is probably, only a few days in the peripheral blood; (v) and their persistence therein for weeks at a time, can be explained by constant replenishment of their numbers, by surviving asexual forms, (vi) The appearance of gametocytes, is no indication of the production of partial immunity in the host. (vii) quinine has no direct effect in the M. T. gametocytes; it affects their numbers indirectly, by cutting off the asexual source of supply. (viii) About 40% of the quinine treated cases (M. T. cases) become crescent carriers.

After detailing the plan of the experiments, the author proceeds to present his results in 5 protocols. Discussing the results recorded and the previous observations of other workers, he comes to the conclusion that the balance of available evidence, appears to be much in favour of giving plasmoquine, as soon as the treatment is commenced, rather than wait for the gametocytes to appear in the peripheral blood.

Occasionally, Plasmoquine treatment in crescent carriers, produced a transient increase in the No. of crescents and this, the author attributes, to the contracting effect of the drug on the spleen. But recent studies on the action of Plasmoquine on the enlarged malarial spleen, by Hughes and Shrivastava completely negative the existence of any such action in Plasmoquine. (*vide Indian Journal of Medical Research* October 1930 number.)

Finally, a summary and conclusions follow:—(i) 84 acute M. T. cases were treated with 20 grs. of Quin. Hydrochlor plus 0·04 grm. of Plasmoquine daily for 10 days and as a control 20 similar cases were treated with Quinine alone (ii) Out of 59 cases (from the Plasmoquine treated cases) who were crescent free on admission 36% developed crescents. But the number of gametocytes in these cases was much below the number produced in the control cases receiving no Plasmoquine. (iii) On the 7th day after treatment 88% of all the patients became crescent free and on, the 10th day, all of them became crescent free. (iv) The clinical course of the disease in the plasmoquine treated cases, was satisfactory, Only four cases were observed to show symptoms of plasmoquine toxaemia (e. g.) Epigastic pain, vomitting and cyanosis etc. (v) Plasmoquine cannot prevent the appearance, in the peripheral blood, of almost fully matured crescents but immature and premature gametocytes are destroyed. (vi) The results of the experiments do not favour the view that Plasmoquine acts as a synergist to Quinine in its effects in the asexual forms of the M.T. parasites.

About 25 references to original papers, followed by 5 tables (referred to as "protocols" before) complete the 2nd part of this Bulletin.

The Reviewer thinks that this Report is just of the nature of a preliminary note. Further large scale experiments designed to test the accuracy of the tentative conclusions reached by the author, appear to be highly desirable; and such experiments must necessarily be of the familiar "Field" type; for, after all, antimalarial schemes in any part of the world, are essentially of the nature of "Field" experiments, And it is these "Field experiments" that serve as an acid test for proving or disproving the soundness of the theories evolved in the laboratory.—*C. R. Row.*

Bacterial Metabolism by Major Stephenson, M. A., with diagrams, Published by Messrs Longmans Green and Co., 39, Paternoster Row, London. Price 18sh.

This is an interesting and admirable new book on the subject. Just like the Carbon Cycle, and the Nitrogen Cycle, the Bacterial metabolic cycle too, is not playing an insignificant part in the world in general and man in particular. It is an unquestionable fact that certain definite changes, chemical as well as biochemical that are taking place every day in and around us, are due to the activities of the apparently insignificant bacterial organisms.

The chapters on Fermentation and Carbohydrate breakdown are so well written, with many appropriate chemical formula, that they not only afford very interesting reading, but also supplies the necessary information for a Biochemist.

In the chapter on Growth and Nutrition, the connection between the different bacteria and yeast—consequently the complex substance Vitamin (B)—has been clearly explained in some detail with tables.

The enormous pains taken by the author in compiling this volume can be well gauged by the bibliography appended at the end covering over 30 pages of small type. The tables and diagrams added to the text serves a very useful purpose.

Well bound, neatly printed, and above all cheaply priced, the book should serve the purpose for which it is intended, and the learned author and the publishers are to be congratulated on their success.—*M. A. K.*

Outlines of Psychiatry by William A. White A. M. M. D. Nervous and Mental Disease Publishing Co, Washington.

This book is essentially intended for initiating the novice into a knowledge of Psychiatry and the author's reputation as a clinician and a teacher is a guarantee of the soundness of the principles and the correctness of the observations that are recorded therein.

Though it claims to be merely outlines the book is comprehensive and deals with all aspects of Psychiatry.

The author introduces us to a lucid account of Descriptive and Genetic Psychology, a knowledge of which is necessary to a proper understanding of the subject. He appeals to the physiologically-minded general practitioner by adopting the concept of mental processes "as taking place in conjunction with certain physiological processes in the cells and fibres of the cerebral cortex." Psychology *per se* appears elusive to the average practitioner and a correlation between the psychological and physiological phenomena stimulates his interest in the subject.

The book is divided into 3 parts.

Part: 1. deals with mental disorders in general.

Part: 2. deals with clinical aspects and under treatment the author gives the reader the full benefit of his experience.

Part: 3. is a, careful summary of the principles and methods of examination including mental tests.

A handy and valuable compendium of up-to-date Psychiatry. —*F. N.*

A short History of the Royal Army Medical Corps.—By Colonel Fred Smith, C. B., C. M. G., D. S. O., R. A. M. C. (Retired Pay Officer). Printed by Gale and Polden, Ltd, Wellington Works, Aldershot. Price 1/6.

This small volume, though not a book on medical subject, is certainly a book for the medical men. If one goes through the pages, one will be impressed with the idea that the Medical element in the military is not playing an insignificant part, especially during an arduous campaign. The many examples set forth by the young and energetic staff of the Royal Army Medical Corps during the wars fought in the course of the last 50

or 60 years should serve as a stimulant to the present generation. The history of the valour, the courage, and above all the self-sacrifice of the many who were decorated with the highest awards and medals and encomiums a military man can expect, is better read in the book than explained. Hairs will stand on end when one reads passages in the book about deeds done by our brethren, unmindful of the dangers and consequences in the fighting lines. Their one object in the world is to give medical aid to their friends. The author has taken much pains to compile the book, tracing the history of the R. A. M. C., though this unit went by different names, from the year 1660 A.D.

The small volume is very readable and priced so low that every one can purchase without any trouble. The few illustrations add to the beauty of the book. As the author himself says, it will afford interesting and instructive study and will be an "incentive to perseverence".—*M.A.K.*

Care of Teeth and Mouth.—Published by J. C. Basak, 363 Upper Chitpore Road, Calcutta. Demi Oct. 72 pp. Price annas 4.

This small book compiled by an Indian from various books and journals, is the right sort of pamphlet to be placed in the hands of the ignorant parents and medical practitioner-who have little knowledge of how and why the teeth should be preserved.

After noting down some of the popular sayings and facts about teeth, the book gives full details of the structure and functions of teeth, and physiology and hygiene of mouth and teeth and goes to the length of describing common diseases of teeth and gums, and gives details of household treatment, and prescription of tooth powders and gargles, which are by the way, the best and cheapest. Hence a perusal of and acting up to the rules laid in, the book by one and all will pave the way to "Dental Welfare", thorough mastication, Digestion, Assimilation, Nutrition Health and Life, worth living. The only drawback of the book is that it is not illustrated, so as to be understood by the student population, who are at present the worst sinners and breakers of oroal hygienic rules, and for whom, I think, the book must have been intended. All the same it is worth-while, the compiler and the authorities will see that such books are forced on the present-day student population as a Text Book, and make them observe Oral Hygiene.

ERRATA.

1. On page 219 of the March '31 issue of the "Antiseptic" line 26, under heading "Manual of Physical and Clinical diagnosis" please add, after Philadelphia, Price 25/- sh.

2. On page 222, last line, March '31 issue of the "Antiseptic" under heading "Oxidation Reduction Potentials" for 2sh. 6 d. please read 12sh. 6d.

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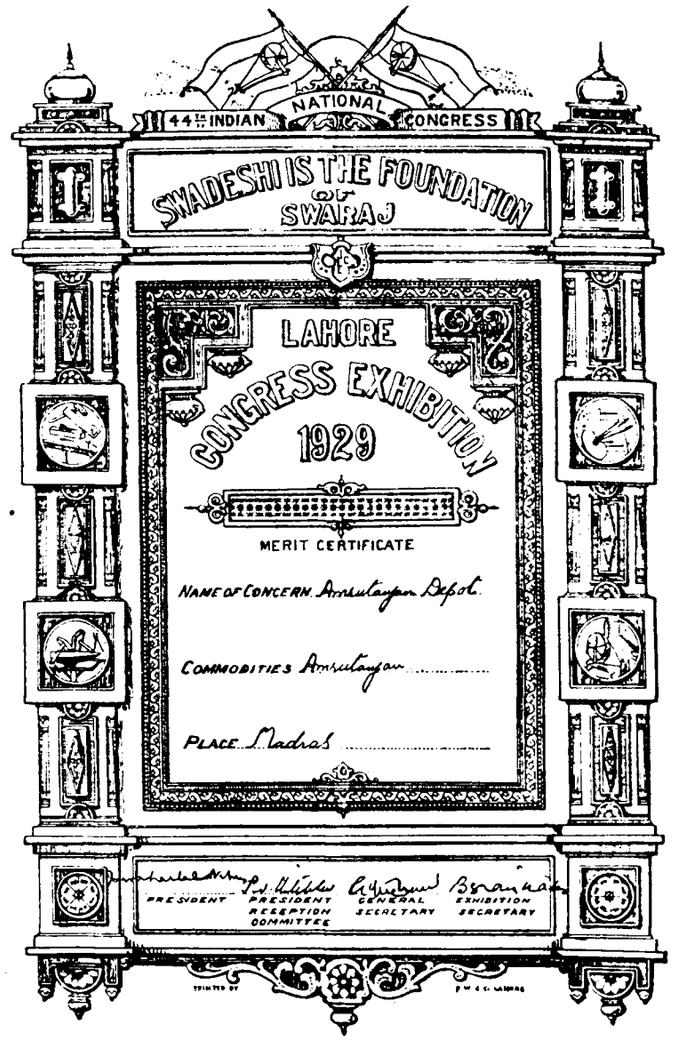

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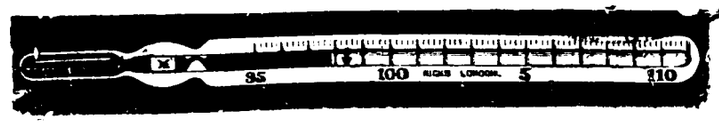

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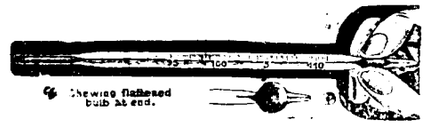

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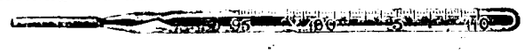
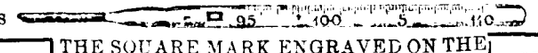
IN FOCUS  GUARANTEED

OUT OF FOCUS  ACCURATE

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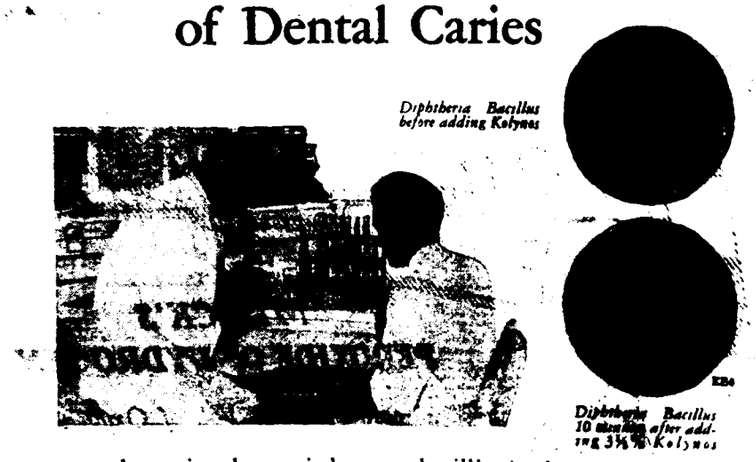

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Original articles

A PLEA FOR EARLY RECOGNITION OF OSTEO-MYELITIS IN CHILDREN.*

BY

DR. J. DURLABH DHRUV, M.S., F.R.C.S. (Eng).

Surgeon, Sir J. J. Hospital, Bombay.

Diagnosis of diseases in children is perhaps the most difficult problem in the whole field of medical and surgical diagnosis; as here where the most important item in the diagnosis, i.e, the history, subjective symptoms, eliciting of valuable clinical signs are not obtainable to the same degree as they are in the grownup. In addition, therefore, to a wide knowledge of both medicine and surgery, we ought to supplement further wanting factors by some weapon which would help us effectively and combat the difficulties already mentioned.

In the first place, the history would depend on intelligence of the parents, and hence questions after questions would have to be asked to get at the bottom of the facts. Subjective symptoms are only of little value for, the initial cryings of a diseased child have no localizing value. Clinical signs are difficult to obtain as the child resents handling by a stranger. In the face of all these diffi-

*Specially contributed to the "Antiseptic."

culties, it is up to us that we should have the highest sense of responsibility, towards the patient and try to make most of all the data available, however trivial they may appear to others.

Our sole weapon, our sole strength under these circumstances should be a closed observation under good light, careful thought, and sober judgment. With this, I am sure we could diagnose very early a disease which is responsible for a heavy mortality amongst infants and children under sixteen years of age.

Osteo-myelitis is more fatal in children, not because the child's resistance is low but because the child cannot express itself; its disease is diagnosed very very late or perhaps not at all. It is a matter of great shame to our profession that such cases should be presented at an out patient department or at a private house as a mere abscess, erysipelas, cellulitis or a double broncho pneumonia (which is strictly speaking a manifestation of pyaemic emboli in the lungs). In one such case as many as thirty abscesses have been seen in various parts of the body; the child ultimately succumbing. More than once these children have been treated for rheumatism (joint pains and fever), enteric and tuberculosis. In fully developed cases when the fever is very low the latter mistake is a very common one and often I had to convince my surgical colleagues with discussion, argumentation and prolonged talk that Osteo-myelitis was present.

If one lay so much stress on early diagnosis of appendicitis, why should we not look upon Osteo-myelitis with the same sense of gravity? Doubtless Osteo-myelitis is a more serious and fatal disease than appendicitis. In the latter the suppuration occurs in a tube which is soft and capable of burrowing in a cavity which we now know has a better protective mechanism than any other serous membrane, while in the former suppuration takes place in a hard, inelastic rigid tube (medullary cavaity) and to start with it is a wide spread blood infection—a septicaemia of the most virulent type to which may be added a pyæmia after some time.

Surgery would reach its zenith when not a single death would be put down to a diffuse suppurative peritonitis, of appendicular origin or septico-pyaemia arising out of osteo-myelitis in children. So operative factor is a mere incidence by this grave surgical disaster to which a child's limb has fallen a victim. If we recognize this disease early cure is possible—cure in these days meaning not only saving a life but perfect restoration of function of the limb with normal joint movements.

How to recognize these cases early? If a child has a high continuous fever, restlessness and a tender bony point in the course of a limb a picture of an osteo-myelitis is complete. X-Ray shows nothing at this stage. Acute-Osteo-myelitis and Scurvy-rickets

could be ruled out. It would be the greatest triumph of clinical medicine, when we can spot acute-osteo-myelitis at the outset when it occurs in a sporadic form. I attach great value to localized swelling and oedema and tenderness. This is enough to suggest exploration for bone infection.

A type of specific form of osteo-myelitis is met with in children and that is of a special interest to a student of tropical surgery. Elbows, knees, and ankles may be the seat of diffused suppuration in after convalescence from small-pox. Suppurative arthritis of elbow in tropics almost always leads to stiffness of elbows and invariably is a legacy of joint small pox.

Multiple suppurative arthritis after small-pox is usually fatal. Primarily this type of arthritis is a bone lesion. Why bones are the commonest site of election we have not been able to work out. It seems the ossific points of the ends of long bones have something to do with this. However, this is a subject which has more of an anatomical interest. Knees and ankles may become affected in small-pox.

In fine we may draw the following conclusions—my reasons for laying this before the medical profession are these :

1. This disease is very common amongst children. I have seen cases as early as three months and as late as twelve years.
2. Lower extremity is more commonly affected than the upper ones. Hip, knee and ankle regions, should be very accurately examined for pain, tenderness and swelling, so as to cure in an early stage. Otherwise Osteo-myelitis should be a fatal disease. Both life and limb could be saved if we manage to recognize the disease early.

THE NECESSITY FOR TUBERCULOSIS INSTITUTIONS IN CITIES.*

BY

RAO BAHADUR DR. M. KESAVA PAI, M.D.,

Superintendent, Tuberculosis Hospital, Madras.

The subject is an important one as it concerns the populations of cities like Madras, especially at this time when the Corporation is busy improving the health conditions of the city. City extensions are being briskly effected, housing conditions are being steadily improved and suburban trains are being developed. The tuberculosis hospital scheme which has been under the

*Specially contributed to the "Antiseptic."

consideration of the Government for a long time now is also coming to fruition and before the next few years elapse the city will probably have a decent up-to-date hospital for the treatment of tuberculosis. In connection with this scheme there have been the most alarmist misapprehensions amongst the citizens of Madras and there have been the most vehement protests against its construction in the city in which unfortunately a few medical men have also joined. Now that the question of construction of the hospital has been more or less settled and the site has been tentatively selected outside the city limits, there is perhaps a sense of relief, satisfaction and security amongst the citizens of Madras, especially some of the city fathers, who have apparently had a most anxious time during the last two years when the Surgeon-General as the medical adviser of the Government advocated the construction of the hospital on the Spur Tank. Now that the air has been cleared by the practical abandonment of the Spur Tank scheme, one can discuss without prejudice the question as to whether the location of a tuberculosis hospital within the city is a menace to the safety of the citizens. A short account of the prevalence and causation of tuberculosis will therefore be of interest.

Tuberculosis or consumption has been existent in all civilized countries for ages and has been a scourge of India from ancient times. The medical literature of ancient India is full of references to this disease and its treatment. Consumption is in fact prevalent amongst all modern nations and though till recently the disease seems to have been unknown amongst the aboriginal tribes of America, Africa and Australia, it has now made its in-roads into these newly explored regions so that it can be correctly said that there is no country at the present day which is free from tuberculosis. There may be differences in point of incidence and mortality from tuberculosis in different countries but the disease exists in all and exacts a heavy toll of mortality. It has been said that not a minute elapses without five victims of tuberculosis dying somewhere or other in the world. In fact the mortality from tuberculosis in India alone is not less than one million per annum and the total mortality for the whole world per year must be about five millions.

Towards the middle of the 19th century Villemin first proved by experiments that consumption is an infectious disease, though up till then it was very much suspected that the disease, judging from its epidemiology and other characters must be due to an organism. Villemin by experiments showed that the phlegm and material from tuberculous patients contains the living germ of the disease. It was in 1882 that Robert Koch discovered the

bacillus of tuberculosis, which is now known to be the causative organism of consumption. Since the time of Koch numerous attempts have been made by scientists to devise means for the prevention and cure of tuberculosis, basing their work on the knowledge of the bacterial causation of the disease.

The notions regarding the causation and the nature of tuberculosis have undergone considerable change during the last 50 years. Till the days of Queen Victoria consumption was considered to be a highly fatal disease and whenever a person was diagnosed to be suffering from consumption and later made a recovery it was considered that the original diagnosis was incorrect. Later in the days of King Edward VII a considerable change took place in our conceptions of the nature of consumption. Both clinicians and pathologists began to recognize that a large number of cases of consumption detected early enough recovered either naturally or by proper treatment. It was also found during the post-mortem examination of persons dying from other causes that tuberculosis of the lungs and other organs was present in a large number of the cases. At the present day in the Georgian era it is now universally recognized by the medical profession and the pathologist in particular that in tuberculosis which is a generally prevalent disease, recovery is the rule and death is the exception, occurring in such cases only as have been either badly treated or have been living under unfavourable conditions.

We now come to the most important part of the subject viz. the infectivity of consumption. Such a great deal has been written and said by the lay public on this aspect of the question that the most fanciful and alarmist views are still held by them in the matter. Tuberculosis being a disease universally present in all civilized society it is practically impossible for a human being to escape from the germ of the disease. Every day of our lives we live and move in an atmosphere and amidst surroundings that are infected with the germ of tuberculosis. It is only a question of degree and the vast majority of us must imbibe the infection sooner or later. The new born baby, the growing child, the adult and the aged are all subjected to this infection time after time, whatever precautions we may be taking against such infection. Why is it then that we do not all fall victims to tuberculosis?. The answer to this important question has now been definitely given by the epidemiologist and the pathologist. It is now fully recognized that as a result of this frequent and mild infection nature helps the body in setting up within itself an immunity or protection against the disease on the same principle that vaccination against small-pox and inoculation againt plague, typhoid and other bacterial diseases confer an

immunity against the respective diseases. What actually happens in nature is that all of us living in modern civilized countries imbibe the infection in childhood to a greater or less extent and develop as a result a very mild form of the disease recovery from which ensues when we are brought up under favourable conditions conferring upon us a protection against the disease in later life. Such of us who have been brought up under favourable sanitary and food conditions and have lived healthy lives develop the maximum protection and escape from the disease altogether. But such of the unfortunates who, due either to poverty or to ignorance do not obey the laws of hygiene, cannot obtain the proper air and nourishment and have to live under conditions of overwork and strain, fail to develop the resistance and fall victims to the disease. In a few words what actually happens in all civilized society is that almost all human beings imbibe infection, but most of them get over this infection naturally by the time they become adults, but the unfortunate few develop the disease as a result of the infection not being properly controlled by good living. It has now been definitely proved by modern scientific medical men that by the time we reach adult age most of us have developed sufficient protection against tuberculosis by natural infection and cannot therefore catch further infection even when we come into contact with consumptives, unless our bodies happen to have been run down by bad living or other diseases. It is only the child that has not had time to develop the protection by natural infection that runs the danger of getting the disease if subjected to the infection from a case of open tuberculosis. Experience all the world over has sufficiently proved the correctness of this view that there is ordinarily no danger to the grown up adult who has already developed natural protection and has lived a healthy life, if he comes into contact with cases of consumption. To put it more explicitly consumption or tuberculosis is not really infectious to the grown up person who has lived in civilized society and has lived a healthy life. In other words the bacillus of tuberculosis though theoretically the root cause of tuberculosis is not, the really effective cause of the disease. It is the conditions of life and other factors including the social and economic, which account for the prevalence of tuberculosis. In western countries these have improved considerably during the last fifty years with the result that the disease has lessened to a very great extent in spite of the fact that infection with the bacilli is still existent. In our own country the disease is still levying a high toll, not so much because the infection is much more prevalent here than in the more advanced countries of the west, but because our living conditions are worse,

our social and economic conditions much less satisfactory and the sanitary con ditions under which we live are much less ideal. The remedy therefore for the high incidence and mortality from tuberculosis is to try and improve our food, housing, and living conditions and improve the lot of the poor and working classes. The removal of tuberculosis hospitals from our midst will not in the least help us, but will on the other hand make conditions worse as I shall explain presently. What our public spirited citizens ought to do to prevent tuberculosis is not to protest against the construction of hospitals for the disease within the city but to make efforts in the right direction by improving sanitation, by ameliorating the condition of the poor working classes, by improving the food supply, by improving the wages and working conditions in factories, by opening up roads and parks, by preventing overcrowding in the city, and by providing facilities for the early detection of tuberculosis amongst the population and its prompt cure by having more tuberculosis hospitals and dispensaries in their midst. The more the facilities given to the citizens of Madras for early diagnosis and prompt treatment the less will be the incidence and mortality from tuberculosis. The greater the impediments placed in their way by forcing these institutions to go out of the city and far away from the city, the more the incidence and mortality from tuberculosis is likely to be.

There are at present about 30,000 persons or more suffering from active tuberculosis or consumption in the City of Madras. These people are living and are spread out throughout the city. Roughly it can be said that there is probably on the average one case of active tuberculosis in every other house in the city. Some houses have more than one case of tuberculosis each within them whilst the more fortunate may have none. What are the precautions that the residents of these houses are taking against the spread of the infection? There is only one answer to this question —"none". What is the cause of the increase of tuberculosis in the city? It is the harbouring of the infectious cases within the houses with little or no precautions taken for disinfection. The disease is spreading in the city because the 30,000 and more cases pent up within dirty, ill-ventilated and overcrowded houses inhabited by a poor, ignorant and ill-fed population are spreading the infection amongst the growing children in these houses, who in their turn swell the incidence and increase the mortality from tuberculosis. What is the remedy for this unfortunate state of affairs? It is certainly not the removal of the tuberculosis hospital and Institute from the city. Because this proceedure will lessen the chances of early diagnosis and detection, segregation, disinfection, proper treatment and ultimate prevention of

the spread of the disease. The immediate result of the removal of the tuberculosis hospital and dispensary from the centre of the city will be the lessening of the facilities for these 30,000 tuberculous patients of the city to have their condition properly diagnosed and treated and for the proper segregation and prevention of infection within the houses. The further off the hospital from the city the less such facilities will be. Human nature is the same all the world over. If there be an institution next door and in the very midst of the population, there is an inducement for seeking advice and treatment. If it be even a mile or two distant the tendency is to wait and avoid seeking help till the last moment when perhaps the mischief has already been worked, hosts of children have been heavily infected and the patient himself has foregone all chances of recovery. There can be no doubt in the minds of persons who know the reality about the causation of tuberculosis that the removal of the tuberculosis hospital from the city of Madras will most likely increase the incidence and mortality, until such time that the citizens realise that the real factor in the spread of infection is the infected house itself, the poor housing, and economic conditions and the want of facilities, for early diagnosis and treatment at their very doors. It is foolish to protest against the imaginary dangers of a tuberculosis hospital which treats cases of tuberculosis under the best possible hygienic conditions with all due care regarding disinfection of the sputum and other material and the prevention of spread of the infection. What about the 30,000 patients who are continuously living in the houses of Madras and are broadcasting the infection with absolutely no precautions against spread of the infection to the children in the house or in the neighbourhood ?.

All modern cities of the west have located their tuberculosis hospitals within their limits and very often in their thickly populated areas. In London, Paris, New York and other large cities of the west tuberculosis hospitals and dispensaries are located in the most populous areas of the cities.

These cities have thereby provided easy and close facilities for early diagnosis, prevention and treatment. The result is that their tuberculosis incidence and mortality have considerably fallen down i.e. by 90% to 75% during the last fifty years. The health statistician thinks that in some of these countries like America, England etc., tuberculosis will be wiped out in another fifty years. We, in Madras, still labour under the false conception that we ought to banish tuberculosis by removing the tuberculosis hospital from our cities. Unless we realise that the maximum facilities should be given to the ignorant population of the city by placing

hospitals in their close proximity so that they may have means of prevention and cure at their very doors, the disappearance of the disease from our midst cannot be dreamt of as a feasibility for centuries. To sum up, the problem of tuberculosis prevention can be solved by improved sanitation, housing, food, and economic conditions, better facilities for early detection and treatment in congested areas and by education of the masses regarding the real causation and prevention of the disease. No object can be served by trying to minimize facilities by locating tuberculosis institutions outside cities, bearing in mind that thousands of actively tuberculous patients are living and spereading the infection in the houses and these should be encouraged to take advice and treatment and thereby minimize their infectivity by being given the utmost facilities of being examined and treated at closest possible quarters.

MODERN CONCEPTION ON THE ETIOLOGY AND TREATMENT OF PERNICIOUS ANAEMIA.*

BY

K. LAKSHMINARAYANA RAO, M.B., B.S., MADRAS.

Only a few years ago pernicious anæmia retained its pride of place in the slowly diminishing ranks of the incurable diseases. But to-day, it is one of the most easily cured of all diseases. Clear reasoning, keen observation and patient research by ardent workers went to the conquest of pernicious anæmia. Among the pioneers in the field are G. R. Minot and W. P. Murphy, two American physicians, who developed the liver treatment of pernicious anæmia, the result of which was marvellous. The introduction of the Minot-Murphy treatment ranks as one of the most sensational episodes in the history of medicine. A few years ago there would have been few medical men credulous enough to believe in the possibility of so simple and yet so specific a cure for a hopeless condition.

The recognition of this disease as a clinical entity is usually attributed to Thomas Addison, and this disease is sometimes called after him as "Addisonian" anæmia. Biermer between 1868 and 1872 made further studies of this condition, and Pepper in 1875 and Cohenheim in 1876 differentiated it definitely from all other types of anæmias. Cohenheim demonstrated the fact that the more active the bone marrow in respects of its blood-making function the worse is the anaemia. In all other types of anaemia an active bone marrow is associated with improvement in the an-

*Specially contributed to the "Antiseptic."

aemia. Perhaps the red cells formed within the bone-marrow are destroyed on liberation or they are never liberated at all. It has been established beyond doubt that there is a powerful haemolytic element evidenced by the excess of bilirubin in the blood serum and of urobilin in the urine and by the deposits of iron in the liver, spleen and other organs. The difference between this and other haemolytic anaemias was demonstrated for the first time by C. Price-Jones in 1922 by the characteristic size of the red cells in Pernicious anaemia and this offers an explanation for the high colour and volume indices of the blood. Pernicious anaemia is thus characteristically a megalocytic anaemia.

Zadek was the first to find the condition of the bone marrow during life in cases of pernicious anaemia by trephining the tibia, and Peabody making use of this technique, demonstrated that during the remission stage the bone marrow was more or less normal, but in the relapse phase showed an altogether abnormal activity. To the naked eye the appearance is of a normally active red-cell forming marrow. But microscopically they are of larger size and stain differently from those of normally active marrow. They are the precursors of the large nucleated red cells or megalocytes, which are only young immature cells, identical with the red cells of the embryo and on being liberated in the blood stream, are not tolerated by the system and are destroyed. These facts prove that the seat of the disease is in the bone-marrow and is a failure in the formation of red cells to pass a certain stage or development. Key has further demonstrated that these large immature red cells tend to adhere to each other and escape into the blood with less readiness. So the anaemia is probably due partly to the failure of liberation of the immature red cells into the circulation and partly to haemolysis.

Cesaris-Demal and Chauffard demonstrated reticulocytes in blood by vital staining. If a blood film is stained with brilliant Cresylblue a net work can be shown in the cytoplasm of the red cells. In the normal blood, reticulocytes may be present to the extent of 15 % and in active formation they may reach 15 to 30 %. In the earliest red cells of the chick embryo the net work was demonstrated by Sabin and is considered as a cytoplasmic substance. It disintegrates and disappears as the cell becomes mature.

The phenomenon is thus closely related to that of polychromasia and also to some extent to punctate basophilia-perhaps all the three represent different morphological aspects of the same thing, the basophil substance of the young erythrocytes. The period of improvement in cases of pernicious anaemia is heralded by a rise and a relapse by a fall, in the reticulocyte count, which accords with the view that the disease is due to a defective formation of blood in the marrow, due to reversion of the cellular content of the marrow to the faetal megaloblastic type. On the other hand the anaemias which are admittedly haemolytic, like that of achloric jaundice, the reticulocytes reach 20 to 25% showing that compensatory blood formation is in active process. This proves that pernicious anaemia is not purely an haemolytic anaemia.

Flint and Fenwick were the first to discover the frequency of an atrophic condition of the gastric mucuous membrane as a post-mortem finding in pernicious anaemia. Later on A. F. Hurst demonstrated by test meal that free hydrochloric acid is never to be found in the gastric contents of patients suffering from pernicious anaemia. Achlorhydria may precede the disease by many years, and this may be found in several members of the same family throwing some light on the familal incidence of the disease. It is established beyond doubt that there is some relation between achlorhydria and pernicious anaemia.

Dr. W. B. Castle and his collaborators have demonstrated that by an interaction of normal human fasting gastric contents and beef muscle, a substance introduced which will cause an improvement in pernicious anaemia as that obtained with liver treatment. But when used separately they are ineffective. The nature of the intrinsic factor contained in normal gastric juice remains unknown. "The experiments", writes Castle. "are consistent with the hypothesis that the intimate nature of this reaction is a digestion of the protein made by an enzyme working in an acid medium. If this work can be taken at its face value, an analogy is established to the condition present in diabetes. In diabetes the pancreas is the organ at fault, and the physiological defect resides in the internal matabolism of carbohydrates. In Addisonian pernicious anaemia the defect lies in the external manipulation of the protein and the stomach is the organ that is deficient".

In 1900 the work of Hunter brought out the important part played by septic teeth in pernicious anæmia. His observations, as well as those of Hurst, on gastro-intestinal sepsis with its concomitant absorptions of toxins are based on firm experimental evidence. Toxins may be caused by abnormal fermentation or produced by abnormal growth of organisms in the bowel; thus Kiralyfi implicated the colon bacillus, Hurst the hæmolytic streptococci, Moench, Kahn and Torrey the bacillus welchii and Davidson all the organisms of the bowel in general. Organisms in this disease are increased in number and found at a higher level in the alimentary tract, probably the upward spread being assisted by the achlorhydria. By injection and ingestion of B. Wel-

chii and their toxins blood pictures similar to pernicious anæmia were produced in monkeys and rabbits. S. Davidson in an investigation of Pernicious anaemia with special reference to B. Welchii as the causal agent, presents the following summary of his report: (1) Clinical symptoms and pathalogical findings support the Pernicious anaemia is caused by an absorption of toxin from the intestinal tract. (2) Bacteriological examination of both small and large intestines shows a non-proteolytic formentative flora which is typical of Pernicious anaemia. (3) Biological and experimental evidence points to the B. Welchii as the most probable causal agent. Whipple has remarked that the toxic theory has little to support it and has been responsible for much confusion.

Liver treatment:—Minot and Murphy were the first to take up the dietic studies in Pernicious anaemia. Their atten tion was first directed towards the improvement of anaemic patients with a diet rich in protein and vitamins and later on found the importance of liver as an article of diet with a rich variety of amino-acids and much iron. Whipple and Robscheit-Cobins investigated the role of liver administration in experimentally produced secondary anaemias in dogs and this was made use of by Minot and Murphy by feeding patients suffering from Pernicious anaemia with liver. This gave amazing results and revolutionised the treatment of Pernicious anaemia. There was rapid and striking improvement with an increase of red cell and reticulocyte count, and a fall in the plasma bilirubin as the result of diminished blood destruction. It is evident by now that the liver contains some substance apparently nitrogenous but certainly non-protein in nature and when taken by mouth will improve the condition of blood in Pernicious anaemia.

But one thing must be stressed that sufficient quantity must be given to be effective. Less than 250 gms. of prepared beef liver per day is found to be of very little use. This may be counted as half a pound of liver as purchased. Smaller doses show little response in arresting the progress of the disease. S. C. Dyke gives a special liver diet as follows:—

Breakfast: one egg, dry and crusty bread, butter to taste (not more than two rounds), tea or coffee (plenty of milk, sugar sparingly).

Lunch: 3 oz of raw minced liver (made into sand-wiches), sause may be used for flavouring, an orange.

Dinner: 2 oz of lightly cooked liver, 3 oz of meat (if desired), 4 oz of cabbage.

Tea; 1 oz lettuce, bread and butter (two rounds), one orange, tea.

Supper: 3oz of liver, as thick soup (flavoured with vegetables). 3 oz of greens, Bovril.

For vegetarians meat may be replaced by wheat and milk or butter milk. Liver can be better tolerated by those who are not accustomed to take meat when taken as sand-wiches. This may be prepared by mixing minced liver with jam and putting it between two thin slices of bread.

In several cases of anaemia bordering on coma with considerable anorexia, gastric pain and intractable vomiting, the patient can neither take nor digest a large quantity of liver; but a fluid preparation of liver can be had recourse to. Pickering gives the following method for preparing a fluid extract. Eight ounces of fresh liver is scraped so that the liver parenchyma is separated from the connective tissue and reduced to a finely divided condition. To this the juice of two oranges and two lemons, one ounce of sugar and one ounce of port wine may be added. This must be strained through a single thickness of gauze, and water added to make up to 8 oz. This can be easily given in small quantities throughout the day. Though the active principle of liver is thermostable to the heat used in ordinary cooking, some believe that there is a certain reduction in potency on cooking. So it is advisable at least in the early stages of treatment to take it raw, and even when it is cooked, the patient should be warned against overcooking.

An important development was the successful preparation by Cohn and others of an extract of liver containing in small bulks the unknown factor which produces the ameliorating effect. Since then the method of production has gone through very many changes. The activity of liver extract was investigated by the British Medical Research Council and the extract used was then prepared by a modification of the American process, through the co-operation of Prof. F. R. Fraser. The clinical reports from a number of doctors showed satisfactory results. But the dose of extract should correspond with half a pound of liver. They are put up by commercial firms both in liquid and solid forms. The advantages of these are they are in a concentrated form and so the quantity to be taken is smaller, and of a non-protein form and so easily digestible. Vegetarians will very much prefer this to taking a large quantity of liver. But to be of any use the efficacy of each preparation must be well investigated and should be administered in efficient dosage; otherwise it will bring discredit to the liver treatment.

Symptoms referable to the nervous system if of a recent date and of the nature of mild parasthesia may completely disapp ear. Where they are the result of actual nervous tissue destruction no

cure can be expected, but further exacerbations do not occur. But some improvement may be felt due to the muscles becoming stronger and the patient can walk better. Some patients may show very considerable improvement; but cases have been reported in which, in spite of the blood pressure becoming normal with liver treatment, the degenerative condition of the nervous system has progressed to paralysis and complete disablement. Wilkinson and Brock-bank are of opinion that when the deep reflexes are affected little improvement in the nervous system can be expected.

When the blood picture becomes normal and the patient's general condition is improved, the dose of liver may be lessened. But the degree to which it can be reduced depends on individual cases and can be found out by trial and observation. For some, half a pound of liver three times a week is sufficient and others may require more or less. But it is important that the patient should be observed for signs of relapse, because the same dose may suddenly become insufficient and relapse may occur. Relapse may be accompanied by vomiting and gastrointestinal symptoms which are liable to be attributed to liver indigestion. But it should be remembered that these are generally produced by insufficient dose of liver and are accompanied by blood picture characteristic of pernicious anaemia, in which case the increased dose of liver is all that is required. With more liver or extract, the gastric symptoms disappear and the blood picture becomes normal. The danger of not recognising such a condition is that subacute combined sclerosis will progress more rapidly during relapse with severe permanent symptoms.

Hog's stomach treatment:—Castle has shown the relation between gastric juice and pernicious anaemia, and shown how the cases improve by giving muscles after interacting with human fasting gastric contents. Further work on this field was done by C. C. Sturgis and Raphael, who investigated the action of hog's stomach in the treatment of pernicious anæmia. The Hog's stomach was finely minced and dried at low temperature after removal of mesenteric and fatty layers. It was then defatted by repeated washing with light petroleum and yielded an almost tasteless product which was given with tomato juice. This desiccated defatted stomach about 10g. for each million deficit in red cell count gave as good a result as liver administration. But when the muscular layer or the mucosa of the stomach was separately given the result was negative. The authors conclude adopting Castle's hypothesis that an enzyme secreted by the mucosa acts on the muscle protein which is brought about during the preliminary mincing of the fresh stomach. John F. Wilkinson tried both uncooked fresh hog's stomach and desiccated stomach in pernicious

anæmia cases and says that the results so far obtained show that this diet, weight for weight, is at least equal to or better than a liver diet. He gave about half of a fresh stomach daily for each patient or 100 gms. of desiccated stomach muscle (equivalent to 300 gms of fresh product). The desiccated hog's stomach preparations are in the market in the name of ventriculin (Parke Davis & Co.) Wilkinson in a recent article on the treatment of *Pernicious anæmia* with hog's stomach (B. M. J. Jan. 17, 1931) concluded that it has given highly satisfactory results, undoubtedly better than with liver, while the relative effective dose is less than the liver, the speed of remission quicker, and cases with early postero-lateral involvement of the spinal cord have shown remarkable improvement and paraesthesia of hands and foot (without alteration of reflexes) have been almost completely cured in almost every case. The preparation used in these cases is "exbomak" of Benger's food, Ltd., the initial dose of which is about 25 to 30 gms. daily and the maintenance dose, when the blood becomes normal, is about 10 to 12 gms. The latter varies, as with liver, with the needs of each individual.

Blood transfusion.—There is a real danger that the older methods of treatment may be relegated too much to the background with the inauguration of liver and hog's stomach treatment. Of these blood transfusion was an old method of treatment which once had its day as a treatment for Pernicious anæmia. There was some improvement with this, but was only transitory and was not able to check the progress of the disease. But to-day it is an useful adjunct for other methods of treatment. A blood transfusion has been largerly responsible for tiding the patient over a dangerous period in many cases. In most severe cases the delay of a few days before administration of liver commences to take effect may be fatal. In such cases blood transfusions can only save the patient. Some cases with slight rises of temperature respond badly to liver treatment, in which case the outlook can be improved by a timely blood transfusion. Severe cases with a high temperature often respond well by blood transfusion and in some cases it is probably life saving measure.

Hydrochloric acid.—With the observation of Achlorhydria in nearly all cases of pernicious anæmia. considerable importance has been attached to the administration of dilute hydrochloric acid. Hurst has suggested that the acid acts as an intestinal disinfectant and that in its absence organisms are capable of living and do live at levels in the bowel at which they are not found in individuals with normal gastric acidity. He advocated large doses as much as a dram of the dilute acid to be given well diluted during meals. With the advent of the liver treatment it

has been found that patients respond to liver treatment as readily without the acid as with it. Now the hydrochloric acid administration does not form part of the treatment. Some patients feel better with acid treatment along with liver and so there is no harm in giving small doses of the acid, XV to XX minims, during or after food. As a routine treatment there are few adherents to it, because the disinfectant theory is definitely over-ruled.

TREATMENT OF SYPHILIS AND ITS STANDARDIZATION.*

BY

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Syphilis is a very old disease. To trace the origin is just the same as to trace that of mankind. During the last 25 years the knowledge of this disease has developed quickly by the wonderful discoveries in the etiology, pathology and their treatment. In the year 1925 Schaudinan discovered the Sp. pallida. Within a year after, Wassermann and his colleagues discovered the Wassermann reaction, which even now stands without a parallel, as a practicable and valuable procedure for the diagnosis of this disease and also as a means for the control and check upon its treatment. Four years later Ehrlich, Bertheun and Hota completed its wonderful climax upon discoveries with Salvarsan. This remarkable trial of discoveries is as far as can be seen without parallel in the history of medicine. Years after in fact 15 years later i.e. 1921 Sazerac and Lawaditi first recommended intramuscular administration of bismuth, which has opened floods of light on the so called methods of treatment of syphilis.

Since these discoveries, attempt after attempt has been made to standardize, as it were the treatment of syphilis with different combinations. Though many combinations have been recommended still to standardize the treatment of a disease and especially syphilis is not practicable because of the probabilities and possibilities of so many modifying factors requiring consideration. For this reason we must possess a sound knowledge of the pathology, of syphilis, with the pharmacology of the drug employed and the modifying influence upon the treatment that may be exerted by the disease. Furthermore the constitution of different individuals influences the course of disease and the amount of treatment required for its eradication or arrest. At first just after the discovery of Salvarsan hopes of high magnitude were entertained and in fact it was thought to be the "Magna therapic Sterilans." Later on it was known that one dose was not sufficient and that repeated

* Specially contributed to the "Antiseptic."

doses were needed. At least we can but realize that we have in some arsenical compounds and in some salts of bismuth powerful spirochoeticidal medicaments, but their administration must be guided by our present knowledge of absorption, elimination, their pharmocological and toxic effects in infected human beings.

ARSENIC.

Action.—Arsenic as is well known is the chief ingredient of salvarsan, neo-salvarsan, Sulpharsenol and silver-salvarsan. The method of administration is by intravenous route. The question of absorption here is of little importance, because the ingredients are thrown into the blood solution and naturally the parasitical effect is much quicker, but with this there is also a great disadvantage and that is of rapid elimination with a shorter period of spirochoeticidal activity ; likewise toxic effects are more likely to occur. Neo-salvarsan and its compounds could be administered by intravenous route, so also by the sub-cutaneous and the rectal, but the former two are painful.

The rapidity of absorption as shown by Swift (1) is influenced by many factors requiring due consideration : the solubility of drug, the menstrum employed for suspensions and the local degree of inflammatory reaction. If it is only suspension, about 30 to 40 % absorption of arsenic occurs during the 1st week, about 50% during the next week and it is very common to still find about 10 to 20 % even after 6 weeks in the muscles. If neutral suspensions were used the rate of absorption was most constant. The distribution of this drug by the blood, doubtless reaches all portions of the body, but is deposited and retained more by some organs than the others. This concentration in the cells of an organ or tissue is more dependent in part on the concentration in the surrounding fluids, since as mentioned by Kolmer, (2) the simple diffusion follows the law of mass action. Kolla and Youmans (3) by colorimetric modification of Abelin's method found that this drug was present in spleen, liver, kidneys and lungs three hours after intravenous injection ; only traces were found in brain and none in cerebrospinal fluid. With these findings, it is seen that the storage and retention varies greatly among the different organs. The same is also true with intramuscular injections. Whilst MacIntosh and Fildes found that the brain and cerebrospinal fluids contain no arsenic after intravenous injection and this was further confirmed by Rudolf and Bilmer (4) by the Gutzeit test.

Salvarsan and its compounds are as seen above very potent in the primary stages. With the increase of the stage of the disease it needs help from other medicants which have spirociticidal

properties. In fact arsenic by itself is not so potent as it was first thought in 1905. It has been shown that in neuro-syphilis its action is very poor, and no arsenic is found in the cerebrospinal fluid. It also has a deleterious effect in cardiac diseases and has a destructive action on optic nerve, if pushed further, in fact the preparation Arsphenamin is still worse. In broad and general manner, it may be stated that the toxicological effects of salvarsan and its compounds are numerous and exceedingly complex; as far as it is known there is no other class of compounds so complicated in its different toxic actions.

BISMUTH

Since compounds of bismuth have been employed in the treatment of syphilis duriug the past few years, our knowledg of pharmacology has shown that when bismuth is injected intramuscularly it gives rise to a new compound termed "Bismoxyl". The substance in the extract which has the property of changing bismuth into bismoxyl is termed "Bismogine". It has been shown that blood is incapable of producing bismogene wherewith to activate elements to bismoxyl. Bismogene derived from muscle is the only potent source capable of production, but that derived from brain tissue has better action. To reach the most effective end bismoxyl derived from brain would be ideal, but this is not feasible.

There are on the market compounds of bismuth, either in solution or suspension in isotonic solution or in vegetable oils. It is found that the suspended or insoluble salts are slowly and uniformly absorbed whilst the soluble compounds are more quickly eliminated, and thus the parasitological action decreased, It is often the cause of suspension of treatment due to the toxicological actions. Beinhauer and Jacob [5] injected preparations of bismuth in gluteal muscles followed by roentgenological examinations for absorption and found neotrapol and bicreol widely differed and much better absorbed than others, Potassuim-bismuth-tartarate and bismuth salicylate were very slowly absorbed and showed cumulative effect. In treatment soluble salts are not preferred to the insoluble ones, as the action is not uniform and they are more toxic. Kolmer shows that the absorption rate of insoluble bismuth compounds intramuscularly is somewhere between 5 and 7 days.

The organs which excrete bismuth are the kidneys, sweat-salivary glands, mucus membrane especially buccal, and the entire gastro-intestinal tract. The milk of lactating woman also excretes bismuth. Aubry [6] was able to detect bismuth in a dilution of 1:60,000 by employing a modification of Lagu's method. Demelin

found bismuth by the same method from cerebrospinal fluid of patients with intramuscular injections of 0.2 Grains of neo-trapol.

The spirochoetal activity of bismuth expressed by Milian [7] is as follows:—

Arsenic 10
Bismuth 8
Mercury 4

Accumulative action of bismuth is in my opinion, more in syphilitic tissues than in the non-infected parts. Of course the drug is being constantly eliminated, but with proper dosage it is possible to maintain this good action, especially in infected tissue, without damaging the kidneys etc., though the amount in the blood may be below this level.

The lesions which react to bismuth better than arsenic are the lesions of mouth and tongue such as leucoplakia, ulcers and gumma. It is the only drug that could be safely used in T.B. cases complicated with syphilis. Anwyl-Davis [8] mentions that in "even small doses (arsenic) given to patients suffering from T.B., the results were inimical to them, whilst bismuth has no such deleterious effect and usually checks syphilis, thus giving the patient a chance of recovery". Here mention may be made that bismuth not only checks the spread of syphilis but also has a slow action on the disease. In advanced organic lesions arsenic is again a dangerous drug to use, but bismuth even in worst selected cases of advanced lesions has shown good effects especially in cardio vascular syphilis, and I personally [9] think it is the drug of choice. Bismuth furthermore shows its superior action in neuro-syphilis. Smith and Forter [10] found that in cerebrospinal syphilis the symptoms were relieved by bismuth. They confirm the value of bismuth in relieving the subjective symptoms of syphilis of nervous system. whilst in babies it gives better results than even arsenic. [11] I have already shcwn that bismuth ameliorates the lightening pains, gastric crisis and incontinence of urine. The "halo of miningites" according to Col. W. Harrison vanishes. The ataxia and incordination is lost but the pupilary changes and deep reflexes are the last to show signs of recovery.

The results of the action of bismuth observed by me were very encouraging. In some cases bismuth was the only drug used and the results published sometime ago. [12] In others bismuth was used in combination with arsenobenzol series, and in others administered with mercurial preparations. During these series of observations both insoluble end soluble preparations were employed. As mentioned above the insoluble ones especially

neo-trapol, bicreol, and bismosstab are the drugs whose actions were superior to many others employed.

CONCLUSIONS.

Often medical men have made requests and wished for the standardization of treatment. The only advice that could professionally be given to them would be not to rely on any fixed plan or method, because of the possibilities and probabilities of so many different factors requiring considerations as shown above. This article purely aims to show that the standardization in any mode, whether by fixed courses of injections or the time factor method with different combinations, is not the only way left, but the best method would be to study the drug and its reactions produced in the human being under treatment. The other factor to study and regulate treatment would be the conviction of the patient during treatment, and the limit to which the treatment could be safely pushed and the rest period for the tissues to recover from the accumulative actions of the drug.

In primary cases it is better to start with arseno-benzol compounds and keep going with bismuth ending the treatment with salvarsan and its compounds.

In secondary cases the same mode of treatment as that of primary cases works well.

In tertiary cases especially the advanced organic lesions, such as cardio-muscular, neurosyphilis, lesions of eye and mucous membrane especially buccal, I prefer purely bismuth treatment.

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THE TREATMENT OF CHRONIC MALARIA AND MALARIAL ENLARGEMENT OF THE SPLEEN BY INTRA-VENOUS INJECTION OF QUININE AND ITS ECONOMIC IMPORTANCE.*

BY

K. N. GOVINDA MENON L.M.P., M.O., L.F. *Hospital.*

Vayittire, Wynaad.

" Malaria " as we all know, is a disease which has hitherto resisted a parmanent cure in a patient living in an endemic area ; and though quinine and its various forms and derivatives and the very many patent preparations classed as 'Aquecides' have their own value, the fact still remains that none of these has been able either to prevent an attack of malaria or to confer immunity in a patient once sterilized of his system from the germ.

During the past three years of my service in the Wynaad—a malarial country—I have had opportunities of studying and treating the disease in its various clinical manifestations, though the cerebral and algide forms were not of frequent occurrence. Most of the cases that came to hospital were of a chronic type, with unusual enlargements of the spleen, sometimes jeopardizing even the free breathing of the poor patient. In the ordinary acute or sub-acute varieties of the disease, the system of treatment has been simple enough ; an initial opening dose in a commonly constipated patient followed by a few doses of the plain quinine or cinchona mixture (10 gr. to oz. i) with or without Mag. Sulph. as is indicated in individual cases have generally proved effective, though in the more persistent forms, wherein this method was found inefficient, Quinine in effervescing mixture form (gr. 5 to oz. i) had to be employed. Even in certain cases wherein intolerance of quinine by the stomach (as shown by the persistent " vomitings " of the patient) was marked, a dose or two of a mixture containing 10 gr. pot. bromide, 3 min. acid hydrocyanic dil., 10 min. sprts. ammon. aromoticus made up with an ounce of Aqua chloroform, was found to act wonderfully in checking the vomiting, thus paving the way to the further administration of Quinine with impunity.

It is however in the more chronic forms, which are not so easily amenable to this form of treatment, and wherein the morbidity—if not the mortality—of the patient is more pronounced, that the injection method as advocated by me herein, was found to be most effective. The hypodermic or intra-muscular routes, which are the generally accepted " *modus operandi* " of giving

*Specially contributed to the Antiseptic.

injections of quinine, have been found to be either too painful or too risky in the liability to produce suppuration, abscess formation, &c.; and I have neither advocated these ways nor employed them in my practice so far. On the other hand, the intra-venous route of giving the drug has always been found to be very effective, and I have not had even 2 per cent failures in the very many cases treated thus; and it is this success in the line of treatment, that has now emboldened me to write about it in this article. I am so convinced of the efficacy of this method, that I have no hesitation at all in recommending it for the trial of my fellow practitioners, engaged in the treatment of this dire disease.

Remembering that sporulation of the parasite in man, synchronises with the "rigor" and "hot stages" of the 'fever' and bearing in mind the fact that free parasites are more numerous in blood at this stage of the disease, I always advise such of my patients who suffer from the malady at regular intervals, to come to me for the injection at least an hour or two before the expected rigor—the idea being to make free quinine available in the blood to encounter the active young parasites as they emerge from the R. B. Cs. into the plasma. Quinine is found to be a direct poison to protoplasm and if it is not by the direct poisonous effect of the drug on the parasite that malaria can be eradicated in a man, how else quinine acts and becomes a specific in the treatment of the disease cannot be said with certainty. Ordinarily we have been taught to employ the intra-venous method of giving quinine only in cases of hyper-pyrexia or in the cerebral types of the disease but, here again, apart from the action of the drug on the heat-regulating centres in the cerebrum, in bringing down the temperature, it is very doubtful that the specific action of the drug is at all brought into play.

The role of the drug in the treatment of the disease being thus clearly understood, my patients are advised to receive the injection into the vein of about 7 gr. to 10 gr. of the acid hydrochloride of the drug in about 10 C.C. of sterile normal saline, warmed up to normal body temperature, about an hour before the expected rigor. Now, it is known that it takes, at least 24 hours, before the whole drug is excreted from the blood, so that it is sure, that a good many if not all of the free parasites that find access into the plasma are killed by the quinine thus freely circulating in the blood. It is not difficult therefore to realise how a couple of such injections help to sterilize a patient from the disease-germs and thus cure him of the ailment at least for some time to come. In the large majority of cases treated in this fashion, I have not found it necessary to give more than two or three such injections in any single case. The patients also relish this line of treatment as neither the

bitter taste of the oral administration nor the painful arm or thigh of the hypo or intra-muscular routes have to be experienced and more especially because they have been made to feel a sense of well-being and perfect security against a recurrence of the symptoms for a long time to come, after these injections; apart from a temporary giddiness or malice experienced by certain patients, I have not had any sort of complaint from any one so far.

The freedom from fresh attacks and the sense of well-being in patients treated by this method have been so pronounced and far-reaching, even in those living in endemic areas, that I am emboldened to propound the theory that there is a certain amount of lasting immunity secured by these patients against the disease though this has not been scientifically proved as yet. The popularity of this method has been so great that it would not be out of place here, if I quote one example of how an Anglo-Indian gentleman employed in an estate near here, has now come to swear by it and to repudiate any other sort of treatment for 'malaria'.

Mr. E.V. the gentleman in question, has been a subject of 'malaria' for about three years continuously and has been taking quinine in one form or other so incessantly that when he came to tell me about his case he was too very vehement in his protest against the efficacy of quinine in curing malaria. Oral administration proving futile in his case, he told me, that he even submitted himself to one or two "pokings of the needle" by the usual route; but the after pain of the injections was more pronounced than the effect of it on the disease itself. He therefore repudiated any sort of injection of quinine, though I fully assured him that my method of giving it would not produce the pain he so much dreaded. However, finding him intelligent and educated, I detailed to him the full parasitology of the disease laying special stress on the 'life cycle of the parasite' in man and the value of quinine in combating these parasites successfully; and being reasonable, I suppose, the gentleman readily consented to try my method and came to me for the 'injection' two days hence, at the appointed hour when, with due precautions and all care, I gave him the first injection of 10 gr. of the acid hydrochloride of quinine requesting him to go over to me for a second injection two days hence. He was punctual in his appearance for the second injection and told me how remarkable the effect of the first was in him. He felt so well and bright being quite relieved of the general malice and unhealthiness about him and since this second injection for about eight months or so he felt so well off that though he was living in the same place and under the same environments he began to forget all about it; I had, however, to give two more injections after this period, as he contracted the infection afresh,

and since this second course, he has been free from the disease now for about more than twelve months. He is quite hale and healthy now and attends to his daily work feeling himsef a new man. The conviction of the efficacy of this method has been so great that many more patients have come to me for being treated similarly, and especially on the advice of this gentleman.

The past three years have given me opportunities to treat about, not less, than a thousand cases of malaria—about 95% of them coming from the cooly classes—by this method and in about. 75% to 85% of the cases I have found it more effective than any other method; one factor worth mentioning in this connection is that this line of treatment has obviated the necessity of the much talked of "long continued use of quinine" or other similar drug 'by mouth' for the cure of chronic malaria; and almost none of the patients treated in this way has taken any quinine or other mixture thereafter. In certain cases, however, where fever was not of great consequence, but the anaemia and the mechanical inconvenience of an enlarged spleen were the more predominant factors sought for to be treated, a few doses of the triple sulphate mixture (with 5 gr. to oz. i of quinine in it) with As. and Stry. in suitable doses, augmented the injection treatment successfully. Big malarial spleens have been considerably reduced in size by this method while smaller ones have been made to retrace to their original sizes.

There are about two dozen cases of "cure" thus effected. I see almost every day those patients who have now been free from the disease for over a year and more. Their everyday lives have been just the same as before and no sort of precautions have either been imposed upon or adopted by them; nor have they been taking quinine in any form thereafter.

The economic value of this injection method of treating malaria may now be clearly made out. Both the "capitalist" and the "labourer" are benefitted each in his own way; and while on the one hand there is a great relief in the matter of expenses on sick" for the capitalist, there is a feeling of happiness and well-being on the face of the poor cooly, who has to toil all day for his daily bread—now unhampered by these recurring fevers

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Cases & Comments

A CASE OF IDIOSYNCRASY TO TINCTURE IODINE APPLICATION

BY

A. P. JANA M. B.,

Medical Officer, Digambor Charitable Dispensary Balagaria.

A Hindu male named Durandhar Singh an inhabitant of Arab District aged about 65 years but at present residing and working as Durwan at Balagaria of Midnapore while alighting from a motorbus plying on the main road slipped and sustained the following minor injuries. Abrasion about 3″×2″ over both the knee caps, another abrasion denuding the epithelium only over the inner aspect of the middle of the right tibia. He was seen and attended by my compounder who washed the injuries with Lotio Hydrarg Perchlor 1 in 500 and then applied Tincture Iodine over them and sealed them with thin layers of cottonwool soaked in Tin. Benzoin Co. and applied a bandage over each knee to guard against external infection. The following day the patient again met the compounder who finding the abrasions sodden, washed them with Merkozone and applied Tincture Iodine but no bandage was applied on that day. The Tincture Iodine that was applied was the simple Tincture Iodimitis B. P. On the 4th day the patient and the compounder being terrified at the horrible appearance of the legs brought the matter to my notice. Both the legs from the middle of the thigh down to the toes were horribly swollen, so much so that it did not even pit on hard pressure. The abrasions were turned into sloughing ulcers. The whole of the legs were of red angry appearance and painful. The inflammation was extending upwards and at the extending margins red swollen nodules of the size of peas were appearing. The nodules were aggregated together towards the ulcer and were more and more separated towards the periphery. By the time the peripheral nodules were about 9″ away from the margin of the ulcers. The congregated nodules formed a hard mass over a wide area of skin surface. The patient complained of slight fever the preceding night.

I took the case to be one of severe dermatities due to idiosyncrasy to iodine. I advised the application of Sodi. Thiosulph 5 %

ointment to rub over the part and calamina preparata to dust over the ulcer T. D. Saline purgatives were given. Next day I found that the inflammation has not extended further up and the same treatment was repeated. On the third day of my treatment the inflammations diminished markedly and a 5% lotion of sodi Thiosulph instead of the ointment was given to keep the parts soaked in it and the ulcers to be dusted as usual. On the 4th day the patient felt markedly relieved and most of the nodules had by the time turned into blebs which were punctured with sterile needle and calamina preparata dusted. The inflammation subsided completely within a day or two more.

A total and differential count of blood taken on the 2nd day of any treatmont.

Haemoglobin=80%
R. B. C.=4,980,000 Per c.m.m.
W. B. C.=7,600. „ „
Poly=74 %.
S. M.=16 %.
L. M.=10 %.
Eosino=nil.

The past history of the patient could not reveal any occurrence in which Tr Iodine was applied, neither could he make any statement regarding the application of Tr. Iodine in any other members of his family.

This case merits its publication due only to its extreme rarity. A fatal case of this nature appeared in the *Indian Medical Gazette* Jan. 1931 page 42 abstracted from the *British Medical Journal*. In that case an operation was performed for which Iodine had to be applied several times and in more devitalised tissues. Who knows that this case would have turned so under the same circumstances.

A CASE OF CONVULSIONS OF ONLY HEAD AND NECK

BY

V. S. GOPAUL L.M.S.

Medical Officer, Doodhadi Dispensary, Hyderabad, Deccan

A woman aged 20 years living in Gudal village conceived a female child. After delivery, she had fever for 10 days, Then fever stopped. Two or three days later, she developed convulsions when I went to see her, she suddenly devoloped peculiar convulsions of only head and neck, and these convulsions lasted for full

half an hour or more. Such attacks of partial convulsions, she had 7 or 8 times a day. During the period of convulsions, her face became flushed, and she could not express her feelings, though she seemed to be conscious of her condition when this attack stopped, she became quite alright, and could answer questions intelligibly.

A purge of calomel was administered to her, one pituitrin injection was given, and she was put on mist carminitive with pot bromide. Late in the evening, she passed two bad smelling motions, and a round worm. That day she had convulsions only two times. As there was no stock of Santonin, she was not given the same. Next day she was given a purge of mag sulph. and the same mixture was continued. With this treatment, she became alright.

Perhaps worms were the cause of her peculiar illness.

A CASE OF ACUTE COUGH.

BY

DIN DAYAL PRASAD L.M.P. (B. & O.)

Lakshmiganj District Gorakhpur, U. P.

A patient aged 35 years, male, consulted me for his cough. After examining him I prescribed the following.

(1) Pot. Iodide	grs v	}	Every fourth hour.
Tr. Squil	m v		
Syrup Prun. Virg	3 p		
Syrup. Tolu	3 p		
Aqua	ad ℥i		
Ol. Eucalyptus	℥i		
Tr. Benjoin co	℥i		

For inhalation through a tea-kettle (as no Bronchitis-Kettle could be available).

He took the first dose of the mixture no 1 at about 6 p.m. and repeated it at about 9-30 p.m. The inhalation was done at 6 or 7 p.m.

At 10 p.m. the patient came to me complaining of some pain in his left Eye-ball. There was nothing abnormal to account for it then. At 2 A.M. I was called to see him again. He was then complaining of severe pain in his left eye-ball and over the region corresponding to the frontal sinuses of that side. The conjunctiva was slightly congested, but there was a little chemosis of the lateral parts of the conjunctiva, and profuse lachrymation and Eye-lids swollen.

Will any of my professional brothers let me know whether they think this severe pain and eye trouble could be due to the Iodide? If so, whether this was possible within four hours of administration and in a patient who had suffered from syphilis which was not fully treated?

INDICATIONS FOR THE USES OF SOME COMMON PATENT MEDICINES IN THE TREATMENT OF DISEASES

BY

DR. K. D. MAZUMDAR, M. B.,

(*House Physician, C. M. S. Hospital. Calcutta.*)

In this connection, I want to state that on several occasions, my attention has been drawn by my students to the difficulties they invariably experience in selecting a suitable patent medicine and then again to explain its uses and doses, I have no hesitation in saying that there are very few practitioners amongst us who know the complete list of such drugs as they are being almost daily manufactured from several parts of the world. We very often receive literatures from far and near and I say with confidence that they are too numerous to mention.

In my humble experience, I must defend myself by asserting that our old friends are almost always faithful: There are sufficient risks in recommending new and untried patent medicines to our private cases; although this may not hold good sometimes in hospital practice. Views, regarding the prescriptions of latest remedies (just come out of the laboratories and manufacturers den) and only read from advertisements in journals vary, but in my humble opinion they not only prove dangerous sometimes to patients but also become very difficult at times to be obtained readily from the Chemists' shop. If any one thinks that he who can write very fashionable and rare remedies in his prescriptions is an experienced and educated doctor, I must openly confess that his ideas are open to correction and should be forthwith corrected. Sufficient credit must be given to him who can select very common place remedies, few in number and thus to conquer human suffering very quickly: Of course, a clever doctor will always try to write prescriptions so carefully that extremes of age; Softer sex and a fastidious patient will remain ever grateful to him for the taste; colour, odour and last but not the least, the effect of his medicine. Experience bitter or sweet, as the case may be, is always undoubtedly our greatest teacher and there is no exaggeration when I say that very few can boldly follow what they honestly practice although many can preach as gospel truths.

In the lines which will follow, I hope to make an honest attempt at some of the very common patent medicines used in the treatment of diseases and shall try to point out their particulars as far as possible. Hence my contributions will be a series of articles which will aptly describe the actions and therapeutics of drugs with their doses together with the names and addresses of manufacturers, their local agents and stockists.

Medical Men's Success in their Career.

"Lancet" endorses the following outlook on the part of the Editors of the "Antiseptic', as practical.

"The medical profession in their dealings with the lay public, have a hard time in convincing them of the benefits of fresh air, pure water, nutritious food, good exercise, sound sleep and a host of other things which are indispensable not only to cure them of their maladies but also to prevent them from contracting fresh ailments. The lay public consequently require to be educated too in matters of health and hygiene if the medical profession should claim absolute success in their career."

"Health" the popular illustrated monthly on health topics edited and published by the Editors of the "Antiseptic" since 1923 in English, Tamil, Telugu and Canarese aims at educating the public in matters of health.

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PERNICIOUS ANAEMIA.

Pernicious Anaemia was separated from the general mass of anaemias as an entity possessing singularly few points of resemblance to any other condition, firstly by Addison and later on by Biermer and Ehrlich. The high colour index of the blood, the presence in it of an abnormally large red cells, the great excess of bilirubier in the serum, and the absence of free hydrochloric Acid from the stomach contents are cardinal factors in diagnosis. In spite of ethereal sulphates, portal haemolysis, focal sepsis, auto. intoxication, intestinal sepsis, and many other promising theories, the way to an understanding of pernicious anaemia is hidden. The presence of bilirubin in the serum and of an excess of its derivatives in the urine led Ehrlich to postulate excessive haemolysis, as the underlying cause. Hurst and others attributed this to the abnormal growth of organisms in the intestine, like haemolytic storeptococci and B. Welchii. The abnormal growth of these organisms and their spread upwards was supposed to be favoured by the non-existence of the gastric juice, which, they said acts as a disinfectant. J. Muller attributed the blood destruction to the reticulo-endothelium system, with which view came into force the spleenectomy treatment of pernicious anaemia. Ashby and others have, however, offered good grouuds for believing that no toxic haemolytic agent is active in this condition, the inorease of the Serum bilirubin and the deposition of iron

in the tissues are being attributed to inability on the part of the blood forming organs to use these substances rather than as evidence of blood destruction.

Cohnheim viewed that the fault is in the bone-morrow in producing abnormal blood cells, which on liberation into the circulation was destroyed. It was found that the bone-marrow in cases of pernicious anaemia contains an unusually large number of immature red cells—reversion of the cellular contents of the marrow to fœtal megalo-blastic type. This defect in the bone-marrow seems to be not so much a failure of blood formation as a failure to bring the red cells to maturity. This is perhaps caused by the deficient supply of an unknown substance which the body is not able to form by an inherent defect in its mechanism. J. H. Means and W. Richardson conclude that the pernicious anaemia is a chronic disease of unknown etiology, the chief manifestations of which can be held in abeyance so long as adequate amounts of specific substance contained abundantly in liver and kidney are received.

The recent observations of Castle and Locke at the Mayo Clinic confirm the etiological relationship of achylia gastrica to pernicious anaemia. The conclusion is that it is a deficiency disease due to a defect in protein splitting dependent on the achylia. They found that feeding of skeletal muscles previously digested in a normal human stomach gave a response similar to that obtained with liver in pernicious anaemia. This suggests that the deficiency of the Specific substance in pernicious anaemia is due to a fault of digestion rather than the result of failure of the tissues to manufacture this substance. Castle's work suggests that the gastric defect may play an important role. Whether the normal human being requires any extraneous supply of the specific substance or can synthetize what he needs is not yet known. Faced with the facts of changes in the nervous system, bone-marrow and stomach, Davidson and Gulland postulate a congenital defect in all these tissues and in the liver as well. They appear to place pernicious anaemia in the class of abiotrophies.

Since the introduction of liver treatment of pernicious anaemia by Minot and Murphy it was found that in liver, whether taken whole or in the form of extract, there exists a specific remedy for this hitherto incurable disease. Today the consensus of opinion as to the efficacy of the treatment is complete, and there is a natural desire to put it along side of salvarsan and insulin as a triumph of experimental medicine. The treatment is chiefly the out come of experimental work conducted by Whipple and his

associates since 1921. Gibson and Howard (1923) wrote "our experiments would tend to confirm those of Whipple and his associates that in experimental hæmorrhagic anaemia in dogs, blood generation is hastened on a diet containing meat, liver and other rich-iron foods." Working on these findings Minot and Murphy definitely established that in liver there is a cure for pernicious anaemia. So specific is the response with liver treatment that the condition has even been diagnosed upon the response to treatment alone. Liver forms an article of diet among the peoples of the world: pernicious anaemia is a widespread disease; yet this simple and specific treatment has escaped detection for so long a time. McCann has also reported as good results with kidney.

Making use of Castle's experiments, investigations carried out by Sturgis, Isaacs and Sharps in America, and by Wilkinson and Renshaw in England, have tended to show that the mucous membrane and the muscular layer of hog's stomach are effective in the treatment of pernicious anaemia. This new treatment has got its own advantages and may shortly replace liver. Wilkinson concludes that the results obtained from the administration of hog's stomach are slightly better than those following liver therapy, the condition of the patient improving more rapidly and various symptoms, particularly glossitis and paraesthesias, showing a more ready response. Conner also supports this view and says that this effect of the treatment on the reticulated erythrocytes, on the mature erythrocytes, and on the general and neurological symptoms in cases of pernicious anaemia is similar to that obtained by means of liver therapy. Only a few years ago pernicious anaemia was classed under incurable diseases; but to-day it is one of the easily cured of all diseases. Our gratitude is mainly due to those eminent physicians whose life long work in the services of the humanity went to the conquest of one of the deadliest enemies of mankind.

Medical News and Notes

NOTES

BY

COL. PROFESSOR FROILANO DE'MELLO, NOVAGOA.

Treatment of surgical tuberculosis by the method of Finikoff. Zalewsky (Presse Med. 7-6-30).

The method consists in injections of oil iode associated to ingestion of calcium salts in strong doses. The author gives 5 to 29 cc. of iode oil every week, and 6 to 8 gr. of calcium chloride per as per day.

Indeed, the initial doses of iode depend on the age, general state and t he gravity of the affection. Short observations on 6 cases of osteoarticularly tuberculosis, 3 cases of tuberculosis of epididyme, cases of ganglionnary tuberculosis with very good results.

On the value of the vaccine of Friedmann. J. Chabaud (Review de la tuberculose III. X. 6-12-29).

The author exposes firstly the experimental base of the metbod found on animal inoculations, specially monkeys, as well as on human inoculations, specially in the population of Pesterzsebet and of the Budapest dispensaries. A medical comission in Germany studying the subject in 1923 states that it was harmless but its indications were not precise and its specific characters not demonstrated.

The author examining many patients from Rheims from where true pilgrimages follow for Friedmann's clinics declares that only those patients who were not accurately observed clinically bacteriologically, radiologically can be considered cured. The vaccine of Friedmann has no value and should be rejected because it avoids the use of B. C. G. which is so useful for prophylaxis of tuberculosis. Friedmann's vaccine has perhaps some adjuvant value in the general cure of tuberculous patients.

On a case of acute colibacillemia in a baby cured by anticoli serum of Vincent, Dorget, Carles, Noguies. (*Socede Med et de Chir. de*, Bordeuaux. Dec. 1929 Analysis in *Presse Med 1. II. 30*).

Baby, 2 months, acute colibacillemia, urine, collected aseptically by catheterism, purulent with b. coli. All treatments tried without result (uroformine, septicemine, stock and autovaccines anticoli per os). Injections of anticoli serum of vincent disensitised by special method (prepared by Clin.) Pyuria disappeared rapidly as well the coli after 20 cc. injections followed, by 10 cc. in the following days.

Colibacillary infections (IV Congress of the International Society of Urology).

First report by Spyrdon Aeconomos, from Athenes. *Second report* Perearnau, from Barcelone.

The reviewer quotes here only the points referring to the treatment. It must be directed against (1) stasis, (2) the infection, (3) the initial focus of the infection. In colibacillosis of urinary tract without evident stasis, the infection shall be treated by anticoli serum of Vincent, and rapid evacuation always assured in order to avoid stasis. In urinary colibacillosis with evident stasis the treatment can be systematised in the following way: (1) intestinal treatment with dietary nujol enema etc (2) urinary treatment with dietary, collargol and salol per os, wash of urinary viae; (3) antifectious treatment by Vincent's serum.

The second reporter emphasizes a therapeutic attacking the original focus, mostly intestinal and prescribes absolute rest, autosepticæmic treatment in acute cases and appropriate treatment for the possible urinary lesions. Urotropine and its derivates per os or per injections are recommended. Castor oil in small doses gives good results in stasis. Autovaccines, Vincent's serotherapy.

Asthma: invisible tuberculous virus and perilobulitis. Sergent and Kourilsky (*Section d'Etudes Scientifiques de l'oeuvre de la tuberculose* resume in *Presse med.* 25. 1. 30).

Man, 22 years old, asthmatic since childhood with a poussee of Pulmonary Tuberculosis.

without bacilli, the sputum containing a filtrant and *invisible virus of strong caseogen activity.*

The asthma seemed idiopathic, alternating with urticaria and eczema. No sign of tuberculosis found. At 22 years a recrudescence of abcesses with loss of weight and fever. Radiography gives perilobulitis. specially in left sup. lobe. Sudden haemoptysis confirming the suspicion and due to a fibro congestive evolution, ending by fibro caseous process. No bacillus, but ultravirus giving rapid death to guinea pigs with multiple caseous ganglionnary lesions. This virus was present in the sputum before

haemoptysis and persisted till the moment when typical bacilli appeared, giving typical tuberculosis by inoculation.

The authors emphasize the following points:

(*a*) the existence of an antibacillary etape in the development of pulmonary tuberculosis.

(*b*) the existence of a perilobular etape prior to the establishment of fibro caseous pulmonary tuberculosis.

(*c*) the invisible virus cannot be considered as an attenuated form of the infectious agent as it can produce very serious and caseogenous lesions in guinea pigs.

Therapeutic action of sugar in cardiac insufficiency. Kisthinios and Gomez (*Presse Medicale* 8 X 30).

Sugar merits a place among the cardiac drugs. Like digitalis, sugar is an occasional diuretic, but its pharmacodynamical action is quite different and should be perhaps compared to that of strophanthus as it acts on muscular fibre, specially the myocardium. Glycose is a valuable means against cardiac adynamy, acting like ouabaine and often when ouabaine has failed.

We may hope that the association of these both drugs should constitute a new therapeutic complex analogous to the complex ouabaine digitalis and perhaps stronger.

Treatment of meningitis by urotropin. P. Rostock (*Deulsche Zeitschr for Chirurgie* CCXNII 3-4 July 1929).

Urotropin has a very favourable action on purulent meningitis, when the germs are not very virulent. The practitioner should inject urotropin systematically, when the meninges are open. The daily dose should be 3 to 10 gr.

In slight cases intravenous injections should be repeated 3 times per day, 10 cc. of a solution to 40% to be injected each time.

The examination of urine is necessary to see some possible renal lesion. The haematuria frequently coming after such injections ceases after the suspension of urotropin.

Insulin in the nutrition of the heart of cardiac patients Loeper, Lemaire, Degos (in *Presse Medicale* 8 X 30).

Glycogene and glucose are the normal constituents of the metabolism of cardiac muscle. Experimentel proofs are numerous MacLean and Syndley Rona and Neu Kirch state that the heart of rabbit may consume indifferently dextrose, galactose and mannite. Muller has evaluated this consummation in 3 millgr. per gram hour in dog and 2 millgr. in cat. Starling and Evans give the following comparative numbers concerning the elements of the

heart nutrition: 1.64 dextrose against 0.48 albumin. 0.68 fat and 3.8 oxygene.

The heart when fatigated stopped or altered shows again its rythms under the administration of glucose. The fact had already been observed by Budingen six years ago as he recommended sugar to cardiac patients. Savegers believes that the sugar reinforces the action of some drugs, specially of digitale.

The authors state that the administration of 150 grams of glycose syrup reinforces the contraction, diminishes the tension regulates the rythms and brings the disappearance of tachycardia and arythmias.

The heart contains glycogene and an amylase. The glycogen of his fibres is more stable than that of other fibres, and their amylase less abundant.

A normal heart does not need any drug to fixate the glycogene. But the same cannot be said of a diseased heart and here the *insulin* renders valuable service. Insulin acts on the combustion of sugar, and the reserve formation, it eliminates CO2. Hepburn states that it increases the hourly consummation of glucose (0,97 to 3.06 millig.) Starling and Knowlton think that at the same time a small reserve of glycogene is formed. So it is highly indicated in cardiac insufficiency.

Technique of the authors: inject daily, during 6 to 10 days, 5 to 10 units; 15 to 20 minutes after injection give 100 gr. of syrup of glucose.

The authors do not hesitate to propose in the treatment of cardiac affections *sugar*, which is a food of the cardiac fibre and *insulin* which regulates its consommation.

Some examples given in the paper.

Iode in the treatment of functional diarrhoeas of warm countries. Y. Santet (Bull. Soc. Path Exotique Dec. 1929).

The author has obtained excellent results in the treatment of such diarrhoeas by *diociphene iodosulfonate of potossium.* Doses: three cachets of 0·25 in 2 days or five cachets in 3 days.

Nephritis with hypochloremia treated by chloruration. Achard (Soc. Med. dos *Hopitaux* 17-1-30 in *Presse Medicale* 22-1-30).

Woman 37 years, hematuric nephritis with recidives coming occasionally with anginous accesses.

In a first phase of complete anuria during 4 days followed by pronounced oliguria (100 & 300 cc.) during 2 days, the blood urea raised to 3·24 per 1000. Maxim concentration of urea in the first urine was 5·37 to 8·10. The alkaline reserve 34·7, plasmatic hypo-

chloremia 2·59 resulting less from a chlore spoliation (renal elimination almost nihil, vomits very few) than from a trouble on the chlore distribution.

CLNA was administered per os and injections, till 27 gr. per day during 3 days, followed by 12 gr. per day during three days more. In this second phase of chlorurated therapeuttc the patient had 20 litres of urine, 122 gr. of urea and 61 gr. of Clna. Blood urea came down to 1·24 alcaline reserve raised to 49·5 plasmatic chlore to 3·92.

In a third phase of dischloruration, during which Clna was suppressed, the volume of urine was diminished. Blood urea raised from 0·88 to 0·99, plasmatic chlore came down under normal (3·19) but alkaline reserve was above normal (60·2).

Clna was again given (5 gr. per day), and azotemia came to normal (0·24) as well as plasmatic serum (3·60).

The therapeutic effect of Chloruration has been considerable possibly facilitating the elimination of the excess of blood urea, increasing the diuresis just in the moment when the ureo-concentrating power of the kidney was very defective.

Treatment of pulmonary tuberculosis by golden salts R. Mignot (*Presse Medicale* 15-1-30).

The salts used in France are: *Sanocrysin*, *chrysalbin*, Poulene, *thyocrisin* from Rhone (all thiosulfates doubles of gold and sodium) and *allochrysin* Lumiere (thiopropanol-glicerynate-sulfonate of sodium). The first three are administered by intravenous injections, the last one by intramuscular injections.

The hypodermic via is to be rejected.

Villaret and Kindberg have advised intrapleural via in purulent tuberculous pleuresies: The method is without danger and gives some successes.

Before beginning the treatment the patient should be carefully examined as far as concerns liver and Kidney. The presence of albumin, the apparition of digestive troubles and of slightest cutaneous eruptions are contra indications or formal signs to stop the treatment.

Posology. Mollgard employed massive doses (0·5 to 1 gr.) This method has been abandoned. Actually the method of strong doses has some partisans. Knud Faber gives an initial dose of 10 to 25 centigr. and increase progressively till 0·75 or even 1 gr. L. Saye begins with 0·10 and increases till 1 gr. to 1·50.

L. Bernard and Ch. Mayer treat the pyretic patients by the following way: 1st week 0·25; 2nd week and following 0·50. If the general state and weight are good they continue the same

dose or 0·75. The total amount of salt injected varies between 5 and 7·50 gr. If the patient is apyretic they rarely surpass 0·25 per week and the treatment is continued during long time.

Dumarest, Garin, Jacquerot, Mollard employ very slight doses. The treatment reposes essentially on the following principles: very small doses, progressive increasing, surveillance of the intervals, strict study of the reactions. Begin with 0·025 or 0·05 by weekly injections, increase till 0·25 taking always care not to increase the dose if the precedent one has not been well tolerated. Total amount 3 gr.

Allochrysin may be used in stronger doses and shorter intervals: 0·12 twice a week, even 0·25 when the patient is resistant. Total amount 12 gr.

Indications (a) Chronic subfebrile cases, slightly evolutive where this higieno-dietetic cure has given no results.

(b) torpid sclerous form

(c) often evolutive accesses in chronic cases (inconstant action according to Mollard).

(d) very rarely prolonged pyretic tuberculosis

(e) as adjuvant medication associated to collapsotherapy.

Contra indications. Renal, intestinal & hepatic troubles are formal contra indications.

Cachexia, very extense lesions, congestion & hemoptoic forms, acute or caseous pneumonias, acute granulias. bacillary septicemias do not find any benefit by their treatment.

For Dumarest and Mollard the age of the patient, the antiquity of the lesions and the coexistence of laryngites are not contra indications.

Results: many statistics quoted. The best one is of Mollard: much ameliorated 12.5%, ameliorated 48.75%, no amelioration 33.25%, aggravated 5.50%.

On the Eijkman test for the bacteriological examination of water M. D. Magalhaes (*in Archivos de Higiene Rio de Janeiro* IV, no. 2)

The Eijkman test proved to be of value in differentiating between fecal strains from warm blooded and cold blooded animals The results are in accordance with those obtained by north American standard tests which are more relied upon the differentiation of fecal from non-fecal strains. The Eijkman test saves considerable time, work and material, and should be extensively investigated to have its value definitively established in comparison with the high value of the North American test.

The method of Eijkman is: pour the suspected water in fermentation tubes with the following medium: dextrose: 10%, peptone 10%, Cl Na 5%, water 75%. Proportion of the mixture: 1 of water to 8 of the medium. Incubate at 46C. Coli provenient from warm blooded animals develops, that provenient of cold blooded does not. The high temperature of the incubation has an inhibitory action in most bacteria. Acid and gas are produced with Coli in 18 hours.

Results of the treatment of purulent pleurisy by optochin P. Woringer (*Rev. francaise de pediatrie V. I. Febr. 1929*).

The author employed chlohydrate of optochin. Technique: take out by ponction so much pus as possible and inject 25 milligr. of chlohydrate of optochin (1/2cc of solution at 5 p. 100) per kilo of weight, never surpassing a total dose of 0,50 (10cc of the solution). This treatment may be preceeded by a wash of plevra through a weaker solution 1/2 p, 100. Generally, temperature becomes normal and general state ameliorates. In such cases it is better to wait quietly for the resorption of the remaining liquid.

But when the fevers reappear a 2nd, sometimes 3rd and 4th series of optochin injection are necessary.

It is the best treatment actually known for purulent pleurisy in children. The drugs act only on pneumococci and is without any action on other microbes. This action is only local and so when there is concomitant bronchopneumonia or extra pleuropulmonary localisations the treatment fails.

Isolated unimateral exophthalmia whose basedowian nature has been recognised only by the increase of basal metabolism. Faure-Beaulieu and Velter (*Soc of neurology, Presse Medicale* 11-1-30)

Woman, 42 years unilateral exophthalmia since 5 months. No local process explaining the trouble. The authors think to basedowian nature, but no sign is found. Only basal metobolism is increased at 25 per cent. The irradiation of thyroid gland cures the exophtalmia and its nature is fully confirmed.

The authors insist on the necessity of a close study of basal metabolism for the diagnosis of such exophtalmias.

Troubles of cerebellous cords in consequence of an ancient dysentery Houssian (*Annales de la Soc. belge de medicine tropicale* X. 30 V. 1930.) Madame H. baving stayed in Belgian Congo during 9 years, in 3 periods of three years each. In May 1929

vomits firstly bilious, after aliment. The incoercibility of vomits renders every feeding impossible. Bad general state.

The cerebellous origin of vomits is diagnosticated, but no special treatment on this line has been tried.

The stool shows numerous cysts of E. *dysenteriae* R.W. negative.

The patient cannot stand on foot. Intentionnale trembling very accused, slight adiadococinesia, left hypothony.

Treatment by emetine. Wonderful ameliorations. In October the patient can walk but the march is uncertain not spasmodic. No nystagmus, slight vertigo. Every digestive symptom normal.

The author shows that the case could not be disseminated sclerosis neither lateral atypic amiotrophy and believes that it was a cerebellar inflammation due to amebiasis.

Ticks, as plague carriers M. Tikhomirova and S. Nikanorov (*Revue de Microbiologie, d' Epidemiologie et de Parasitologie de Saratov* IX n° 1.)

The authors claim to have been the first to find in nature plague ticks, *Rhipicephalus Schulzei* Ol. on a suslik *Citellus pigmaeus* and *Ixodes autumnalis* Leach in *Arctomys bobac*, infected with spontaneous plague. They consider this new factor of endemic plague of great epidemiological importance.

D. Golav and A. Kniazesky (**On the role of ectoparasites-fleas and ticks of empty nests of spermophils—C. Pigmaeus–in the epidemiology of plague** ibid) show that many fleas *Ceratophylus tesquorum, Neopsylla setosa, Clenophthalmus breviatus* and the tick *R. schulzei* taken in the nests of the spermophiles may harbour plague bacilli and that these ectoparasites, so infected in nature are sometimes found in the body of healthly animals.

New studies are suggested on the epidemiological role of the ticks as well as on the possibillity of the plague bacillus being transmitted hereditarily in these invertebrates as it is the case with *B. tularense* and tularemias (in Russian; resumes in English and French).

On chronic streptococcic dermatoses R. Sabouraud (Presse medicale 8. Jan. 1930.)

A brilliant study of Dr. Sabourard, the well known French dermatologist. We will quote here his treatment of *impetigos*,

Constant lotion with.

Distilled water	800	gr.
Copper sulphate	2	,,
Zinc sulphate	2	,,
Safran tincture	0,25	,,

During night applicatien of the following pommade.

Goudron de houille, washed, neutral	3	gr.
Lanoline	5	,,
Zinc Oxide	3	,,
Vaseline	25	,,

When the imptiginisation is finished and the dermatose becomes dry frictions of alcohol wiode (1/100) followed by applications of creme of Zinc. This treatment gives also excellent results on intertrigos.

Frequency of bacillemia in tuberculous women during menstrual period L. Bernard and Desbuquois (*Rev. tuberculose* X. August 1929).

The blood of tuberculous women taken at 6th day of menstrual period and inoculated to guinea pigs is able to produce in these animals an atypical tuberculosis; these researches show also the ephemerous character of the bacillary elements which are present in the first six weeks of the infection in guinea pig and cannot be discovered at the end of 5th month.

Actinotherapic treatment of tuberculous adenitis Ory (*Annales de Medecine physique et de Physio-Biologie* (Belgium) 1928 10–12.

The ganglions when isolated and not very numerous are well influenced by local and general actinotherapy, given every two or three days. The weight of the child must always be taken, as a sensible diminution is an indication to stop the general irradtation. Tuberculous lymphoma is not ameliorated.

Periadinitis is very sensible to Ultraviolet rays and to X-rays; one should be cautious when these are signs of bacillary impregnation.

The adenopathies with fistules respond well when the secondary infection is not very extensive.

The adenitis, when dure. fibrous, cretaceous constitutes a form very difficult to be treated by actinotherapy and only the general state is influenced by this form treatment.

Methylic antigen In the treatment of osseous, articulary and ganglionnary tuberculosis R. Massart (*Gazette medicale de France* June 1929.)

In children with no signs of pulmonary tuberculosis the technique of Massart is the following: 2 subcutaneous injections every week, beginning by the antigen diluted to 1/4, 1/2, 3/4, 1/1 and finally the ampoule of pure antigen.

The spina ventosa and cord abcesses are very favourably influenced; in osseous tuberculosis the benefits have not been so appreciable but the lesions did not progress.

The author thinks that antigentherapy should be at present a first class adjuvant method in the cure of surgical tuberculosis.

The effect of Rivanol in the treatment of amoebic dysentery A. G. Biggam and M. A. Arafa (*Lancet* June 21. 1930).

Rivanol administered as a local application rectally has been found to be irritating to the mucosa in a concentration of 1/2000 marked hyperemia of the rectal mucous membrane as viewed through the sygmoidoscope having resulted. In a dilution of 1/10.000 no lethal effect on the entamœbae has been noted.

Rivanol administered orally, even in doses as high as 0,075 thrice daily, has not been found to produce any toxic effects on the individual nor has been observed to have any markedly lethal action on entamœbae. In only three very mild amoebic infections we were able to get rid of dysenteric symptoms and free the bowel from *E. histolytica* for any considerable period, all our other cases showed soon a return of the symptoms and their intestines were found still to harbour active vegetative forms of *E. histolytica* either immediately or shortly after discontinuing the drug. Marked relief from symptoms was however experienced in most cases during the treatment, tenesmus, blood mucus and diarrhoea soon disappearing usually to return shortly after stopping the rivanol.

The experience of the reviewer agrees fully with the above resume of the authors. Rivanol is far away from having the effects of emetine, stovarsol or yatren.

On the spontaneous infection of Dadypus hybridus by Tr. cruzi and the presence of cystic gigantocytes in myocardium and lung S. Muzza (*Prensa Med. Argentina* 10-VI-30).

Cystic gigantocytes in *Tr. cruzi* infection have been just described by Margarino Torres from the Inst. O. Cruz. They are large multinucleated cells, with nuclei disposed in a crown and having in the centre an alveolar cytoplasm, free from parasites. These, under the form of Leishmania appear outside the nuclear crown, in a clean area, apparently without structure. A membrane having a double outline surrounds these elements which have been discovered by the author in myocardium and lung of *Dasypus*

hybridus. Such elements had been seen by Gaspar Vianna in the testicle of infected guinea pig and lately by Crowell in myocardium of tatoo. Both authors misinterpreted their real nature.

Excellent microphotographs.

Segmentary colitis, signal of chronic appendicitis Huet. (*Journ. Belge de Radiologic* XVIII 1929,

The author notes the frequency of the syndrome of segmentary colitis in the course of chronic appendicitis, duly controlled by surgical interventions. In general such cases have evolutioned without great manifestations. The colitic lesions are predominant on the hepatic angle, transverse colon and more rarely in splenic angle. They are always localised in a very short intestinal segment. The radiographic symptomatology is confined to irregularities of external tunic: the mucosa is sometimes ulcerated, infractious: the aspects of spasmodic colitis are frequent. Certain images show a kind of stenosis, the colon being generally hypotonic behind the stenosis.

This segmentary colitis is not a mere case of coincidence, because it disappears after the intervention.

Tubercular ultravirus in the spinal fluid of pregnant woman affected by specific meningitis; Couvelaire syndrom in infant. Veber and Jonesco (*Compt Rend Soc. Biol* (*Societe Roumaine*) CII 1929).

In a pregnant woman with granulia and meningitis the authors made the following statement: bacillemia, ultravirus in blood producing in guinea pigs a tuberculosis type Calmette-Valts; Spinal fluid with ultravirus producing in guinea pigs a nodular tuberculosis type Arloing Dufourt; the virus traversing the placenta and producing in infant the syndrome of Couvelaire (atresia, emaciation, senilism, death without and apparent lesion either macro or microscopic).

The ultravirus was also present in the blood of the child having produced in guinea pigs both species of lesions: type Calmette Valtis and type Arloing Dufourt.

The treatment of chronic encephalitic parkinsonism with dried preparations of stramonium Worster Drought and T.R. Hill (*Lancet* June 7 1930 Results as satisfactory as those from hypordermic hyoscine are obtained by the administration of Extractum stramonii U. S. P. by the mouth in doses of 0·25 to 1 gr. or more, three times a day, the average dose being 0·75. Similar results are obtainable with doses containing equivalent

quantities of alkaloid of Extr. stramonii exsicatum B. P. C., dried stramonium leaves and tinctura stramonii B.P.

The equivalent therapeutic doses of the preparation are as follows: hyoscine gr. 1/100 (hypodermic)=dried stramonium leaves 1gr=extractum stramonii U. S. P. 0·25—extr str. exsicatum B.P.C.O, 25—tinctura stramonii B.P. 3III. (Resume of the authors)

Essays of treatment of Tuberculosis by a new medication: the chlohydrate of choline. F. Leuret & G. Pery (*J. de Med. de Bordeaux* Feb & March 1930).

The authors studying the rate of blood cholesterine arrived at the following conclusions. (1) Every evolutive tuberculosis has a blood cholesterine rate inferior to the normal rate, (2) A permanent diminution of this rate indicates an evolutive poussee in the course of the disease. (3) The same rate, increased, indicates a good prognosis. (4) All hypercholesterinemic are refractory to an active Tuberculosis.

The factor cholesterinemy in conjunction with glycemia has a definite action. A tuberculous patient with normal glycemia and high cholesterinemia acquires a flourishing aspect. The biological relation between glycemia is not yet fully studied.

The authors inject to their patients choline chlohydrate. 0.02 per each injection, giving *in toto* 2 series of 10 injections each. Wonderful results obtained even in advanced cases.

The action is also remarkable in cold abcess, tub. fistules, bacillary adenopathies.

A new method for the homogeneisation of T. B. in sputum C. B. Udaondo, J. Renner, O. Massiglia (*Prensa Med. Argentina* Jan 1929.)

Take 5 cc of sputum, add 25 cc of CINA solution at 15 per 1000, triturate in a mortar, take to autoclave at 120° during 20 minutes.

When cold, pour into two centrifuge tubes, add an equal part of amylic alchool, and make the slides with Ziehl method after centrifugation.

Important to remark that the analyst is working with sterilised material.

The granules of Schron, Mircoli, Muck are components of tuberculous bacillus and take an active part on its reproductive phenomena Scarzella (*Giornale di Batteriologia e Immunologia* n° 4 1930).

Detailed work fully illustrated. Studying the variations of acid fast forms in connexion with all these granules the author

after the examination of a large material, states that such granules are found in almost all Tub. bacilli and should be considered as concentrations of chromatine taking an active part in the reproduction of the bacillus.

The reviewer calls the attention of this opinion clinically admitted in the Congress of Tuberculosis of Lyon, with the theory that granular forms of Hansen's bacillus are signs of degenerescence of this germ, widely spread in India in spite of no evidence to support it.

The anti-phages in Bacteriophagy A. Raiga (*Compt. Rend* Biol. C IV 22, 1930.

Blood serum is able to render resistant a lysable Bacteria vis-a-vis of Bacteriophage or to inactive the Bacteriophaga vis-a-vis of a liable Bacteria. The presence of antiphages has always a pernicious influence on the evolution of the disease and explains sometimes the reason why a Bacteriophage, active in vitro, loses its action *in vivo*.

Autohemotherapy is in such cases capable to suppress the antiphages and render the organism able to suffer the happy effects of provoked bacteriophagy.

Experimental Tabagic leucoplasia A. H. Roffo (*Prensa Med. Argentiua* **XVI, 33,** 1930.)

Dr. Roffo, to whom we are indebted for so many research works in cancerology gives in a fully illustrated paper the result of his experiments in rabbits with the smoke of Tabacco. Conclusions: The smoke of tobacco applicated daily on the mucosa of a region, produces a lesion with all characters of leucoplasia. The biopsia shows that the dermis has very little interference in this process. The lesions are produced by the active principles of tobacco viz., extracts, nicotine, the resinous substances derived from the oxydations of oils and acids produced by pyrogenated distillation as well from those due to resynthesis after a high temperature formed by benzinic nucles and pyridenic bases.

The modification of the terrain by previous injection of cholesterin, shortens the period of the appearance of such lesions.

Small surgical diabetes Oppell (*Vestnik Chirurgii pogranitchnich oblastei* V. 15 1928 Analysed in *Le Sang* iv. 4; 1930).

Over 50% of patients operated under anesthesy, local or general, show different symptoms viz., hyperglycemia, glycosuria, acetonuria, which may be sometimes diagnosticated as diabetes, This symptomatic complex is transitory, a small surgical diabetes,

developed generally in persons of hypoinsulary constitution or in those showing a definite diminution of pancreatic fonction (cancer of stomach for example). This hypoinsulary stage may be caused also by symptoms of reflex nature, such as psychical emotions and painful irritations.

Duodenal vomits G. Segura (*Prensa medica Argentina* XVI 30.1930). The author gives the following semiologo for diagnosis of vomits of duodenal origin.

No definite pains either gastric or intestinal, but a slight malaise on epigastre. The patient seeing this malaise to increase changes constantly of position. Seeking specially the ventral decubitus without amelioration. Sensation of epigastric bar. The provocation of vomits gives no release. This stage is named by the author "*angor duodenalis*" Intense psyalorrhea. Spontaneous vomit, 6 to 7 hours after the beginning the angor, coming with effort and throwing out bile and pancreatic elements. Instataneous disparition of the angor after this vomit.

The patient, in spite of his general malaise may be totally free of colics or diarrhoea. He lays during some days with anorexia, asthenia, slight subicteric colour of conjunctivae and a peculious terreous colour of this skin.

This syndrom is found in acute gastroduodenitis, toxic or alimentary, in some cases of mercurial or salvarsanic intoleranee in diseases which produces exanthemas, in seric and anaphylactic troubles.

On the presence of toxic substances in the blood of tuberculous patients K. V. Pomeltsoff (*Vouprossy touberkoidosa* 1928 no. 2 analysed in *Le Sang* IV no. 4 1930).

Studies made through the testicular reaction of Lang. Conclusions: The introduction of red globules in the testicles of a guinea pig inoculated with tuberculosis one month before, gives a characteristic tablean of necrosis and degenerescence. Red globules of normal persons do not provoke such a reaction. This injection of red globules or of blood serum of tuberculous patients gives a reaction characteristic of tuberculin which shows that these elements contain substances whose action is specific and similar to tuberculin.

Gleanings from Medical Press

MEDICINE

A case of tabes in a boy of eight years of age.—This is a case in which tabes dorsalis occurred in a child, with a history of congenital syphilis. Lereboullet, Saint-Girons and Izard showed that from the clinical aspect the symptoms were complete—namely, the abolition of the reflexes, irregularity of the pupils, the Argyll-Robertson pupil. hypertonia, lymphocytosis and albuminosis of the cerebrospinal fluid. The difficulty in walking was very marked, and had frequently caused the child to fall. All the signs were considerably improved by intravenous injections of novarsenobenzol.—Societe de Pediatrie, Paris, June 17, 1930. —*Franco British Medical review.*

Present Status of Nonspecific Therapy.—Joseph L. Miller, Chicago (*Journal A. M. A.*, Aug. 16. 1930), asserts that protein therapy has been employed in nearly all acute and chronic diseases of supposed bacterial origin. At present it is used especially in acute polyarthritis, gonorrhoeal arthritis, the infectious type of chronic arthritis during the period of more or less active inflammation, acute iritis, corneal ulcer, thrombo-angiitis obliterans, bacillary dysentery, dementia paralytica, and multiple sclerosis. Probably the most dramatic results are observed in acute polyarthritis, and it is safe to say this is the only method of treatment that can immediately terminate this disease; at least 50 per cent of patients can be promptly relieved of their discomfort. About one-half of them are cured; the others, after a few days or occassionally a week or more, have a recurrence. In the others the immunity is complete. In the early stages of chronic atrophic arthritis, in which there is marked evidence of inflammation, this treatment will occasionally give gratifying results, terminating the disease, occasionally permanently, more frequently for a few months, after which it again becomes active but will usually yield to a second course of treatment. It is highly improbable that protein therapy is of permanent value in osteartbritis, as mechanical irritation, rather than bacterial infection, is the important etiologic factor. As thrombo-angitis obliterans is due to an inflammatory reaction, probably of bacterial origin it offers a field for protein therapy. If this treatment is begun early in the course of the disease, the results may be most gratifying. Not only is its progress stopped, but the patient may show great improvement in his ability to walk without discomfort in fact, the pain may entirely disappear. In southeastern Europe, protein therapy has been used quite extensively in the treatment of bacillary dysentery and is reported to be much more efficient than the dysentery serum. Miller has used immunized chicken serum, normal chicken serum and immunized sheep serum in the treatment of pneumonia. These serums frequently, but not always, gave a chill. It was noted that when the patient failed to react by a rise in temperature there was no change in the course of the disease. Occassionally, after a violent reaction, the disease would terminate by crisis. The immunized chicken serum, after the fibrin was removed, would no longer cause a marked change in temperature and failed to modify the course of the disease. He thought it might be of interest to determine whether a single small dose of typhoid vaccine intravenously, sufficient to give a moderate reaction, would modify the course of pneumonia. Fifteen patients with lobar pneumonia were so treated within forty-eight hours of the onset of the disease. Three of these, or 20 per cent. had an immediate and lasting crisis with disappearance of all symptoms. The lung, however, failed to undergo resolution until the regular times for the crisis. The greatest interest in protein therapy is now centred in its use in the treatment of dementia paralitica, The number of recoveries reported from malarial treatment varies from 30 to 40 per cent; that is, patients who are able to return to their previous occupations. Multiple sclerosis is another disease in which protein therapy is being used extensively. This new field for nonspecific therapy deserves continued trial. If the treatment is begun early, before irreparable tissue changes have taken place, complete recovery may be possible. It is too early to predict the permanence of the improvement.

The Haemorrhagic Diathesis.—K. Schloessman from a study of haemophilia in 24 familiar groups, has been able to prove the existence of the diathesis for several generations past. From these and from the well-known example of its prevalence through intermarriage in the Royal families of Europe, he shows that it is always inherited through the daughters of an affected father, his sons but not his grandsons, escaping. At the same time although the women may show slight indications proving that they are not immune from the taint altogether, the full syndrome of the affection was never once discovered in them. The one characteristic that the women share with their affected fathers and sons is the

prolongation of their blood-coagulation time, and especially, the friable nature and lack of elasticity in the coagulum when it does form. Hence the old teaching that the diathesis is purely a male peculiarity is found to be erroneous. (*Berlin Archiv fur Klinische Chirurgie. XXXIII.—Thr' The Medical World.*)

The Treatment of Chronic Arthritis.—J. W. Torbett in *Physical Therapeutics* (September, 1930)' in an article on chronic arthritis, most of which he thinks belong to the hypertrophic class, gives the following practical hints.

Overeating, underexercising and deficient breathing with suboxidation are important neglected causes in many chronic cases. We know that one fourth of the system's toxic elimination should be through the lungs, and if this is stopped for ten minutes death ensues. If the total skin function be stopped a few hours death follows. These are very important functions for elimination and health. A hot dry climate with considerable altitude increases both of these functions and often cures severe cases if other causes are removed.

Advise deep breathing, proper diet, exercise, fresh air, and rest to suit each patient's needs. The overfed fat patients of the hypertrophic type need baths and restricted diet, often fruits and grape juice alone three or four days, to lose weight, with rest of the inflamed joints a few hours each day. Massage is not used nearly so much in chronic and convalescing cases as it should be. All medical nurses should be trained to give correctly general and special massage.

Radiant heat and light usually helps these cases when applied after the baths for ten minutes; also diathermy may help such cases, but frequently both make the acute infectious type worse if applied to the already inflamed joint instead of beyond it, where heat and massage should be given in such cases. X-ray treatments often help acute gonococcal and other localized types.

Thyroid extract, pituitrin, and ovarian substance correctly selected often help the endocrine and menopause types. Heat increases the blood's alkalinity, dilates and hastens the capillary circulation, promoting elimination and more blood and phagocytes and better nutrition. Colonic irrigations are useful every second or third day on suitable cases who have small greenish mucous stools of bad odor and often are griped easily by laxatives, with indican or urobilinogen in the urine. Anemic and atrophic types are given frequent feeding and more protein, such as milk, buttermilk, cheese, peas (basic foods), with some meat, chicken gizzard and one egg (acid-forming foods), and the green leafy vegetables

and apricots, peaches; and raisins (basic iron vitamin foods), instead of acid-forming foods; also baked potatoes, which are 7 percent alkaline and which Professor Grierson has shown may be digested in ten minutes and give much quick, energy. Honey or molasses, an iron vitamin alkaline food, should be used instead of so much sugar. The robust cases are often greatly helped by a diet of fruits only for three or four days. Oranges, grapefruit and grape juice alkalinize the blood and furnish vitamins that help oxidation.

Actinotherapy in Chronic Rheumatism.—A. P. Cawadias (Biennial Rheumatism Number of *British Journal of Actinotherapy and Physiotherapy*) believes that general metabolic disturbances, including sulphur metabolism, take place before lesions of joints and periarticular tissues appear in chronic rheumatism. He also states that dietetic, meteorologic factors, or deficiencies of endocrines are responsible for disease as well as focal infection. He advocates the employment of ultraviolet irradiations and describes two methods of treatment. The first, a method of actinic shock combined with local actinic revulsion, is contraindicated in subacute and painful forms of chronic rheumatism, in debilitated or tuberculous or "anxious" subjects. A three-quarter threshold dose is given after the individual erythema threshold has been fixed. This is followed in two days by a full erythema dose. A third application of slightly increased duration is given if an erythema has not appeared. A generalized erythema is not produced but only on those parts nearest the lamp. No further applications are given until the erythema has disappeared then a second series is commenced, starting with full erythema threshold dose and gradually increasing until a second reaction. Four or five series are given with a week's rest between. Local treatment consisting of joint irradiation with slightly stronger dose than the threshold erythema dose is given at the same time as the general treatment. Intense local erythema is obtained. Administration of colloidal sulphur is recommended with this treatment.

The author describes the second method as "mild actinic stimulation combined with local infra red applications." This method gives good results in debilitated patients, those with cardiovascular respiratory or nervous system weaknesses, and those having a subacute or painful condition. Here the carbon are lamp must be used. In this method of treatment the individual erythema dose must be predetermined. Locally the joints are treated with infra red rays while the entire body is given one-fourth the threshold erythema dose. These are progressively

increased in subsequent irradiations, but erythema is not to be attained. The patient should have a feeling of strength and well-being after treatments. The author advocates the injection of vaccincurin following this treatment and diathermy and other measures where clinically indicated.

PROCEEDINGS OF CONFERENCES, SOCIETIES ETC.

Resolutions passed at the All-India Medical Conference, Seventh Session, held at Poona.

ON 25th, 26th & 27th APRIL 1931.

Resolution No. 1.

This Conference strongly condemns the assaults by the Police on Ambulance and Medical Workers on various occasions during the Civil Disobedience Movement.

Resolution No. 2.

This Conference condemns the policy of Government in not inviting any representative of the independent medical profession to the Medical Conference held in Simla in June 1930, to consider the question of the creation of an All-India Medical Council.

Resolution No. 3.

While this Conference is in favour of the creation of the Indian Medical Council, it is emphatically of opinion :—

(*a*) That it should be, if and when started, an independent and predominently a non-official body with an adequate representation of the independent medical practitioners both graduates and licentiates and should have a non-official elected President from the beginning;

(*b*) That its functions should be, among others, to maintain a uniform and minimum high standard of medical education in India ; and

(*c*) That when the Bill for the establishment of the Indian Medical Council is published, the Central Council of the Indian Medical Association should submit a representation to Government in consultation with the following six members specially elected for the purpose :—

Dr. E.S. Bharucha	(Poona)
Dr. Tendulkar	(Poona)
Dr. Rochiram Amesur	(Karachi)
Dr. Jethalal Vora	(Bombay)
Dr. Hyderali Khan	(Patna)
Dr. M.A. Cholkar	(Nagpur)

Resolution No. 4.

This Conference is of opinion that no one who is not on the Indian Medical Register should be entertained in the Civil, Military, Naval or Air services of the country or be permitted to act as a ship's Surgeon or in such other services.

Resolution No. 5.

This Conference is of opinion :—

(*a*) That the preliminary qualification for admission to all medical institutions should be the Intermediate Science Certificate Examination of different Indian Universities or its equivalent;

(*b*) That it is urgently necessary to improve the equipment and standard of education in the medical schools so as to approximate the same to that of the medical colleges of the University standard;

(*c*) That in the meanwhile the Conference strongly recommends :—

(1) That the training of the Licentiates should be improved by—

(i) Extending the period of instruction in the medical schools to at least five years throughout India,

(ii) The better equipment of medical schools, and

(iii) The appointment of better qualified teachers therein,

(2) That the time has also come to consider whether this could not be achieved by abolishing some of the medical schools and utilising the funds thus made available in improving the remaining medical schools due regard being given to the already existing medical schools established under definite Endowments or Trusts,

(3) That facility should be given to the Licentiates to enable them with further supplementary training to appear at the M.C.P.S. examination of the College of Physicians and Surgeons and also at the University Examinations for medical degrees, and

(4) That a Committee of eminent medical men be appointed by Government to go into the whole question and report at an early date.

Resolution No. 6.

This Conference strongly condemns the recent decision of the Government of Bombay to reduce the term of instruction in the Medical Schools from five to four years and regards this as a very re-actionary and retrograde measure.

Resolution No. 7.

This Conference—

(1) Condemns the policy of the Government of Bengal

(*a*) in opening several medical schools in the different district towns of the Presidency and

(*b*) in appointing medical men not sufficiently highly qualified in charge of these schools, and

(2) urges that this policy be immediately abandoned in the interest of medical education in India.

Resolution No. 8.

This Conference resolves that Licentiates of Medical Schools in the States should be treated as on par with Licentiates of Medical Institutions in British India.

Resolution No. 9.

This Conference brings to the notice of the authorities of Medical Colleges and Hospitals in India the urgent necessity of starting special post-graduate classes for medical practitioners.

Resolution No. 10.

This Conference recommends that the Resident Medical appointments in Hospitals attached to teaching institutions should be reserved for recently qualified Medical Graduates of those institutions, in order that they may have the opportunity of doing practical work before settling down in Private Practice or taking up Medical Service.

Resolution No. 11

This Conference looks with great displeasure the transference of Professors in one special subject to a Chair in another subject in Medical Colleges and Schools and hopes that the Local Government as well as the Public Services Commissions will consider the inadvisability of such transfers while making or recommending appointments.

Resolution No. 12.

This Conference reiterates its protest against the reservation of appointment of I.M.S. Officers, in the Medical Research Department.

Resolution No. 13.

This Conference condemns the action of the Chairman of the Conference held in Simla in July last, to consider the location of the Central Medical Research Institute and the recruitment to the Medical Research Department etc. in not allowing the consideration by the Conference of the question of the reservation of posts for I.M.S. officers in the Medical Research Department.

Resolution No. 14.

This Conference is emphatically of opinion that the Central Medical Research Institute, on the lines advocated by the Fletcher Committee, should be established at a University centre as soon as possible.

Resolution No. 15.

This Conference recommends Government to give immediate effect to the re-constitution of the Governing Body of the Indian Research Fund Association as recommended by the Conference held in Simla on July 21st and 22nd 1930.

Resolution No. 16.

This Conference is of opinion that the salaries paid to the Departmental Heads of Research Institutes in India are exorbitant and that a thorough revision of the salaries of the Departmental Heads of these Institutions is imperative. And this Conference is further of opinion that the present system of recruitment for the Medical Research Department is unsatisfactory and very expensive for the country.

Resolution No. 17.

This Conference urges the Governing Body of the Indian Research Fund Association to give effect to the resolution of the Simla conference of 21st July 1930 recommending the institution of 20 Research Scholarships of the value of Rs. 100 per mensem, for award to the various medical institutions in India which are prepared to train young medical men with aptitude for research.

Resolution No. 18.

This Conference recommends that pending the creation of the Central Medical Research Institute the Government of India should establish scholarships to be given to deserving Graduates of Indian Universities for proceeding abroad to get training in special subjects.

Resolution No. 19.

This Conference notes with approval the action of the Government of India in giving effect to the recommendations of the conference of last year, by raising the salaries of Assistant Professors at the Health Institute, Calcutta, from Rs. 400 per month to the grade of Rs. 450-50-1250, and thus ensuring the recruitment of suitable officers in the grade of Assistant Professors.

Resolution No. 20.

This Conference protests against the reservation of three out of six posts of Professorships for I. M. S. officers at the Public Health Institute, Calcutta and against the raising of the salaries of these officers to Rs. 3000 per month.

Resolution No. 21.

Whereas the Government of India are about to appoint Cammittees of Enquiry into the question of Indianisation of the army and retrenchment of expenditure, and whereas the Medical Administration in the Civil and Military Departments will form an important part of these enquiries, this Conference urges the appointment of a representative of the Indian Medical Association on each of these Committees.

Resolution No. 22.

This Conference strongly disapproves of the arrangements proposed at the Round Table Conference for recruiting European Doctors in the Civil Medical Services for the purpose of rendering medical aid to Europeans in this country.

Resolution No. 23.

This Conference condemns the action of Government in reserving certain specific posts in the Indian Medical Service Cadre for European Officers only of the Service and strongly urges that the 90 posts, contemplated to be released, under the Government of India Communique of 1928, by the Indian Medical Service, and to be handed over to the Provincial Medical Service whenever a temporary or permanent vacancy takes place, should be filled by provincial Medical Service men only.

Resolution No. 24.

This Conference condemns the policy of Government in continuing to nominate officers in the Indian Medical Service, in spite of the repeated protests of the Medical Profession as well as of the public, and urges that all nominations in that service should henceforth cease; and further that the selection into the service should be by annual competitive examination to be held in India, and open to all medical practitioners registered in India.

Resolution No. 25.

This Conference is strongly of opinion that the transfer of Officers of the Indian Medical Serviee to the Civil side should henceforth be stopped and that this service should remain a purely Military Medical Service: this Conference further declares that the members of the independent medical profession are prepared to offer themselves for Military Service in any war that may be waged in the defence of their country: and that they should thus serve as a reserve supply for recruitment in any defensive Military necessity.

Resolution No. 26.

This Conference recommends that for the proper training of the Military Medical Officers, it is necessary to open an Army Medical College suitable for Indian Military requirements.

Resolution No. 27.

This Conference recommends that the Army Department and the Government of India should inquire into the service conditions as also the terms of retirement of the temporary officers in the Indian Medical Service; and that these officers should be given a gratuity commensurate with the length of service they may have put in as temporary officers.

Resolution No. 28.

This Conference condemns the attitude of the Bombay Government in creating a new grade of Civil Medical Service, Class I of the Bombay Medical Service, on high salaries with all the privileges of private practice, as all these posts could be filled in by Honorary Medical Officers as in all countries in Europe and America. This Conference is further of opinion that, if any time such appointments are considered necessary, the officers so recruited should be appointed on a contract basis not exceeding a period of three yaars.

Resolution No. 29.

This Conference is of opinion that the system of appointing Honorary Medical Officers to hospitals and dispensaries already existing in different parts of the country, should be extended on a large scale with an ultimate view of stopping recruitment in the Civil Medical Services; and requests the Central council of the Indian Medical Association to submit a memorandum to Government in this connection.

Resolution No. 30.

This Conference recommends the formation of a scheme to promote legislation for the Indian Ambulance Convention on the lines of the Geneva Red Cross Convention, for the purpose of the statutory recognization, by the Civil and Military authorities in India, of the neutrality of the injured, the wounded and the sick; and of the ambulances, hospitals and medical materials; of the medical and nursing staff, and the personnel of the hospitals, ambulances and allied corps during the ordinary times of peace as well as during civil commotions, riots and war.

Resolution No. 31.

This Conference is of opinion that the time has now arrived for the constitution of the Ministry of Health in every province with a view to pursuing an energetic policy of sanitation and medical relief in the country.

Resolution No. 32.

This Conference is strongly of oppinion.—

(a) That it is essential to enact an All-India Pure Drugs Act at an early date, to prevent the import, manufacture and sale of adulterated, deleterious, worthless, misbranded or dangerous drugs and appliances; as also the false advertisement of drugs appliances, etc. for medical use.

(*b*) That the machinery for enforcing the provisions of the Act should also be provided at an early date,

(*c*) That a provision should be made in the Act for the training, registration, and licensing of compounders, pharmacists chemists, druggists, etc., and

(*d*) That Central and Provincial laboratories for the testing of drugs sera, therapeutic substance etc., be established in centres like Bombay and Calcutta.

Resolution No. 33.

In order to render India self-sufficient in respect of all the modern requisites for the practice of the medical profession and to promote medical industry, this Conference urges on all medical practitioners in India to encourage the use of drugs, sera, vaccines, surgical dressings; surgical instruments and other appliances of Indian manufacture.

To attain this end, schools and colleges of Pharmacy and technical schools for the training in the technique of the manufacture of surgical, electrical and mechanical instruments and appliances etc., should be established in India as early as possible by public spirited citizens to whom this Conference makes a special appeal for their early establishment.

Resolution No. 34.

This Conference requests Government to consider the advisability of protecting the infant drug industry in this country, particularly against the dumping of drugs, chemicals, etc., at low prices and even below cost price by huge foreign combines.

This Conference urges on Government the necessity of encouraging the development of drug-farming in India.

Resolution No. 35.

This Conference is of opinion that it is high time that a Committee be appointed to compile the Indian Pharmacopoeia.

Resolution No. 36.

In view of the great prevalence of malaria in this country, this Conference strongly urges upon the Government of India the necessity of having the devolution rules, which have prevented for several years the release to provincial Government the huge stocks of quinine lying with them, so altered as to enable the sale of quinine in the country in the interests of the health of the people.

Resolution No. 37.

This Conference recommends to the Provincial Governments, Municipalities and other local bodies the immediate necessity of introducing medical inspection of school children within their respective jurisdiction.

Resolution No. 38.

This Conference urges on Government the necessity of giving greater facility for the training of Indian women as nurses in the State hospitals and also urges the educated Indian women to take up the profession of nursing in larger numbers.

Resolution No. 39.

This Conference is of opinion that in order to secure proper medical aid in rural areas suitable subsidies for fixed periods not exceeding five years, be granted by the Government, and District and Local Boards, to Medical practitioners to encourage them to settle in practice in these areas.

Resolution No. 40.

This Conference recommends to Government to appoint a Committee to investigate and formulate a scheme of National Health Insurance.

Resolution No. 41.

This Conference is of opinion that as many mineral and thermal springs exist in various parts of India, the Government of India should

appoint a Committee to investigate and suggest how they can be utilised and developed to greater advantage.

Resolution No. 42.

This Conference offers its heartfelt congratulations to the large number of medical men and women, to the medical students and to the Indian nurses all over the country, who have most ungrudgingly given every assistance in organising ambulance corps and hospitals where the wounded have been looked after with the greatest care and devotion during the last Civil Disobedience Movement.

Resolution No. 43.

This Cenference places on record its gratitude for the valuable services rendered to the Association by Dr. B. C. Roy during the tenure of his office as President of the Association.

Resolution No. 44.

This Conference sincerely thanks the trustees of the Tilak Smarak Mandir, the Principal of Sir Parshurambhau College for lending their premises for the holding of the Conference and the Poona Seva Sadan Society for rendering every assistance in the holding of the Conference.

Resolution No. 45.

This Conference places on record its heartfelt thanks to the members of the Reception Committee and to the medical practitioners of Poona, including the members of the Poona Branch of the Indian medical Association, for the satisfactory arrangements made by them for the holding of the Conference. It further places on record its appreciation of the devoted services of the men and women volunteers of the Conference.

Resolution No. 46.

This Conference authorises the Central Council to appoint a small Working Committtee from amongst themselves and delegate to it such powers as may be necessary.

Correspondence.

TO

THE EDITOR,

"The Antiseptic" Madras.

Dear Sir,

Apropos your illuminating editorial comments in the April 1931 number of "The Antiseptic," on the new regulation, said to have recently been passed by the Academic Council of the Madras University, permitting the L.M.P. diploma holders, of at least 5 years standing, to sit for the Final M.B. & B.S. degree examination, if they satisfy certain other conditions, laid down in the said regulation, I hasten to point out to you that almost all the L.M.P's. of Madras have a feeling of dissatisfaction, at the meagreness of the so-called concessions allowed by the University.

While being grateful to Dr. M. R. Guruswamy Mudaliar for his taking the initiative in the matter, I am really surprised to find that Dr. Mudaliar and the other members of the Academic Council and the Board of studies, seem to have no comparative idea of the standards of other Indian Universities. It is really regrettable that merely to placate a foreign implacable council, the University of Madras should have allowed itself to be dictated to, even in matters which are strictly the sovereign concern of itself.

I refer particularly to the alleged inadequacy of knowledge of the Madras S.S.L.C's. As one who has worked in 3 other provinces, outside Madras, and as such has had plenty of opportunities to compare the standards attained by the products of the Universities of these provinces, I claim to speak with some authority. The S.S.L.C's. of Madras are undoubtedly superior to the "Matriculates" of other Indian Universities, particularly of Calcutta, for the following reasons:—

(i) The standard of English knowledge demanded from Madras S.S.L.C's., is considerably higher than that required by the other Universities from their matriculates.

(ii) S.S.L.C's. of Madras who take up Mathematics and Science, or pure Science, as optional subjects have to do actual *quantitative work* in Science, of a fairly high standard; whereas matriculates of other Indian Universities are required only to have a *qualitative* knowledge of *Elementary Science* for example—the quantitative experimental work, carried out by an S.S.L.C. candidate in Physics, in Madras, is carried out by the I.Sc. (Intermediate in Science) student of the Calcutta University. Such being the case, I wonder how the Madras University, can accept the matriculates of other Indian Universities, as fully equivalent to its S. S. L. C's.; and allow the General Medical Council, to brand the latter as unfit for higher Medical education.

Further, it is the Madras University, which judges the eligibility, for college courses of study, of the candidates that sit for the Public examination; and if those who are declared eligible for college courses of study, are considered ineligible to enter the Medical College, then, it means that the phrase, "Declared eligible for college courses of study", is a misnomer and has no meaning. It is indeed paradoxical to find that one who is "declared eligible for college courses of study" cannot enter a "College" of Medicine. One wonders whether the Medical College also comes under the category of a "college" or if it is a "Super College".

I hope the Academic Council of the Madras University, will give due recognition to its own products and thus show more confidence in its own selections,

PURULIA (Behar).
24—5--31

Yours very sincerely,
G. RAGHUNATHA RAO.

To

THE EDITOR,

The "*Antiseptic*" Madras.

SIR,

May I request you to kindly publish the following in your esteemed journal so that somebody might take up and try to redress the grievances of the Govt. Compounders in the Ganjam District.

The number of Compounders in the Agency stations of Ganjam Dist. is 11 and in the plains 12 thus coming to a total of 23. That is, half of the Govt. Compounders will always have to work in the Agency stations which means to say that the Govt. Compounder in Ganjam Dist, will have to be in the Agency for half of his entire service, as the Compounders in L. F. and Municipal service can't be posted for Agency.

So, to rectify this, it will be desirable that Govt. compounders for Agency duty may be posted by turns as is being done in the case of Sub assistant Surgeons from throughout the Presidency, or at least the Andhra Districts.

I appeal to some philanthropic individuals to take up the cause of the hard worked and voiceless compounders and redress this long standing grievance and thus do a service to them.

Book Reviews

Insomnia.—An Outline for the practitioner. By Dr. H. Crichton Miller. Published by Messrs. Edward Arnold & Co., 41 & 43, Maddox St., London W. 1. Price 10sh. 6d.

Dr. H. Crichton-Miller, M.A., M.D., Director of Tavistock Square Clinic, has placed the general medical practitioners under a sense of gratitude by bringing out a book on "INSOMNIA." An analysis of the underlying causes of this symptom is not always an easy task. It is, however, the experience of the general practitioner that a fair number of their patients seek professional advice for this complaint. As insomnia may result from a large number of causes, a complete history of each patient should be obtained and a thorough examination of his body should be made to arrive at a proper diagnosis.

A preliminary knowledge of the subject of psychology would enable the reader to better appreciate the psychological aspects of insomnia which have been clearly discussed in this book. As psychology is not a subject in the medical curriculum, the average general practitioner will find much difficulty in going through chapters V and VI in which the psychological aspect of insomnia and Psychotherapy have been dealt with. Chapters II, III and

IV deal with the general treatment, the physical aspect and medicinal treatment of the symptom of insomnia. There is a mine of information in these pages which would enable the general practitioner to appraise the symptom at its true value and to intelligently treat the patient for the same. The last chapter contains 9 illustrative cases and a study of the same will be fruitful in giving an insight into the analytical method and differential diagnosis adopted for elucidating the basic facts underlying the manifestation of insomnia. "Uneasy lies the head which wears a crown". But uneasy may also be the head which does not even dream of a crown or which wears a crown of thorns.

It is not possible to lay down any general treatment for insomnia. This quotation from Dr. Crichton-Miller's book will impress that fact:—

"Insomnia is a symptom. It attacks a man when his bank balance has fallen too low or his blood pressure has risen too high; it smites a girl when her lover is faithless or her hæmoglobin inadequate; it knows no bounds, it respects no person, unless, indeed, these be the bounds of civilization and the person of the savage. No symptom with the possible exception of pyrexia can emanate from so many and such diverse sources, bodily and mental, as insomnia. No symptom demands such varied therapeutics. No symptom is more resistant to routine treatment. Perhaps the only element in the treatment of insomnia which is applicable to every case is that intangible attitude on the part of the physician which is calculated to make the patient feel confidence. As Hutchinson puts it: "If the patient can be got to snap his fingers at the insomnia, it will often disappear." With this paramount thought in his mind let the doctor explore the aetiology and treat the causes, remembering Dr. Harry Campbell's dictum: "The physician will be more successful in treating the condition who is prepared to devote infinite care to matters of detail."

The book should be read by every general practitioner who desires to treat his patient rationally for Insomnia.—*T. S. T.*

The Psychiatric study of problem children—By Sanger Brown, M.D. and Howard Potter. M.D. Published by the New York State Department of Mental Hygiene, Albany, N.Y.

Education on the cut and dry lines is a thing of the past. Importance is now attached to several factors besides the intellect which influence the proper training of the child and though the consideration of these factors has rendered the system of education more complicated than before, it has paved the way for the utilisation of the manhood of the community to its best advantage. Efforts have to be directed not merely to secure the bright and the average intellect for the service of the commuuity but also to save the dull and the backward, the nervous and the unstable, the laggard, the truant and the potential delinquent.

The book before us is an introduction to the subject of the reclammation of those individuals who do not come up to the

ordinary standard of educability. It is intended as a guide to those who are already engaged in such work e.g. the staffs of the child-guidance clinics and of the institutions where the psychiatric problems of children are dealt with. It will nevertheless be of much interest to those who wish to get an insight into the subject.

To study the "problem child" one must take a comprehensive view of the situation and must investigate the physical, environmental, psychological conditions that have affected the child's personality and investigations along these lines have already brought out much useful information on the etiology of these problem cases with indications regarding the measures to be adopted in dealing with them. The family history of the child will reveal inherent nervous instability in the stock from which the child has sprung. This information, though valuable in itself, forms only a link in the chain of causes in the building up of the personality." "In the past there has been a tendency to over-emphasize the importance of heredity, in repect to its iufluence on the mental make-up of children. Environmental influence is a more potent factor in mental maladjustment than unfavourable heredity."

Unstable heredity, could be to a great extent counteracted by proper environment and vice versa contact with unfavourable environment would accentuate these tendencies.

"The inherent tendency should be taken into account but it should not lead one to believe that the condition cannot be averted or treated."

The personal history of the child relates to conditions in its bodily make-up. The facts relating to its birth and infancy, the illnesses that it has suffered from, its state of nutrition and any and every trace of physical (organic) disorder have to be taken into account.

The advances in Endocrinology have added to our knowledge, a new set of factors that influence both the physical and mental make-up of the individual and these influences might be peculiar to the individual or could be traced to the family.

A knowledge of clinical picture of endocrine dysfunctions is an invaluable aid in the investigation of problem children e. g., behaviour disorders and mental dullness may in certain instances depend entirely on a thyroid dysfunction.

Much of the attention that was once paid to the inherited qualities has now been shifted to the environmental contitions of children and it is being more and more recognised that environmental influences of the early formative years –say up to the age of six—are of much importance in determining subsequent mental characteristics.

"The child who is brought up in wholesome healthy surroundings is apt to possess wholesome mental qualities whilst the child who has irresponsible or dishonest parents or associates, may acquire such characteristics irrespective of his heredity." The home, the neighbourhood and the school--each in their turn may

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affect the well being of the child. Defects in any one of these situations may mar the good effect in the other two. What is lacking in the home may have to be provided for in the school and the teacher of today is expected to show more concern to the building—up of the personality of the pupil than imparting the knowledge of the 3 R's.

Freudian Psychology has made some notable contributions to the psychiatric study of children and it offers new interpretations to their mental life and conduct. Expermental psychology had added considerably to our procedures of estimating the characteristics of children and of determiniug their short comings and has pointed out the ways of modifying the training to individual requirements. "The child who has little initiative and no ability to plan, cannot be successfully placed in a situation requiring these two traits, nor can the child whose attention wavers and who has difficulty in remembering be expected to do well where steadiness, concentration and a good memory are needed."

As a result of the examination of problem childeen, the causes of personality defect may be attributed to exogenous—where the sources are external to the child—or endogenous conditions.

Certain conditions of physical origin causing problems in children are attributable to physical defects, head injuries, post meningitic distrubances, congenital syphilis. convulsive states and other organic disorders. Mental deficiency is a factor in many social problems. Its recognition and the adoption of measures for the care, management and treatment of mentally defective children should be the concern of all those who are interested in the progress of a community. It is needless to remark that this subject has hitherto received scant attention in India.

All grades of mental defect could be recognised—from the rank idiot at one end of the scale, to, "borderline" cases and in each case the causative factors are traceable and while in some cases the condition is incurable in the majority of causes they are removable. At any rate an organised system of dealing with such cases is necessary in every progressive community.

The management of problem children. "For many centuries the proper bringing up of children has been stressed as the most important factor in civilization and indeed as constituting the very foundations of society". Hitherto it has been considered mainly from the point of view of dietary and bodily hygiene. The aspect of mental hygiene has been lost sight of. Mental hygiene as a positive constructive science has come to be recognised only recently but though the experience gained is still limited, it has to a certain extent made the utility of the traditional methods of child-rearing questionable.

Habit training, character training and guidance of unfavourable tendencies are no less important in a child's education than the training of the intellect. Problems arising from a neglect of these factors are many. They confront the child right through

from infancy to adolesence and a wider dissemmination of knowledge of child guidance alone, will help to solve these problems.

"Indeed a time must necessarily come in education when provisions are made for that large group who require special measures for their education. Such a change in educational methods as applied to certain groups will necessitate a change in the entire educational system of most communities, a change which should meet the needs of those children who are now being seriously neglected and are causing many social problems."

A perusal of the book cannot fail to convince one, of the necessity of adopting measures to combat this important social problem which faces us in this country as well as anywhere else. Public opinion on this point is not sufficiently enlightened. Much may be done in this regard by medical practitioners and public health authorities by diverting a portion of the interest hitherto solely directed to physical welfare of the community. though the importance of the latter is in no way minimised. Physical and mental hygiene are two aspects of the same subject viz. Public Health. Social agencies, Ladies' clubs and similar organisations could very well include this among their various activities.

"When knowledge in child guidance is widespread, many of the present day causes will be removed early recognitition will be more frequent and better facilities for treatment will be made available.—*F. N.*

Children at the Cross Roads:—By Agnes E. Benedict, Published by the Commonwealth Fund: Division of Publications, 597 Madison Avenue, New York City. 238 P.P. Cloth bound with 7 drawings Price $ 1·50.

Apart from Education and mental training, the health, character and morality of school children have become now-a days more the concerns of state than of individuals. This book tells the tale of 9 children who were on the verge of vice and wickedness and who by tactful handling were reclaimed and helped to a new hold on life and a new understanding. Thirty communities were selected by the National Committee on visiting teachers, sponsored by the Common Wealth Fund, for three year demonstrations of visiting teacher work. Three of these communities were rural counties. 'Children at the Cross Roads' is based upon carefully kept records of the work in these counties. This book will be found to be of immense interest and help to teachers, parents, social workers and others who are in any way connected with the child welfare problem in all its aspects, more especially Character-Building.—*S.T.*

America's Sex Marriage and divorce Problems:—By Dr. Williams J. Robinson M.D. Published by Eugenics Publishing Co., New York. 2nd Edition Price $ 3.00.

A genuine and earnest attempt has been made in this book towards the solution of America's sex problem which is becoming more and more complex and complicated as civilization advances. The author who had practised for 20 years and more, seen, handled and treated venereal diseases in public hospitals and private clinics and had thus acquired first hand knowledge and information, must be considered as the best authority on the subject and his views and conclusions must therefore be respected. The stories related and the cases reported here are based every one of them, on actual facts and are intended to serve not as interesting material but as examples, as 'beacon lights to guide men and women, menaced with shipwreck around dangerous reefs, into a safe heaven'. The book is divided into ten parts and the parts dealing with medico sexual topics and birth control and abortion will be found peculiarly interesting to medical men. The book deserves to be in the hands of every educated man and woman in India so that they may have a clear idea of the sex and social evils in Miss Mayo's land and avoid those dangerous pit-falls, which civilized nations generally encounter in their struggle for sex equality and social advancement.—S.T.

Mothercraft.—By Leslie George Housden M. B., B. S. (Lond), published by Herbert Jenkins Limited, 3, York Street, St. James's London. S. W. 1. Price. 2/6.

More care is bestowed, more money spent, both by the state and private institutions, on the upbringing of children, now-a-days, that any book that deals with that subject will not be unwelcome. This booklet explains in a practical manner how children should be reared and brings home to the parents 'the dreadful and manifold dangers' of artificial feeding, while emphasizing at the same time the need for and extreme value of breast-feeding. Preparation for the baby, Weaning, Baby's health and how to maintain it and the training of children are other important matters that are dealt with in this little book, which will be found to be of utmost value to expectant mothers. We heartily commend this to all medical practitioners, matrons, nurses, midwives and to womenfolk generally to whom child-bearing and child-rearing are anxious periods in their lives.—*S. T.*

Tuberculosis and its early diagnosis and treatment.—By Jadugopal Mukerjee, M. B., Ranchi, can be had of Messrs. Butterworth & Co. Ltd., 6, Hasting Street, Calcutta. Price Rs. 2.

Tuberculosis has become a growing menace to the people the world over and is defying all attempts to successfully combat it. In this book the author lays stress on the correct and early diagnosis of the disease and timely and proper treatment as the two conditions essential to speedy cure. He puts the plain and practical question.—Is Tuberculosis curable? and answers it himself saying "Yes, it is curable to a great extent, if detected quite early". Next to diagnosis, the second rank is assigned to rest,

then to hygiene, then diet and lastly to drug. The book contains useful and up-to-date information on the subject and will certainly repay perusal.—*S. T.*

Edward Jenner and discovery of smallpox vaccination:— By Louis H. Roddis, Published by the George Banta Publishing Co., Menasha, Wisconsin.

The advent of this book at a time when Anti-vaccinationists are carrying on a vigorous propaganda against vaccination will be hailed by the public throughout the world as a source of inspiration and bulwark against the incalculable mischief wrought by the oppositionists. No more appropriate time can be chosen to remind the people of that great discovery of Jenner, which has saved many a child from death or from becoming life-long cripples. This book should certainly be read and re-read by every parent who is anxious to successfully resist the raid of smallpox, bringing death and deformity to their little children. The book affords interesting reading.—*S.T.*

"Properties of Food" by W. M. Clifford, M. Sc., (London) and V. H. Mottram, M. A. (cantab), Publishers: The University of London Press Ltd. London, Pages 123, Price 2/6d.

This small hand book of about 128 pages by two eminent physiologists is the first of its kind and fills a real need in the literature on the subject of Domestic science. The treatise is meant as a practical test book for teachers and students of Domestic science, and its aim is to present an account of the way whereby the properties of foods can be demonstrated in a simple way.

The book under review opens with a preface and is followed by an exhaustive description (covering five out of the ten chapters) of the nature and properties of the various constituents of food-stuffs together with a large number of such practical experiments for their investigation as can be carried out almost anywhere and with the help of a few chemicals and home-made apparatus. The succeeding chapters are concerned with the digestion of food and the effect of cooking on foods and their digestibility which altogether afford a very interesting and instructive reading. Of particular interest are the three tables, comprising the 9th Chapter of the book, which would prove of immense practical value in calculating the coloric value of numerous food-stuffs.

In short the book, containing as it does, a number of simple Chemical tests will admirably suit as a practical guide for those for whom it is intended. The style of writing is lucid and interesting and as far as possible free from technicalities. The paper print etc. are of a very good quality and reflect credit on the publishers.—*G. L. S.*

ANNUAL REPORT OF THE INSTITUTE FOR MEDICAL RESEARCH, KUALALUMPUR, FOR THE YEAR 1929

Tropical Typhus. Research work into the several aspects of this disease, was carried out, by different members of the Institute staff. One noteworthy feature of the disease that emerges very clearly from these studies, appears to be the inability to clinically differentiate Tropical Typhus from the Typhus of the Western world. The reviewer thinks that this point, is distinctly in favour of Col. (now Major-General) J.W.D. Megaw's hypothesis re-the essential unity of the Typhus fevers of the different parts of the world. The evidence is growing day by day and the conclusion is irresistable that the different kinds of Typhus fever described by workers from different parts of the world, may after all be due to certaim minor variations in the clinical picture of the disease, which may depend upon, racial, climatic and other factors, peculiar to each country, and they may also be due to the nature of the Vectors.

Comment is made on the inability to locate any initial lesion in all the cases. But from Indian experience, the reviewer is not at all surprised at this failure. Dr. S. Sundar Rao and Mr. M. O. T. Iyengar of the Calcutta School of Tropical Medicine have recently commented upon the failure, by an Entomologist, to find out, a tick, which was actually parasitic on his scrotum !! Even such highly educated people, are frequently unaware of the existence of a parasite on their skins, specially when it happens to be in concealed situations. Initial lesions need not necessarily be present or even if they were present, they might have been so slight as to escape the vigilance of even an educated man, not to speak of oil palm estate coolies, who, mostly were the patients investigated.

Delirium and stupor with very low temperature, features noted in the European form of the disease, were also evident in the Federated Malay States. This again supports Megaw's Hypothesis.

An eye sign, met with, in about 40% of the cases, considered to be sufficiently Pathognomonic of the disease, is described. It consists of a characteristic mild suffusion. The eyes are half closed, somewhat watery and faintly glistening giving a dull yet anxious expression to the countenance. Injection of the vesssels, is usually not marked; much less so than in cases of Leptospirosis; mild cases of which may offer difficulty in diagnosis at least in the early stage. In the absence of other more characteristic clinical signs of the disease, this eye sign may be of some diagnostic aid.

Acute Bronchitis or Bronchopneumonia supervening early in the 2nd week, was the commonest complication encountered.

A very brief description of the naked eye changes in the viscera and just a short outline of the Histopathological changes in the brain, as observed in Post-mortem examinations, on seven fatal cases of the disease follow; and a more detailed description of the morbid anatomy and Histopathology, is promised to be published in a separate Bulletin. The changes in the brain, consist essentially of a perivascular infiltration of round cells, and the finding of a diplococcus in the walls of the vessels, as well as in the pyramidal cells of the cerebral cortex. The reviewer opines that these socalled "Diplococci," may probably be, one of the many Pleomorphic forms of the Rickettsia bodies or they may be the outward manifestation of the tissue re-action to the presence of an ultra microscopic filterpassing virus, just like the negri bodies of Rabies.

Tropical Typhus is said to give a partially positive Kahu reaction.

Examination of all the available coolies from oilpalm estates, wherein Tropical Typhus, has been endemic, at various periods, with a view to isolate the arthropod vector; and the examinationof a fairly large number of rats from same estates, have given results, which cannot be regarded as conclusive, as yet. The arthropod vector may be a mite or the Human louse. But the possibility of of Ticks being the Vectors, does not seem to have been considered.

MALARIA

Most of the Research work done, by this branch has already appeared in 2 or 3 Bulletins which have already been reviewed in "The Antiseptic". So, a repetition of them, is considered unnecessary. An investigation into the problem of detecting the cinchona alkaloids, in the urine of treated cases, was undertaken, in reponse to an enquiry from an outside source. Using the wellknown mayer's reagent, the urine of cases treated with different cinchona alkaloids was examined and this has given much valuable information re—the time of excretion of the cinchona alkaloids, in relation to the particular dosage employed.

Quinine alkaloid, Euquinine and cinchonine appeared in the urine, only 2 hrs. after administration orally. Quinine sulphate appeared in the urine after 40 minutes, 1 hour, and 2 hours after administration (orally). Quinine Bihyodrochloride was found to be more quickly absorbed and excreted than all the other salts and alkaloids. Thus, it could be detected in the urine, just 20 minute after it was administered orally. All these drugs

ceased to be demonstrable in the urine from 9 to 13 hours after administration.

Experimental investigations into :—(i) the ecology of mosquitoes, (ii) the possible larvicidal effect of a plant from Queensland, and (iii) the relative pathogenicity of the species of anophelines; have been conducted and some interesting results have been arrived at. A detailed report on these investigations, is to be shortly published.

LEPROSY.

Inoculation experiments in monkeys, using highly infectious leprous material, all proved negative. This is in keeping with the results obtained earlier, by Dr. E. Muir, in India.

Solganol treatment of 8 lepers, has given very "funny" results, and the reviewer opines that even a mention of such "results" in an excellent report like this, detracts from its excellence.

"Lopion", another gold preparation has been tried in a dozen lepers. The complement fixation reaction, in these cases, using as antigen A. B. tuberculosis emulsion, has given very interesting results; but this requires further confirmation.

Though rather late in the day, the Leprosy Research worker of this institute also concludes that Antisyphilitic treatment, in lepers, who are serologically and clinically negative is positively harmful; and that in those who are positive, such treatment actually improves not only their syphilis but also their Leprosy.

A few reacting lepers, are reported to have given positive reactions with both the Wassermann and Kahu, during the reacting phase but these same cases, after the subsidence of the reaction, even without any antisyphilitic treatment, are said to have given no such positive reaction. Hence it is concluded that reacting lepers give a non-specific reaction with both the Kahu and the Wassermann. But this finding, requires further corroboration, as it is based on a very small number of cases, and as it is contrary to the results of other workers, in India and in the Philipines, who have based their conclusions on a considerably larger number of cases.

"BURNING FEET"

A peculiar condition known as "Burning feet" characterised by a rather severe burning sensation, confined to the soles of the feet, was met with, in a few South Indian Hindus of the labourer class. Noteworthy attempts have been made, to determine the etiology of this condition, but it is regrettable that no definite

etiological factor or factors, have been found. To readers of "The Antiseptic," this condition may not be altogether unfamiliar. The reviewer has frequently met with this condition, in the rural parts of the Tanjore and Trichy Districts at least. From clinical investigations, the reviewer is inclined to the opinion, that this peculiar condition, is in some way related to the carbohydrate and nitrogenous metabolic functions of the Liver. A slight derangement of these functions or any one of them, without any noticeable structural changes in the organ, may be the causative factor. Investigations along these lines, may throw some light, on the etiology of this obscure condition.

RABIES

A compaign of considerable interest to the workers in the Pasteur Institutes of India, is being conducted in the F. M. S. In addition to treating Human beings with prophylactic rabies vaccine (Semple's), prophylactic inoculation of Dogs, with the same vaccine, is being tried, on lines, similar to the campaigns conducted successfully in Japan and America and less successfully in Germany. The results are worth watching further, and if any considerable degree of Immunity from Rabies, results in the inoculated canine population, as compared with the uninoculated, then, a very good case, for extensively adopting this, as a prophylactic measure in Rabies, will have been made out. Deaths from Rabies is not inconsiderable, in this country (India), despite the existence of numerous Pasteur treatment centres. So, India is keenly watching this valuable experiment started in the F. M. S. Also, the Indian Veterinary authorities should try to emulate their worthy brethren of the F.M.S.

The reports from the divisions of Bacteriology, Pathology, and Chemistry, show that, much work of a high order of merit, has been carried out in these laboratories.

In conclusion, it has to be said that Dr. A. Neve Kingsbury, the Director of the institute, and his staff, deserve to be congratulated on a year's very useful work; and there is no gainsaying the fact that this Institute has established its position in the Research world, by its noteworthy contributions to Tropical medicine, from time to time.—*G. R. Rao.*

Books Received.

The following books have been received and the courtesy of the publishers in sending them is acknowledged. Reviews will be published from time to time.—[*Ed. A.*]

Happy Motherhood—*By P.W. Yeomans. Publishers*: William Heinemann (Medl. Books) Ltd. 99, Great Russell St. London. *Price 3 sh. 6 d.*

The care and Nursing of the Infant—*By D.A. Kennedy. Publishers*: William Heinemann (Medl. Books) Ltd. *Price 3 sh. 6d.*

Nervous Indigestion—*By W.C. Alvartz. Publishers*: William Heinemann (Medl. Books) Ltd. *Price 7sh. 6d.*

Simple beginnings in the Training of Mentally defective children—3rd Ed.—*By M. Macdowall. Publishers*; Law and Local Govt. Publications Ltd. 27 to 29 Furnival St. Holborn E.C. 4. London.

Practical Nursing—3rd Ed.—*By H.E. Cuff & W.T.G. Pugh Publishers*: William Blackwood & Sons Ltd. Edinburgh & London *Price 10sh. 6d.*

The origin of the human Skeleton—*By R. Broom. Publishers*: H.F. & C. Witherby, 326. High Holborn, W.C. London. *Price 10sh. 6d.*

Arguivos da Escola Medico cirurgica de Novagoa Series A Vol. 6.—*Edited by Jaime Rangel. Publishers*: A Mr. Ic. Secretaire de Escola Medico –cirurgica de Novagoa.

Aids to Medical Treatment—*By J.T. Lewis & T.H. Crozier: Publishers*: Bailliere, Tindall & Cox. 7 & 8 Henrietta St. Covent Garden London. *Price 3sh. 6d.*

Aids to Medical diagnosis—4th Ed.—*By A. Whiting. Publishers*: Bailliere, Tindall & Cox. *Price 3sh. 6d.*

Male disorders of sex—*By K.M. Walker. Publishers*: Jonathan Cape, 10 Bedfork Sq. London. *Price 5sh.*

The dissection of the Frog—*By R.H. Whitehouse & A.J. Groove. Publishers*: University Tutorial Press Ltd. High St. W.C. London. *Price 2 sh.*

Preliminary Notes on Various Technical aspects of the Control of conception based on the Analysed data from 10,000 Cases.—*By M. Carmichael Stopes. Publishers*: Mothers' Clinic for constructive Birth Control. 108, Whitfield St. Tottenham Court Road, London W. I.

Hygiene—A college Text book for non-medical Students—*By R.C. Whitman. Publishers*: John Wiley & Sons. Inc. N.Y. & Chapman & Hall, 11. Henreitta St. Covent Garden, London W.C. 2. *Price 12sh. 6d.*

An Introduction to Human Experimental Physiology—*By F.W. Lamb. Publishers*: Longman's Green & Co. 39 Paternoster Row. London E.C. 4. *Price 10sh. 6d.*

Cinchona Tercentenery Celebration and Exhibition—Report for 1930. *Publishers*: The Welcome Historical Medical Museum, 54, Wigmore St., London.

Modern Sewage disposal and Hygienics—*By S. H. Adams Publishers*: E. & F. N. Spon Ltd. 57 Haymarket S.W. 1. London. *Price 25sh.*

The Medical Annual 1931.—*By C.F. Coombs & A. Rendle Short. Publishers*:John Wright & Sons Ltd. Bristol. *Price 20sh.*

Essentials of Medicine—9th Ed.—*By C.P. Emerson & N.G. Brown. Publishers*: J.B. Lippincott Co. 16 John St. Adelphi London W.C. 2. *Price 12sh. 6d.*

The American Journal of Cancer Vol. XV No. 1 Jan. 31 issue.—*Edited by Francis Carter Wood. Publishers*: 654 Madism Ave. New York. N. Y.

Problems of Neurosis—*By Alfred Adler. Publishers*: Cosmopoliton Book Corporation, New York. *Price $ 3.00.*

Dr. Colwell's Daily Log for Physicians 1931—*By Dr. Colwell. Publishers*: Colwell Publishing Co., Champaign, Illinois.

Cholera and its treatment—2nd Ed.—*By R.K. Guin. L.M.F. Publishers*: Book Co. Ltd. 4/3 B. College Sq. Calcutta. *Price Rs. 2/8.*

Ante-natal work in India.—*By Ruth Young. Publishers*: Indian Red Cross Society, Simla.

Elements of Physical Therapy—2nd Ed.—*By W.W. Worster. Publishers*: Worster Laboratories, 205 South Mission Drive, San Gabriel, Calif. U.S.A.

The Basis of Epilepsy *By E.A. Tracy. Publishers*. Richard G. Badger—The Graham Press. Boston.

Nutriology—*By J.A. Buchanan. Publishers*: Richard G. Badger.

Beri-Beri.—*By Dr. M. L. Kamath, B.A., M.D.*, Madras.

Nosokomeion—Qrtly Hospl. Review. Vol. II. No. 2. April 1931.—*Edited by Verlag W. Kohlhammer*, Stutt-Gart. Urbanstr. 12-16, Germany. *Price R.M. 8.*

High Frequency Practice—6th Ed.—*By B.B. Grover. Publishers*: The Elecron Press. Kansas City M.O. *Price $ 6.00.*

Alimentary Anaphylaxis (Gastro-Intestinal Food Allergy)—*By Guy Laroche, Charles Richet fils and F. St. Girous. Publishers*: University of California Press. Berkeley, Calif. *Price $ 2.00.*

Annual Report of the "Home for Consumptives" Pine Lodge, Ranidhara, Almora U.P. for 1930—*By Mrs. Lucy C. Mallick, Supdt.*

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NOTICE

THE INDIAN SCIENCE CONGRESS, 1932

The nineteenth Annual Meeting of the Indian Science Congress will be held at Bangalore from the 2nd to the 8th January, 1932. Lt. Col. A. D. Stewart, I. M. S., School of Tropical Medicine, Calcutta has been appointed President of the Section of Medical and Veterinary Research.

In view of the fact that a very large number of papers have been received in past years making it impossible to read all of them in the time available, and necessitating the curtailment of discussion on others, the Sectional Committees have been advised to make a careful selection of papers accepted. Authors are requested to take note of following points :—

(i) Papers on Medical and Veterinary Research *must* be received by the Sectional President, Lt. Col. A. D. Stewart, I.M.S. School of Tropical Medicine, Central Avenue, Calcutta not later than the 15th October, 1931 which is the last date for accepting papers according to the rules.

(ii) Only original papers, that is to say, papers which have not already been read or published in the same or similar form, will be accepted.

(iii) Not more than two papers will be accepted from any one contributor.

(iv) Papers must not take more than 20 minutes to be read. It takes 3 minutes to read a page of foolscap intelligibly, apart from diagrams, slides etc. Papers should not, therefore, exceed 7 pages of typed foolscap.

(v) Papers *must* be accompanied by *3 typed copies* of an abstract of the paper. This abstract must not exceed 200 words, and should not contain any formulae or diagrams. *Papers not accompanied by such abstracts will not be accepted.* It is not fair to members of the Congress not to have due notice from the programme of what a paper is about.

(vi) All diagrams, tables, pictures, etc., should be reduced to lantern slides, or enlarged to posters corresponding in type to 6/18 snellen.

(vii) Authors should not contribute accounts of their papers to the local lay press. It is hoped that it will be possible to arrange for a daily precis of the proceedings in the Medical and Veterinary Section to be sent to the press officially by the President of the Section.

(viii) Workers in Bengal and neighbouring provinces are requested to send their papers before the 21st September 1931. The attention of workers is drawn to the resolution of the Executive Committee that abstracts of papers submitted after the last date i.e., 15th October 1931 *shall on no account be printed in the advance copy of abstracts.*

(ix) Papers will not be accepted from individuals who have not paid their subscription for mempership. Forms of application for membership can be obtained from the General Secretary, Asiatic Society of Bengal, 1 Park Street, Calcutta.

Will our readers kindly take this notification as the first official intimation with regard to the 1932 Congress? We trust, further, that the members of the medical and Veterinary professions in Bangalore will co-operate to make the 1932 Congress a successful one.

There are three classes of members of the Indian Science Congress; viz:—

(*a*) Full members; annual subscription, Rs. 10/—

(*b*) Associate members; annual subscription, Rs. 5/—.

(*c*) Student members (who must be certified by the principal of their college to be such), Rs. 2/—

Only full members have the right to read papers. Associate and student members may submit papers through a full member. Subscriptions should be paid to the Hony. Treasurer, Indian Science Congress, c/o, the Asiatic Society of Bengal, 1, Park Street, Calcutta.

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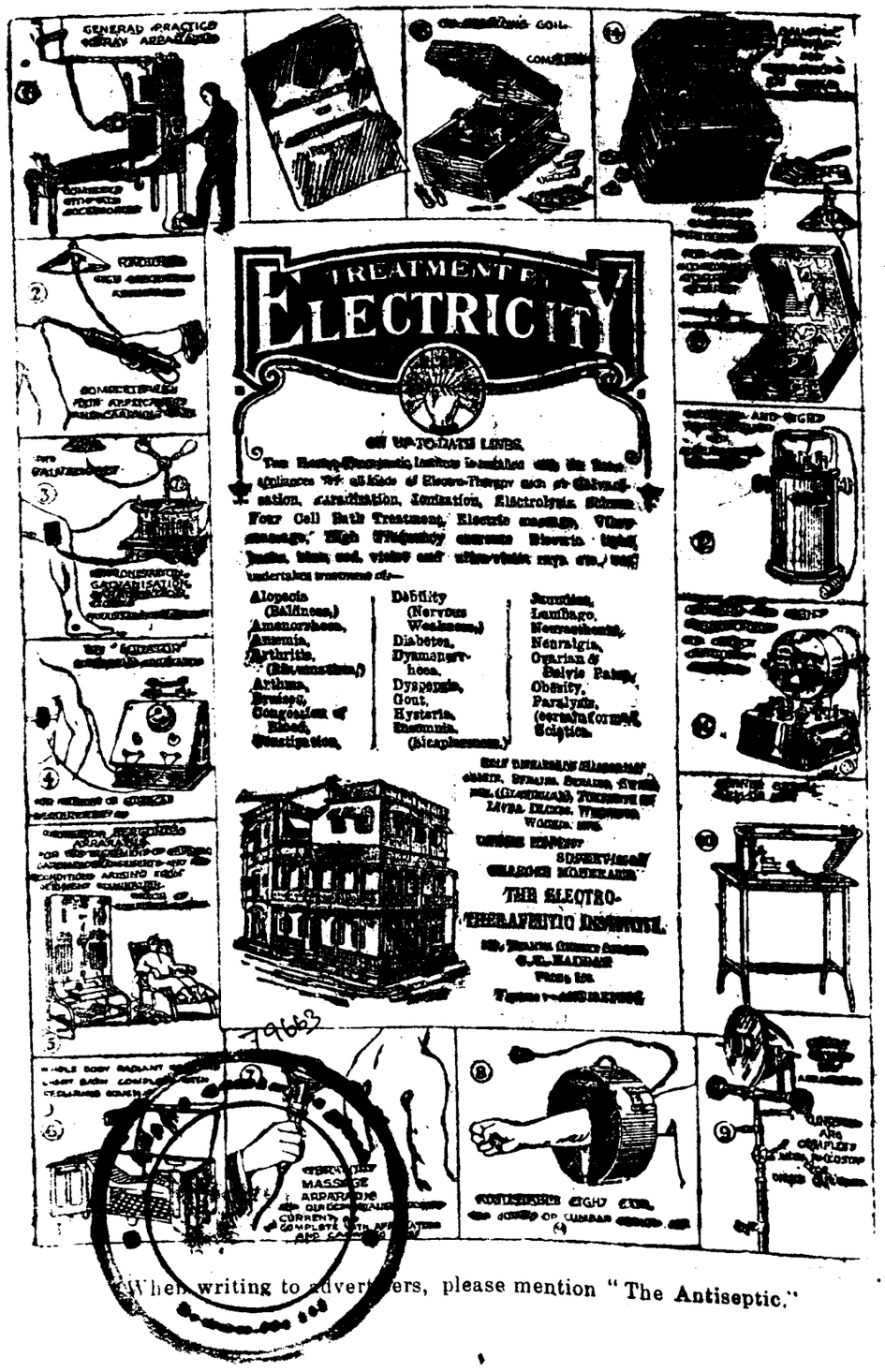

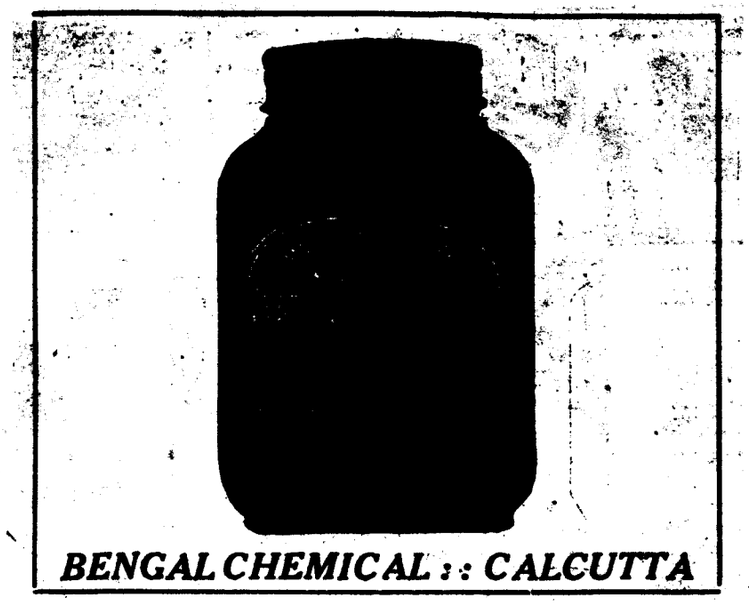

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