

THE ANTISEPTIC

1959

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The Antiseptic

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Editorial & Publishing Office: 323-24, Thambu Chetty St., Madras-1

Telegrams: "ANTISEPTIC"

P. O. Box 166

Telephone: 5263

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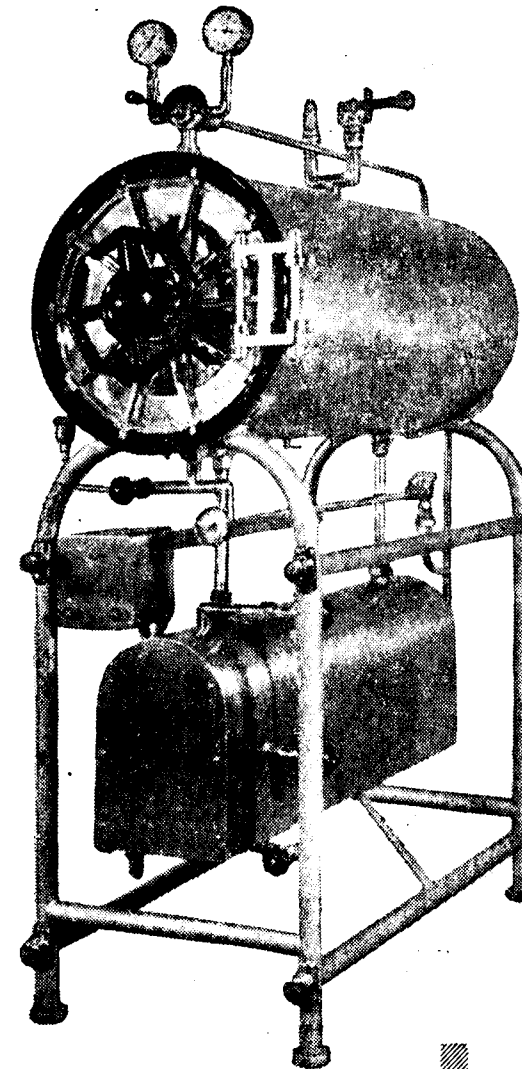
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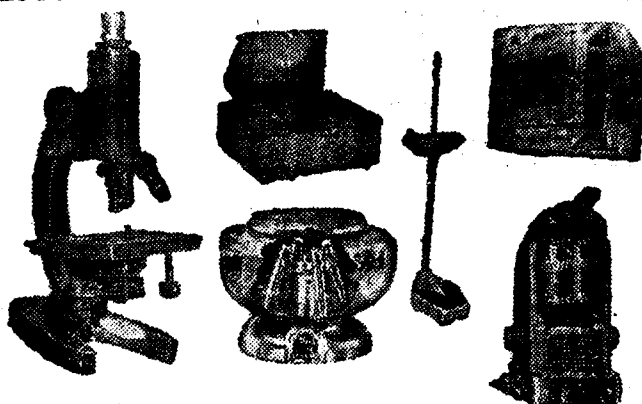
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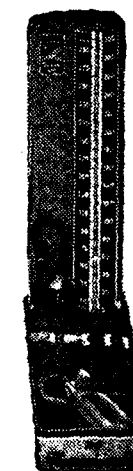
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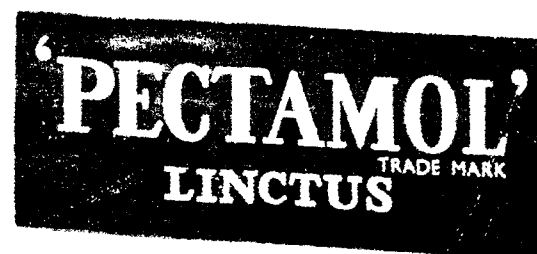
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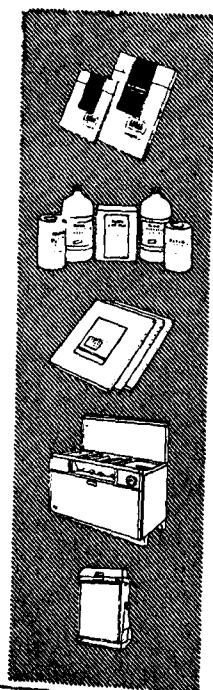
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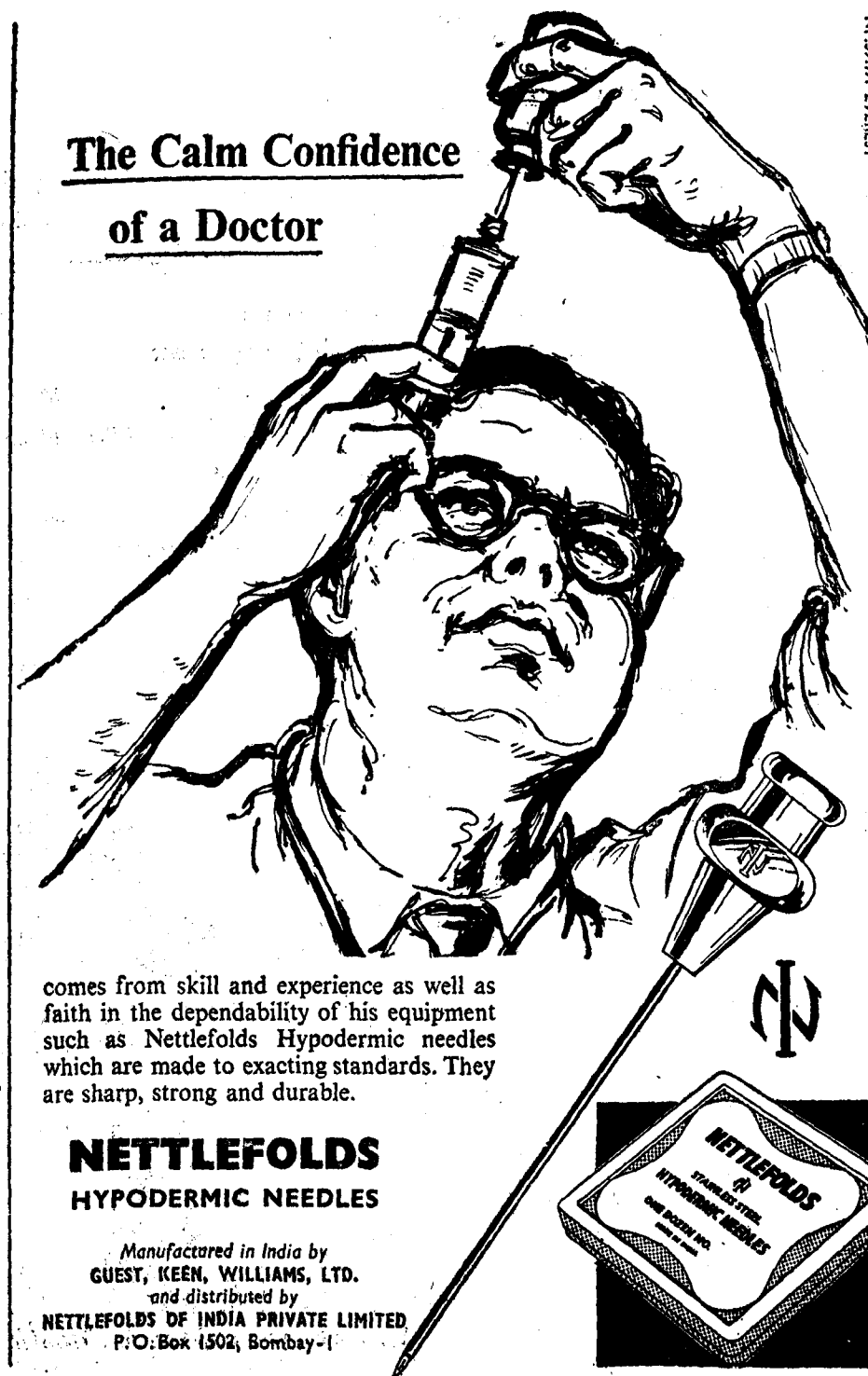
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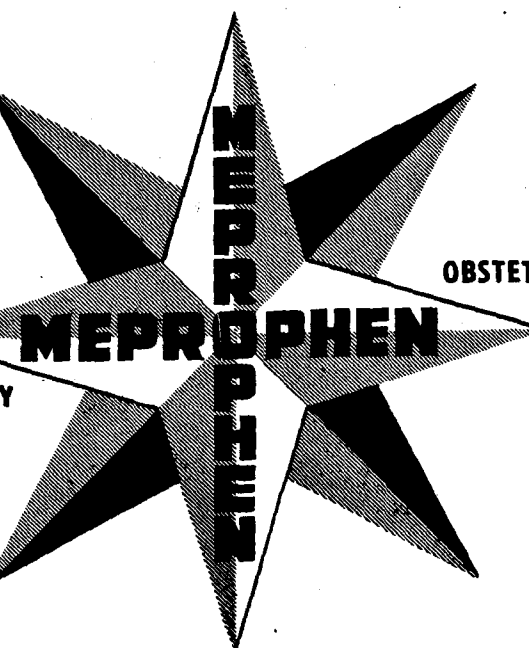
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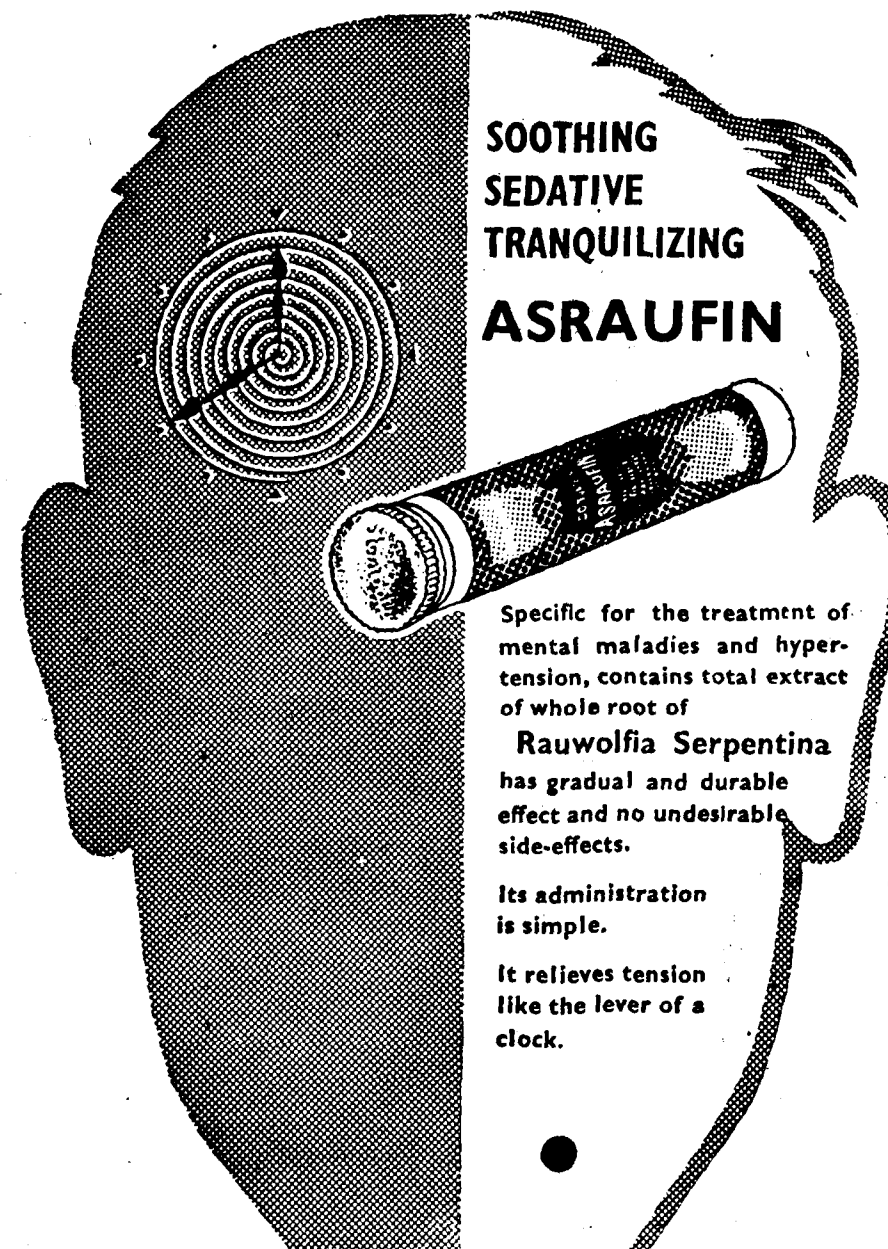
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Its administration is simple.

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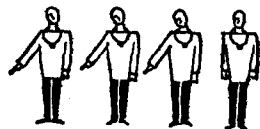
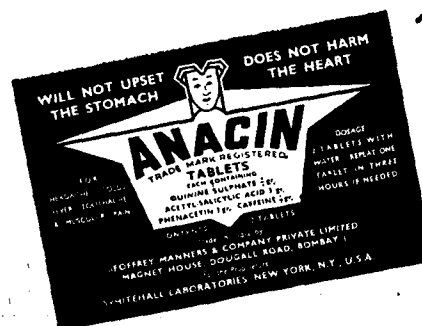
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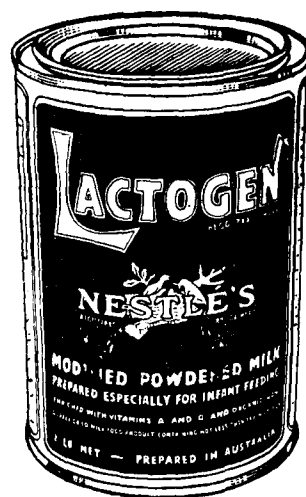
Supplied: Bottles of 20 and 100 tablets, each containing meprobamate 0.2 Gm. and pentaerythritol tetranitrate 10 mg.

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24
 HOUR TREATMENT

OF EPIDEMIC ENTERITIS AND DYSENTERY

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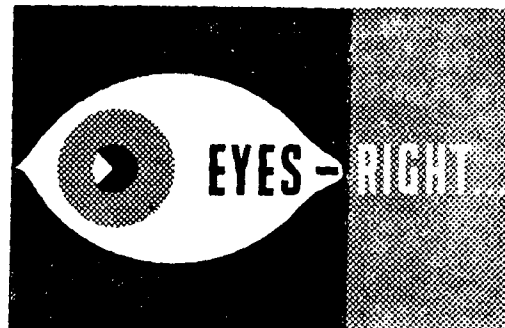


Supplied in bottles to prepare 4 fluid ounces of suspension. When diluted to 4 fluid ounces with water, each fluid ounce contains streptomycin sulphate 0.25 gramme, sulphaguanidine 2 grammes and kaolin 2 grammes.

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A new chemotherapeutic agent developed in Hungary for safe and effective treatment of malignant neoplasms.

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Brand of MANNOMUSTINE (B.C.M.)

The product strongly inhibits proliferating lymphocytes and it is also being investigated for its effect on metastasising tumours. Extensive clinical investigation shows it to be of particular interest in the treatment of:—

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HORDER

People are conservative. They like what they are used to. Sometimes this protects them from cheap and nasty innovations. Sometimes it leads them to a blind resistance to change. The great discoveries of Lister and Semmelweis and Simpson all met with unreasoning opposition even from scientists.

A notable example of unreasoning conservatism is the prejudice that many people have against all things factory-made. No valid explanation can be offered, especially when one considers that most synthetically manufactured drugs and hormones available today are an improvement on the natural forms; in fact, most of them are cheaper, more effective, more easily standardized and without many of the untoward reactions observed in their 'natural' counterparts. Most illnesses today are treated with such drugs — and with excellent results!

Yet on a subject as vital as Nutrition, we find that there are people, even doctors, who are guided more by old beliefs than scientifically established fact. Hydrogenated fats suffer greatly from such beliefs. It is believed, for instance, that they are inferior to animal fats when used as a cooking medium. Yet numerous workers in this and other countries have concluded that hydrogenated fats are as good as animal fats for cooking, if not better.

Research studies in Europe and the US show that the basic energy and food value of hydrogenated oils is the same as that of the oils from which they are prepared. In the case of DALDA, the leading brand of vanaspati, this means primarily groundnut and til oils — both of which have a long record of excellence as a cooking medium.

These researches also indicate that, as a source of fat, hydrogenated oils like DALDA are equal to butter. Dr. Aykroyd, the former Director of Nutrition Research Laboratories, Coonoor, says: 'Vanaspati is a wholesome food and there is no objection from the nutritional standpoint to an increase in its consumption.'

In the USA, H. J. Deuel has found that products like DALDA, which are made of hydrogenated oils (95% of the oil in DALDA

DL/P.7-23

is partially hydrogenated), are digested and absorbed just as well as butter fat. Langworthy, also in the United States, has proved that the digestibility coefficients of vegetable oils hardened up to a melting point as high as 45° C are as good in humans as those of butter fat. And the melting point of DALDA is never above 37° C — which coincides optimally with body temperature.

DALDA has moreover one great advantage over the oils from which it is made. It is an excellent source of vitamins. Seven hundred International Units of Vitamin A, nearly one quarter of an adult's daily requirement, go into every ounce. And it is well known how deficient the Indian diet is in this vitamin. Besides this, 56 IU of Vitamin D are also added. In normal cooking, these vitamins are well retained, though if subjected to great heat for a long time, they will be lost from DALDA as from any other food.

There is a final point worth remembering. A great deal of medical research has been conducted on the subject of the causation of atherosclerosis and coronary and cerebral thrombosis. Excessive fat intake and faulty fat metabolism have been blamed by some people as factors causing these conditions in later life. Nobody yet knows how true this is. What we do know is that cholesterol when raised in a person's blood (serum) and when raised for a long period of time is definitely incriminated in the pathogenesis of atherosclerosis. Thyroid disorders, diabetes etc are diseases of the human which are characterized by raised serum cholesterol levels in the blood. Atherosclerosis is a very frequent accompanying complication of such diseases.

Much more knowledge is needed, and we welcome, therefore, the Government's announcement that the Indian Council of Medical Research is making investigations to try and establish the facts.

DALDA has been used in India for nearly 30 years. Today it is a part of Indian cooking, accepted both as an excellent fat to cook with and as a good food in its own right. And not the least of the reasons for its success is that it is factory-made, a modern product untouched by hand in manufacture, hygienically packed and made to a strict specification.

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Different from the usual (APC) type**No acetylsalicylic acid—No gastric irritation.
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Headache, toothache, colds, fever and muscular and
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Each tablet contains :

Piperazine Phosphate, B.P. ... 0.26 G.

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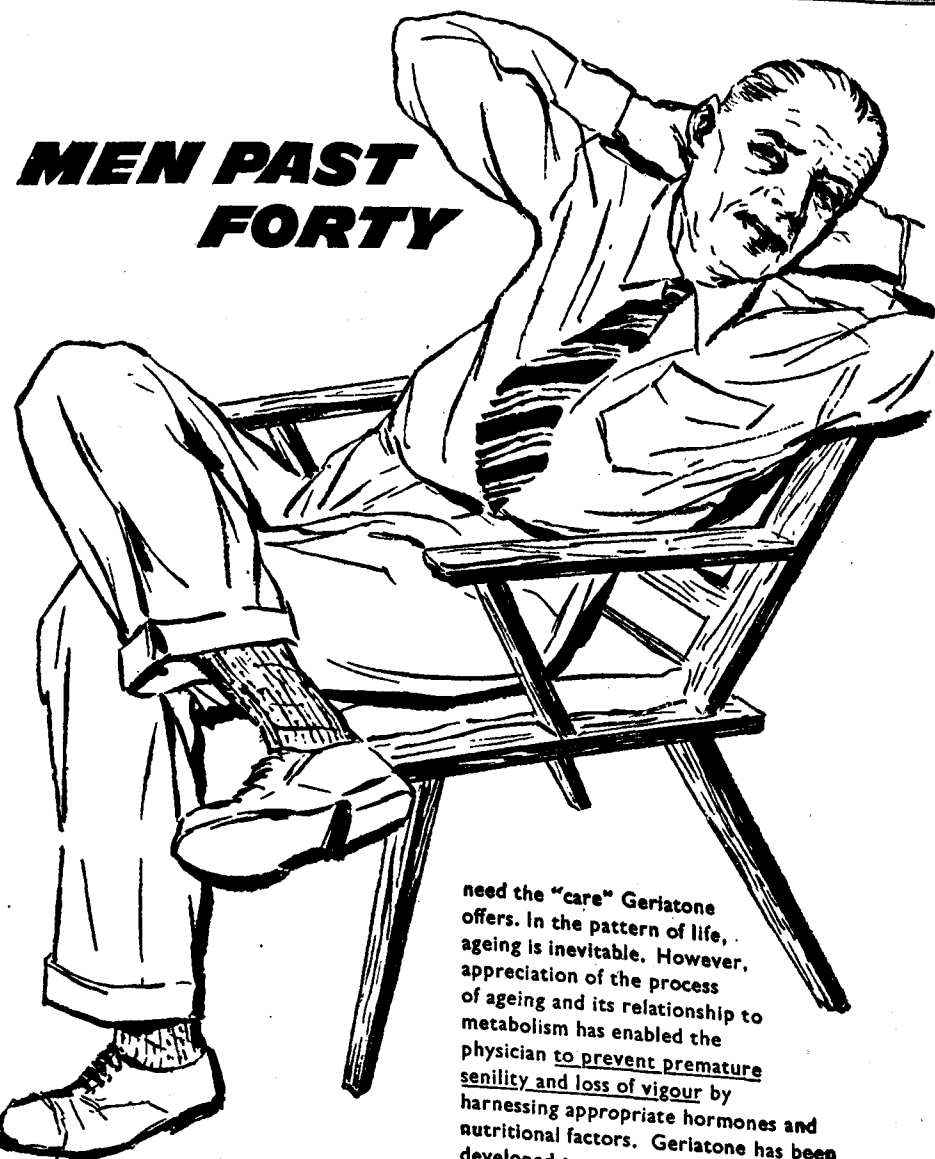
B COMPLEX FORTE WITH B₁₂

Each ml. of the mixed solution contains :

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Vitamin B ₁	B.P. 100 mg.	Methionine	N.F. 5 mg.
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Vitamin B ₆	B.P.C. 5 mg.	Benzyl Alcohol	B.P. 3 %
Nicotinamide	B.P. 0.15 G.	Phenol	B.P.
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Today's most potent and swift-acting antihistamine... yet safe for your youngest patient.

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Packings
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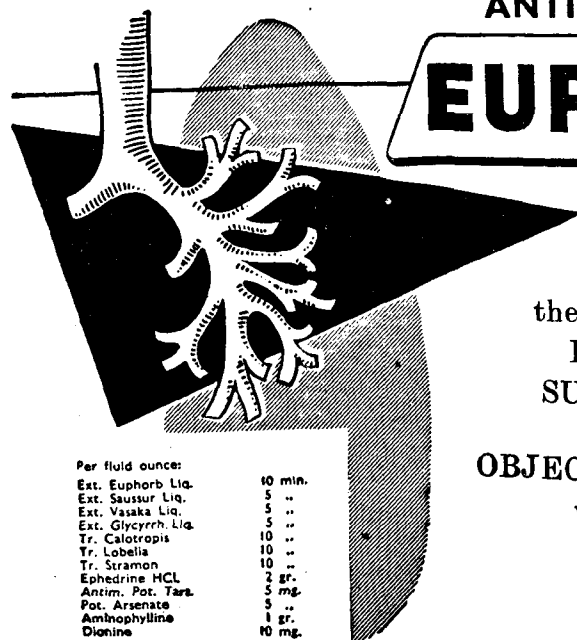
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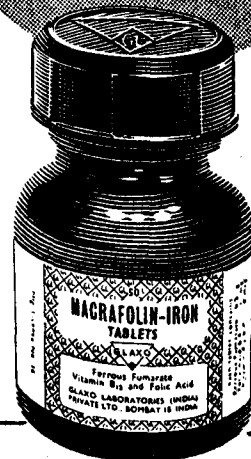
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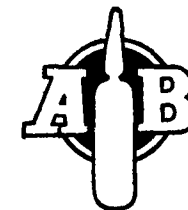
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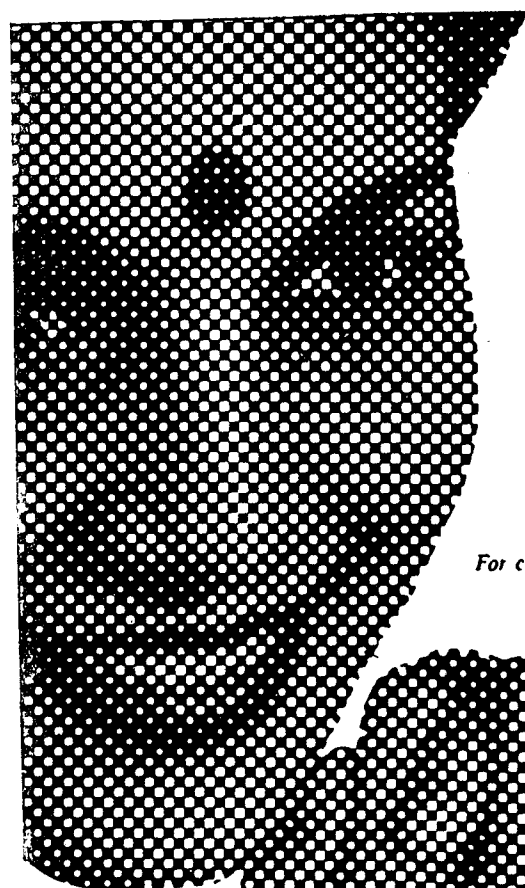
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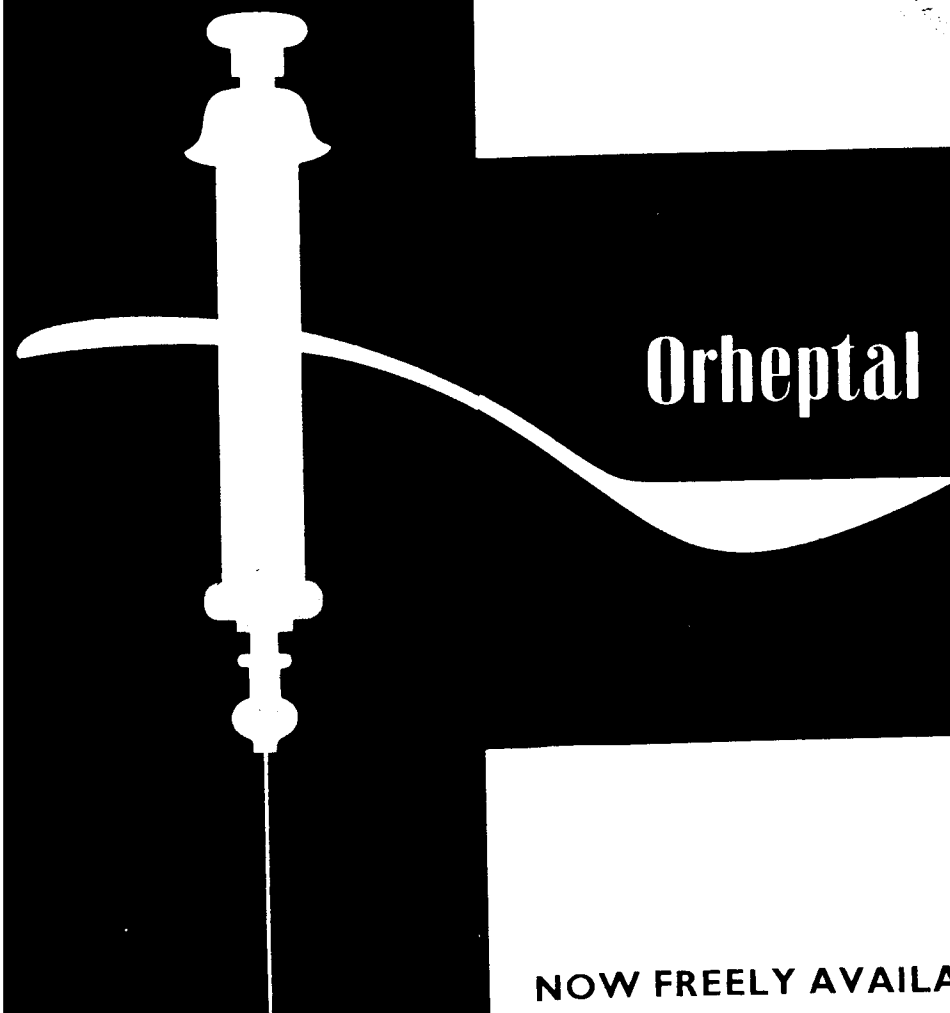


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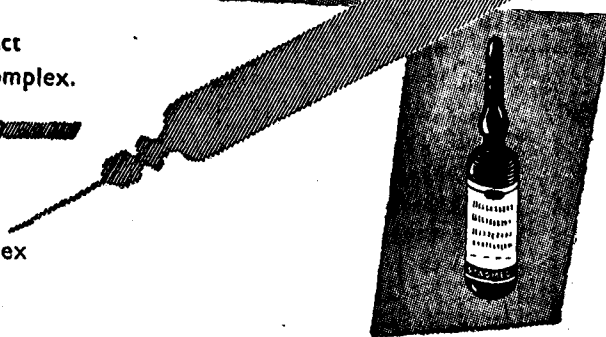
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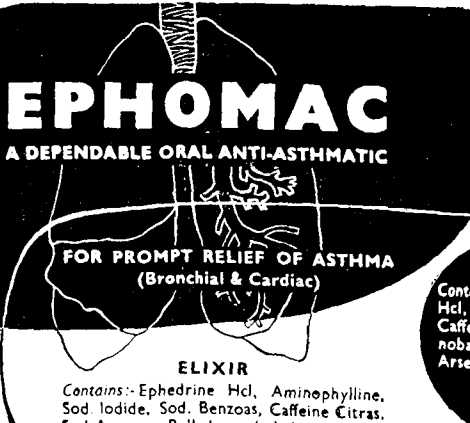
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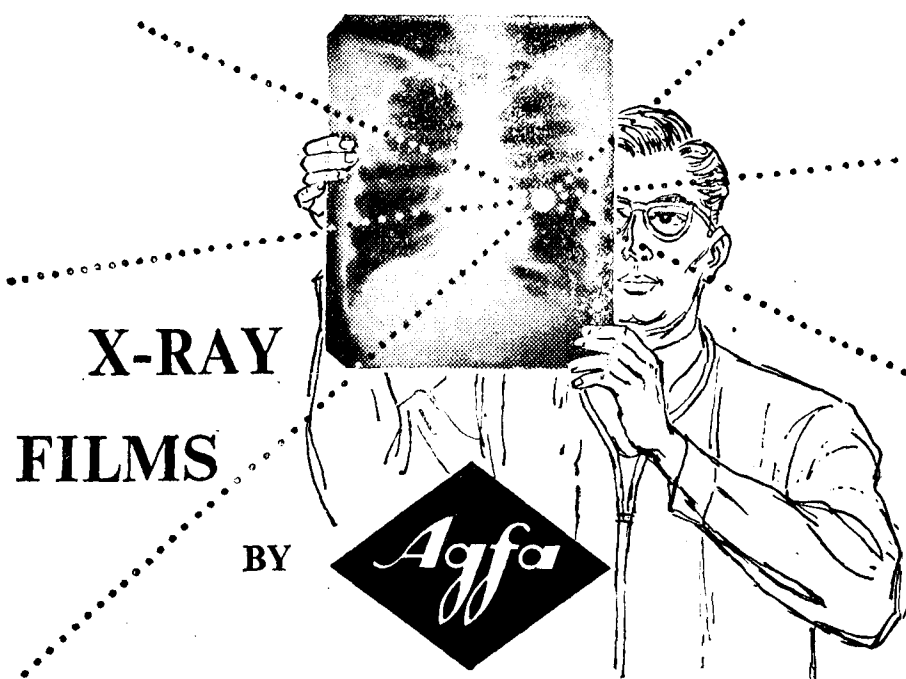
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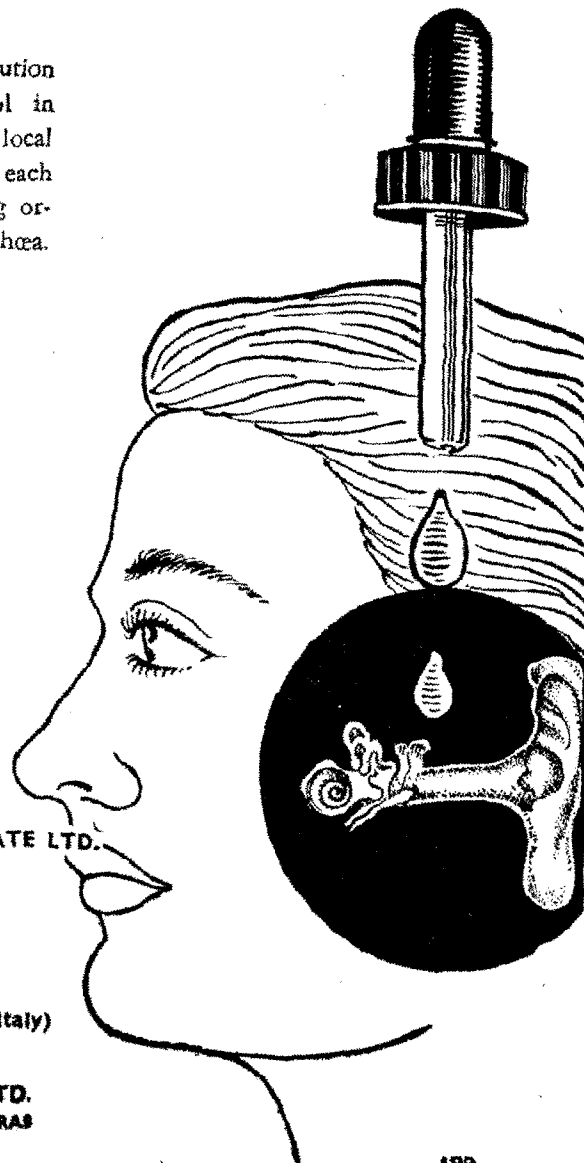
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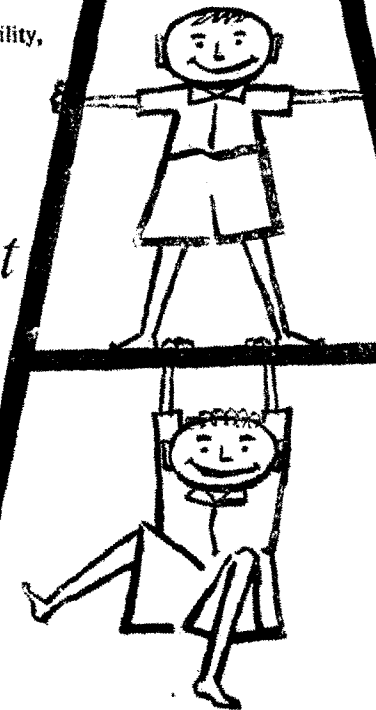
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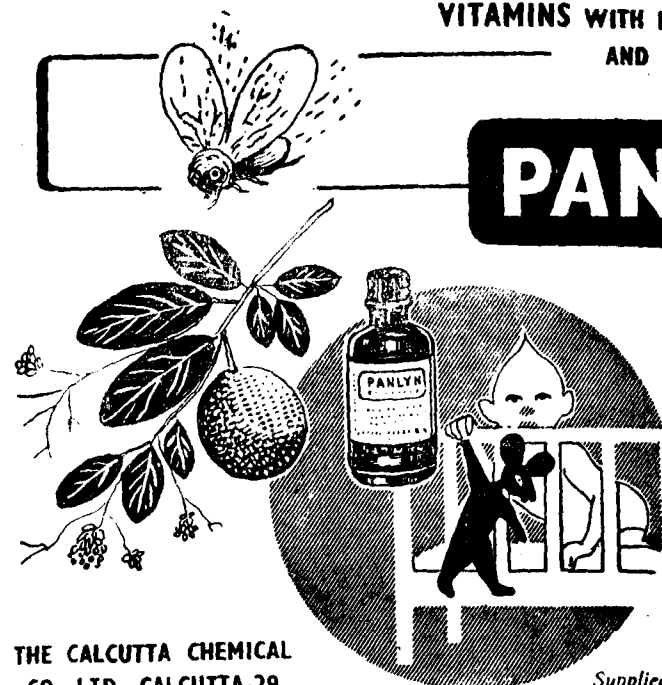
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Vitamin D	500 I.U.
Vitamin C	75 mg.
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Vol. 56

SEPTEMBER, 1959

No. 9

Original Articles

TREATMENT OF AMOEBIC DYSENTERY*

P. K. KRISHNANKUTTY, M.D. (Mad.), M.B.C.P. (Lond.),
M.B.C.P. (Edin.), F.R.F.P. & S. (Glas.),

Honorary Physician, Government General Hospital, Madras

AMOEBIASIS is still very common in our country, in spite of the fact that there are many potent amoebicidal drugs. There is a great need however, for a drug, or a combination of drugs, which will deal with amoebiasis more satisfactorily.

It has been said that the amoebæ in the intestine may remain as a harmless commensal until there is a change in the bacterial flora. This point has to be considered in the treatment of amoebiasis.

A preparation, (UNI-DYS) containing Iodochlorohydroxyquin U.S.P. 250 mg., Chloroquine phosphate U.S.P. 75 mg. and Sulphadimidine 500 mg. per tablet was tried by us in the treatment of amoebic dysentery.

Material and methods.—Seventeen cases of amoebic dysentery which were admitted in my unit were treated with this drug. In all but two, the diagnosis was established by finding the active vegetative forms of *Entamoeba histolytica*. In one, the diagnosis was made by the typical ulcerations found in the large bowel on sigmoidoscopy. In the other, Charcot-Leyden crystals were taken as presumptive evidence of amoebic dysentery. All the patients were given one tablet 3 times a day after food. Particulars relating to the seventeen cases are given in the statement in Table I (see pages 658 and 659).

* Specially contributed to the ANTISEPTIC.

TABLE I

Case No.	Sex	Age	Complaint	Duration of illness	Response	Remarks
I	Male	12	Anasarca and diarrhoea	1 week	Motions became well formed after 8 days with Unidys Compd.	Patient has hepato-splenomegaly and anasarca with anaemia. Transfused 350 cc. blood. Motions to E.H. -ve 3 days after Unidys Compd.
II	Male	19	Dysenteric symptoms abdominal pain	5 days	Motions became well formed after 4 days with Unidys Compd.	General condition good. Motion normal after 4 days.
III	Male	42	Loose motion with blood and mucus and debility	10 days	Motions became well formed after 13 days with Unidys Compd.	Diagnosis was from sigmoidoscopy. Motion well formed after 13 days.
IV	Female	35	Loose motion with blood and mucus pain in the abdomen	10 days	Motions well formed after 2 days with Unidys Compd.	Motion normal in 2 days
V	Male	22	Loose motion with blood and mucus and tenesmus	10 days	Motions well formed after 8 days with Unidys Compd.	Responded well after 8 days
VI	Male	30	Loose motion with blood and mucus	4 months	Well formed. Motion better after 9 days with Unidys Compd. No E.H.	Responded 9 days after treatment.
VII	Male	30	Blood and mucus in motion	6 days	Well formed after 5 days with Unidys Compd.	Responded after 5 days
VIII	Male	60	Dysentery	4 months	No blood or mucus after 5 days with Unidys Compd.	Responded in 5 days
IX	Male	55	Dysentery	2 weeks	No E.H. seen after 6 days with Unidys Compd.	Responded in 6 days. Patient reported again with loose motion and colic. No E.H. Veg. forms seen. Treated with sulphaguanidine. Reported again with dysentery E. H. -ve. forms seen. Motion -ve for E.H. No blood or mucus. Better and discharged after 5 days of treatment
X	Female	19	Blood and mucus in loose motion	14 days 2 weeks	Well formed motions after 3 days with Unidys Compd. No E.H.	Response in 3 days
XI	Female	40	Loose motion with blood and mucus	20 days	Motion normal in 6 days with Unidys Compd. No E.H. seen	Improved

TABLE I—(Contd.)

Case No.	Sex	Age	Complaint	Duration of illness	Responses	Remarks
XII	Male	38	Ten loose motions	7 days	Motion well formed in 5 days with Unidys Compd.	Improved
XIII	Male	42	Diarrhoea blood and mucus	8 months 3 months	15 days	Poor general condition responded after 15 days
XIV	Male	39	Diarrhoea	1 week	Motion well formed after 5 days with Unidys Compd. No E.H. seen	Response in 5 days
XV	Male	20	Loose motions with blood and mucus	2 days	Motion well formed after 5 days with Unidys Compd. No E.H. seen	Response in 5 days
XVI	Female	30	Blood and mucus in stools	5 days	E.H. Neg. 3 days	Response in 3 days
XVII	Male	26	Blood and mucus	20 days	E.H. seen after 13 days	Response poor.

RESULTS:—The response was judged as 'good' when the blood and mucus disappeared from the stools with subjective improvement associated with negative findings on microscopy (*i.e.*, disappearance of amœbæ on repeated examinations).

Judged by these criteria, 15 patients may be said to have responded adequately to the treatment while two did not show reasonable response. In case No. 9, where the response was judged to be inadequate, the patient reported with a relapse.

Conclusion.—The combination of chloroquine, sulphadimidine and iodochlorohydroxyquin may be considered a potent amœbicidal agent; the sulphadimidine controls the bacteria of the intestine, the iodochlorohydroxyquin deals with the amœbæ in the intestines and the chloroquine deals with the extra-intestinal amœbiasis.

Acknowledgement.—Thanks are due to Messrs. Unichem Laboratories, Bombay for placing adequate supplies of the drug at our disposal, and to the Dean, Government General Hospital, Madras and the Secretary, Madras State Research Committee, for facilities afforded to carry out the trial.

A correction: In page 657, para 3, line 1, read 'Uni-dys' as 'Uni-dys Compound.'

REFERENCE:—The Medical Annual, 1945, page 23.

MULTIPLE SCLEROSIS

Development of new techniques in neurology now promises to provide earlier diagnosis of multiple sclerosis. Until recently, average time between onset and diagnosis was about six years. "The multiple sclerosis patient today lives longer than was thought possible years ago. Many people with mild or even moderately severe cases can live normal lives and work regularly for years," "Multiple Sclerosis—Hope Through Research."—(U.S. Public Health Service Announcement, Washington, Dec. 5).

FALSE LABOUR PAINS: BELLERGA FOUND USEFUL

The purpose of this paper is to report on the therapeutic management of a considerable number of patients who complained of abdominal uterine cramping after about 28 to 30 weeks of gestation.

De Lee stated that false pains are the contraction of pregnancy which toward the end of gestation become perceptible, even painful, to the gravida. They are especially marked at the time of lightening and may force the head down into the pelvis. All the usual symptoms of actual labour may be present—that is, pain, hardening of the uterus, regularity, even dilation of the cervix and rupture of the membranes. False pains are not strengthened by pituitary extract.

Since there was some evidence that the autonomic nervous system may play a role in relation to false labour pain, it was felt that a drug, or combination of drugs, which influences the sympathetic, parasympathetic and central nervous system might prove useful. Rothlin demonstrated pharmacologically that Bellafole (a parasympathetic depressant, and ergotamine (a sympathetic depressant) administered concurrently do not neutralize each other but, rather, each drug acts upon its respective part of the overactive autonomic nervous system and enhances the central effect of phenobarbital.

Bankoff, Bernstein, Craig, Harris, Gellert, Kavinoky, MacFadyen, and Stewart reported favourable results with Bellergal in functional neuro-circulatory disorders, menopause and functional gynaecologic disorders.

Fifty-five obstetrical patients were treated with this combination for a period of one year. During this time 238 patients were delivered, of whom 52 were primipara and 186 multipara. Uterine contractions necessitating the use of this combination were less frequent in primipara than in multipara. It was used in primipara 10 times for 52 patients while it was used in 45 multipara of a total of 186. In this series, therefore, the incidence of complaint of false labour pains was 19.23 per cent in primipara and 24.19 per cent in multipara with difference of approximately 5 per cent.

Bellergal was administered in pregnancy at any time after three months when uterine contractions became a complaint. It was administered without untoward effect.

Bellergal exerted a sustained and stabilizing effect on the entire autonomic nervous system which is believed important in the management of false labour pain. The tranquillizing effect afforded symptomatic relief in a high percentage of patients without producing troublesome side effects.—(*North-West Medicine*, April 1959).

COMMONEST TYPE OF THYROIDITIS

Subacute thyroiditis is not a rare disease and is the commonest form of thyroiditis. There is evidence to suggest that it is caused by the mumps virus. Pathological examination of the thyroid usually reveals a rather characteristic inflammatory appearance. The clinical picture is usually that of a tender enlargement of the thyroid gland plus the signs of hyperthyroidism in the early stages. Initially the protein bound iodine is elevated and the radioactive iodine uptake is depressed.

The use of the corticosteroids gives both dramatic symptomatic and objective improvement in this disease. X-ray therapy probably shortens its course. A combination of these 2 forms of therapy has been recommended. Subacute thyroiditis can run a severe or mild course, but it is a benign disease.—(*Virginia Medical Monthly*, Feb. 1959, via *Current Medical Digest*, May 1959).

RETINAL HÆMORRHAGES*

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Anatomical considerations.—The retina is richly supplied with blood from the branches of the central retinal artery, and also from the chorio-capillaries on which it rests, being separated from it, only by the Bruch's membrane. As the central retinal artery, which supplies the inner retinal layers passes through the cribri-form it undergoes changes. The internal elastic lamina becomes reduced to a single thin layer and disappears completely after the first or second bifurcation. The muscular coat becomes reduced to a single layer of muscle fibres but has gaps.

The branches of the larger arterioles and venules form an interdigitating plan as they run towards each other. They remain in the nerve fibre and ganglion cell layers till the precapillaries which in turn respectively feed and drain the capillary plexus. The superficial capillary plexus remains in the same plane as the nerve fibre layer. The deep group, which is more dense and more complex runs vertically into the retina and their meshwork is confined between the inner nuclear and outer molecular layers. The density of the capillary plexus varies. Surrounding the avascular macula there is a three-layer capillary zone in the perimacular area. Beyond this is becomes more dense for an area upto 4 mm. on the nasal side and 7 mm. on the temporal side of the optic disc. There is a single layer in the pre-equatorial zone and a mm. of avascular area near the periphery. The transition from place to place is gradual. This arrangement is an important factor in the pattern seen in the ophthalmoscopic appearance of retinal hæmorrhages. In hypertension and nephritis, the initial mechanism is an increased pressure within the constricted arterioles and capillaries. The arterial capillary is longer than the venous capillary. There is a capillary-free space immediately around the arteries. As the hæmorrhages are in the precapillaries and superficial plexus they are flame-shaped. It is very unusual to see a hæmorrhage actually overlying an artery due to the capillary free space around the artery. In hypertension the superficial plexus being higher up in the vascular circuit, feels the impact of the increased pressure more than the deep capillary plexus.

In diabetes the hæmorrhages are characteristically dotted or rounded and are found in the deeper layers. The most outstanding change is the fullness of the retinal veins. The back pressure is felt in deep plexus where the meshwork is close and circulation is slow. Leakages from this plexus find their way into outer molecular layer and hence assume a circular outline. The rate of

* Paper read at the Fifth Madras State Ophthalmic Conference.

Specially contributed to the ANTISEPTIC.

retinal blood-flow is determined by the systemic blood-pressure, the carbondioxide and oxygen tension of the blood and the functional activities of the various areas of the retina.

The cerebral and retinal vessels do not always parallel the degree of constriction or dilatation of the vessels elsewhere in the body. Peristasis means widening of the different parts of the vascular system behind a spastic arterial constriction. It is preceded by a narrowing of the arterial system. When the spasm ceases, relaxation follows and small hæmorrhages and exudates occur indicating damage to the vascular tissues by the preceding anoxia. Vascular dilatation without preceding spasm will not be followed by hæmorrhage. Alteration in the capillary wall may be present throughout the body, although obvious lesions may appear only in the retina. Increase in capillary fragility and permeability of the capillaries are also causes of hæmorrhage, though these capillary fragility and permeability tests may be normal.

Classification of retinal hæmorrhages:—(1) Hæmorrhages in the newborn; (2) hæmorrhages due to (a) trauma and (b) nuclear explosions; (3) hæmorrhages due to obstruction such as (a) venous thrombosis, (b) papilloedema, (c) sub-arachnoid hæmorrhage and (d) subdural hæmatoma; (4) hæmorrhages due to local inflammatory conditions in the retina; (5) hæmorrhages due to toxic states as in acute febrile and infectious illness or cachetic states; (6) hæmorrhages occurring in vascular retinopathies, (a) arteriosclerosis, (b) malignant hypertension, (c) renal disease and (d) diabetes; (7) hæmorrhage in senile atherosclerosis; and (8) hæmorrhages in blood dyscrasias.

I. Retinal hæmorrhage of the newborn.—The fundus of new-born babies delivered in the best of obstetrical hospitals in which great obstetrical care was ensured, was examined after dilatation of the pupils with 0.25% atropine. The cause is not known. Hæmorrhages in normal deliveries were only considered. No direct inter-relation was evident between the hæmorrhages and the severity or duration of labour. Capillary fragility of the mother may be a cause. An increase in the intra-cranial pressure in the foetus appearing in the course of labour, anoxia, and stasis in the veins with over-filling of the arterioles with blood may be another cause. Pre-disposing factors may be decreased levels of prothrombin in the mother. The hæmorrhages may be petechial, flame-shaped, irregular or patchy. Petechial hæmorrhages were absorbed within 24 to 48 hours. Flame-shaped and irregular hæmorrhages took about a week or two to disappear. In a month's time there was no trace left. Although it may be a harmless phenomenon, it is a reliable index of the vascular injury, inherent in the process of parturition. Despite the fact that no damage could be made out ophthalmoscopically at the time, there may be

some later loss in the function of the eye. Strabismus and amblyopia may follow. Coat's disease may be a result of hæmorrhage in the new-born. Birth injuries causing retinal hæmorrhages follow the usual pattern of traumatic hæmorrhage and may take longer to get absorbed. No special treatment is necessary. Vitamin K to the mother during last months of gestation is useful.

II. (a) Trauma.—Contusions of the eye frequently injure the retina. Very shortly after an injury, only a scattering of hæmorrhages may be found with little disturbance of vision. Vascular spasm plays the chief role. Twentyfour hours later when the spasm passes off, large hæmorrhages may be seen. The hæmorrhage usually occupies the area of vitreous adjacent to the injury or may completely fill the vitreous. A sub-retinal hæmorrhage may develop. Though œdema near the macula is the most common finding after injuries, hæmorrhages are not uncommon.

(b) *Nuclear explosions* produce massive pre-retinal hæmorrhages and hæmorrhages into the nerve fibre layer of the retina. They occurred near the discs and close to the main vessels for about three disc-diameters peripheral to the disc. Macular hæmorrhages were also common. The human blink reflex of 0.1 second is not fast enough to prevent damage. The atom bomb emits a brightness 100 times greater than that of sun-light before 0.01 second. The typical experimental lesions were chorio-retinal burns consisting of a central and a peripheral zone. There may or may not be hæmorrhage exuding from the hole. Treatment of traumatic hæmorrhage is wholly symptomatic.

In *Purtscher's disease*, there is enlargement of the retinal vessels, retinal hæmorrhages and white spots. The injury is usually of a crushing variety or a compression of thorax as in crowds. The hæmorrhages are numerous and may be flame-shaped, punctate or petechial and not connected to the white spots, though they may be close to the vessels. Multiple small petechial hæmorrhages may occur in the retina due to compression of the thorax and abdomen and not connected with Purtscher's disease. Pre-retinal bleeding may be severe.

III. Hæmorrhages due to obstruction.—(a) *Venous thrombosis*:—When the central vein is occluded the veins become engorged, tortuous and enormously dilated. The whole retina becomes profusely bespattered with hæmorrhages especially in the central region. They are of all sizes, irregular in shape lying in the nerve fibre layer and also in the nuclear layers. A large vessel may rupture producing a preretinal hæmorrhage and blood may seep into the vitreous. After a little time the hæmorrhages become fringed with white exudative like areas. In branch venous thrombosis, the hæmorrhages are confined to the area

drained by the vein. Usually seen at an arterio-venous crossing, the superior temporal vein is the one that is usually affected.

(2) *Papilloedema*.—Hyperæmia of the disc is followed by hæmorrhages on the disc and in the nerve fibre layer and are flame-shaped. In some cases they may be of sufficient size to break into the vitreous. Sub-hyaloid hæmorrhages suggest a sudden increase in intracranial pressure. They are also seen in cases of sub-arachnoid hæmorrhage and in cases of cerebellar cyst.

(3) *Sub-arachnoid hæmorrhage*.—The cause of retinal hæmorrhages is obstruction to the flow of venous blood from the eye by pressure on the central retinal vein due to sudden transient increased intracranial pressure. They are associated with papilloedema palsies of extra-ocular muscles and disturbances of conjugate ocular movements. The hæmorrhages may be pre-retinal or may burst into the vitreous.

(4) *Sub-dural hæmatoma*.—Retinal hæmorrhages occur in association with papilloedema in adults, and without papilloedema in infants; they are frequently pre-retinal. The retinal and pre-retinal hæmorrhages are venous in origin.

IV. Local inflammatory condition in the retina.—Perivasculitis is usually seen in the peripheral vessels. There is distension of the veins and a profusion of hæmorrhages round the vessels. They may be superficial or deep and may not be associated with visible vessels. In septic retinitis of Roth, white spots are seen near the disc frequently associated with hæmorrhages. In all these cases the hæmorrhages are superficial and flame-shaped and later rounded in the nuclear layers. If massive they form a pre-retinal hæmorrhage.

V. Acute febrile diseases.—These have retinal complications usually hæmorrhagic, due to injury to the retinal capillaries from the infective agent or toxins. In influenza retinal hæmorrhages may occur. In a recent epidemic however, no such case was seen but 2 or 3 cases of macular œdema were noted. Typhoid, typhus, malaria and kala-azar may all show retinal hæmorrhages which however, usually get absorbed.

In infectious mononucleosis pre-retinal and retinal hæmorrhages may be due to periphlebitis and peri-vascular cuffing. Though the periphlebitis disappears within 2 weeks the pre-retinal hæmorrhage may take six months to get absorbed.

VI. Vascular retinopathies.—(a) *Arteriosclerosis*.—May be due *firstly*, to an inherited deficiency in the wall of the vessel, causing it to give way sooner to ordinary wear and tear and *secondly* to an intensification of normal wear and tear causing the vessels to give way prematurely. Sclerosis of retinal vessels occurs in association with generalized arteriosclerosis but it may occur in the vessels of the retina and brain alone. The

appearance of the retinal arteries is a fairly reliable index as to the state of the cerebral vessels. Hæmorrhages are relatively rare and when they do occur, they are small occurring by diapedesis from smaller venules and capillaries. Their occurrence is a serious prognostic warning and an increase in the number of hæmorrhages precedes the onset of serious symptoms.

Retinal vascular lesions associated with hypertension have been the subject of different classifications. When sclerosis and hypertension have persisted for a number of years there is retinopathy with hæmorrhages and exudates. The hæmorrhages are usually small, superficial or deep with, or without any relation to the larger vessels. The presence of retinal hæmorrhagic exudates and œdema in toxæmias of pregnancy is an indication for the prompt termination of pregnancy regardless of the duration of gestation.

(b) *Malignant hypertension*.—The retinal changes may occur acutely especially in young persons and may be preceded by angiospasm. The fundus shows hyperæmia and massive œdema of the disc profuse superficial hæmorrhages and soft cotton wool patches. The papilloedema and peri-papillary œdema is the outstanding fundus picture in malignant hypertension.

(c) *In renal retinopathy*.—There are changes in vessels, œdema, hæmorrhages and exudates. Hæmorrhages practically always occur. They are small in size, striate and flameshaped and are situated near the larger vessels usually close to the optic disc. They may occur anywhere in the retina and may be round or punctiform. When advanced arteriosclerosis complicates, the vascular changes are more marked. A vessel may become completely thrombosed or a large hæmorrhage may occur. The hæmorrhages tend to get absorbed when the condition improves. When uræmia develops the papilloedema and hæmorrhages are more marked with the macular star. The patient may become blind in a few hours.

(d) *Diabetes*.—A prominent feature is the early engorgement and dilatation of the veins. The retinopathy is related both to the severity and to the duration of the disease. The alteration in the veins produce an arteriolar spasm which, if sustained, may give rise to structural changes of arteriosclerosis. The earliest and basic lesions are minute capillary aneurysms. Hæmorrhages are small, round and are in the periphery. They gradually increase in number and approach the macular area so that the entire fundus is peppered with them. They are deep and round and are seen away from the larger vessels. These obviously represent an escape by diapedesis through permeable capillaries. When arteriosclerosis is present, with a septic focus existing elsewhere in the body as an additional cause, extensive hæmorrhages may occur in the retina as a result of infective perivasculitis. Massive

extravasations of blood may appear in the retina. Pre-retinal hæmorrhages occur and recur and the whole vitreous is flooded with blood followed by retinitis proliferans. These massive hæmorrhages occur and recur in patients even when their diabetes is fully controlled with insulin. It is doubtful if normal blood sugar will postpone the vascular lesions. The pathogenesis of the capillary lesions in diabetes is unknown. An investigation to the relation of blood cholesterol to diabetic retinopathy is under investigation at the Stanley Medical College, Madras.

In Kimmelstiel-Wilson syndrome pathological changes in the inter-capillary glomerular capillaries and degenerative alterations in the arterioles and capillaries of the kidneys are associated with long standing albuminuria and diabetes mellitus. Hypertension and renal insufficiency develop. The fundus shows signs of diabetic retinopathy with complications of hypertensive retinopathy. There are definite capillary aneurysms and distortion of the capillary pattern. The retinal hæmorrhages including micro-aneurysms that occur in this group are similar to diabetic retinopathies.

Pulseless syndrome of Takayashu:—The symptoms include absent radial pulse, retinopathy and cataract and are due to progressive thrombosis of the carotid and subclavian arteries. Fundus shows fragmentation of the retinal blood column, peripheral arterio-venous anastomosis, optic atrophy, large irregular veins and retinal hæmorrhages. Permanent obliteration of the columns of blood in the peripheral vessels may occur. Scattered punctate spots and larger red spots are seen in the periphery. Pre-retinal hæmorrhages with bleeding into the vitreous and resulting retinitis proliferans may occur. Cataract develops in each eye.

VII. Senile atherosclerosis.—There is a fibrous and hyaline degeneration of the muscular coat. The retinal arteries show decreased translucency. More complicated cases are associated with hæmorrhages and exudates. When the atherosclerosis leads to thrombosis of the central retinal artery, massive extravasation of blood may occur.

VIII. Blood dyscrasias.—(a) *Primary anaemias*:—The hæmorrhages are irregularly distributed and are not numerous. They are either radial, flame-shaped or round and increase with the severity of the anæmia. They are due to peristasis and pre-stasis with dilatation of the terminal vessels and contraction of the arteries above. The blood-forming bone marrow becomes exhausted and the number of platelets are reduced to the critical limit below which hæmorrhages by diapedesis occur. Large round hæmorrhages may occur in the deeper layers of the retina and pre-retinal hæmorrhages may occur. A characteristic point seen also in leukæmia, is the presence of a white spot in the centre of the hæmorrhage.

(b) *Secondary anaemias*:—Retinal hæmorrhages occur in all severe secondary anæmias. The vessels are more dilated and tortuous. Hæmorrhages are said to be absent in chlorosis.

(c) *Purpura*:—Retinal hæmorrhages occurring in all the layers vary from minimal ones to large pre-retinal ones. Hæmorrhage may occur into the optic nerve. Papilloedema and transient palsies of extra-ocular muscles are present.

(d) *Haemophilia*:—The eyes are not usually affected. Retinal hæmorrhages are extremely rare but have been recorded.

(e) *Polycythemia*:—There is distension and engorgement of the retinal veins, and both arteries and veins have a purple hue. Hyperæmia of the discs papilloedema, a generalized greyish tinge of the entire fundus are associated with retinal hæmorrhages.

(f) *Sickle cell anaemia and sickle cell trait*:—Show extreme tortuosity of the vessels with overfilling of veins and slight retinal oedema. Retinal and vitreous hæmorrhages may be present.

(g) *Leukaemias*:—In the early stage there is dilatation and engorgement of veins, later, pronounced engorgement and tortuosity of both arteries and veins, perivascular sheathing and retinal hæmorrhages. The hæmorrhages are of various sizes and shapes, radial, linear, round and irregular. They vary from a few small ones to a great number scattered extravasation over the entire fundus. Pre-retinal hæmorrhages may occur with occasional rupture into the vitreous. Sometimes the exudates are surrounded by a hæmorrhagic border. Swelling of the optic discs may be very marked. Venous thrombosis and glaucoma has been observed.

(h) *Multiple myelomas*:—Show a high incidence of fundus changes consisting of retinal hæmorrhages and choroidal lesions.

(i) *Blood transfusions*:—Retinal hæmorrhages have been described as occurring after blood transfusions. This was probably due to the pre-existing condition.

Types of retinal hæmorrhages.—1. *Inter-retinal hæmorrhages*:—(a) *Superficial hæmorrhage* lie in the innermost layers of the retina. They have a striped appearance with flame-shaped outlines and as a rule are not very large. The blood is equally distributed in the nerve fibre layer but does not advance uniformly along the separate bundles giving it a flame-shaped outline.

(b) *Deep hæmorrhages* are round or irregular in shape. They may be small or quite large. They are deeper in the third dimension than superficial hæmorrhages. Massive hæmorrhages often lie in the internuclear layer and cause thickening of the retina and folding of the external nuclear layer.

2. *Pre-retinal hæmorrhages*:—When a hæmorrhage occurs in the inner surface of the retina and does not penetrate the vitreous body a characteristic appearance is produced. They are large, have clear-cut lower borders and a horizontal upper margin. The blood, usually from veins or smaller arterioles, flows through a slit and accumulates below, because of gravity, as a red hemispherical mass. This has been noted to change its position with the changing position of the head. They usually lie in the posterior pole and it is still debated whether they lie between (first type) the internal limiting membrane and the posterior layer of the vitreous or (second type) between the nerve fibre layer and the internal limiting membrane. The first type is large, vesicular or saccular and may move when the patient sits up and lies down. The second type is small and does not protrude very much due to the firm connection between the internal limiting membrane and the nerve fibre layer.

At the macula the circular form may be retained due to the closer attachment of internal limiting membrane in this region.

3. *Vitreous hæmorrhage*:—Any inter-retinal or pre-retinal hæmorrhage if sufficiently profuse may burst through the internal limiting membrane and invade the vitreous. Large hæmorrhages which fill the vitreous with blood can only be suspected when the red reflex of the fundus is abolished in the presence of a clear lens. Such cases when examined with the slit lamp may reveal the red mass in the anterior layers of the vitreous.

4. *Eales' disease*:—Recurrent hæmorrhages into the vitreous. All blood studies are normal. The hæmorrhages may result from a hypersensitizing reaction in the venous wall in persons who have been sensitized to tuberculo-protein. It occurs in young adults usually males of the age of 23 years. The hæmorrhages appear suddenly with dimness of vision. Recurrences are the rule. Treatment is difficult. Isoniazid improves some cases. Streptomycin and I.N.H. combined had good effect in others. Irradiation with radium and X-rays have been tried with cleaning of the vitreous. Exsanguination of blood with blood transfusion repeated at fortnightly intervals has been useful in many cases where no cause can be found. Replacement of the blood-soaked vitreous with cerebrospinal fluid has been tried. As the disease occurs only in young men injections of female hormones have been tried without much success. The eye may be lost from secondary glaucoma or retinitis proliferans.

Sub-retinal hæmorrhages are rarely recognized. They are formed if blood has penetrated the external layers. They appear as very dark vesicular retinal detachments if large. In smaller sub-retinal hæmorrhages the blood seeps through from the rupture of choroid into the sub-retinal space. Sub-retinal blood may be seen in Kuhnt Junius retinitis disciformis.

Sequelae of retinal hæmorrhages.—(1) Retinitis proliferans follows hæmorrhage into the vitreous body. Fibrous tissue derived from the mesoblastic elements associated with the retinal vessels, form proliferating masses in the vitreous cavity and may cause detachment of the retina.

(2) External hæmorrhagic retinitis (Coats). Hæmorrhage in the outer layer of the retina occur into the sub-retinal space. The blood breaks down with formation of debris, fibrin and cholesterol.

(3) Large vitreous hæmorrhages produce secondary glaucoma.

Course of retinal hæmorrhage.—In appearance most of the retinal hæmorrhages are homogeneously red in colour. If they are dense and larger they may appear slate-blue in colour. Occasionally there are pale areas in the centre of the hæmorrhage.

Inter-retinal hæmorrhages.—Retaining all the time their original colour, they gradually become smaller and tend simply to fade away. The retinal hæmorrhages of the new-born may disappear completely in four days. Unless the external limiting membrane is lacerated, the hæmorrhages pass away completely without leaving behind even pigmentary changes. Fresh hæmorrhages may occur. The individual extravasations of blood clear up so completely that the part of the fundus involved assumes a normal appearance. Hæmorrhages remaining longer may be associated with scarring consisting of glial and connective tissue proliferation. Sometimes dense white deposits are seen around the scars consisting of cholesterol and other lipoid disintegrative products of nervous tissue. In the macular region these become connected into hyaline-like material appearing ophthalmoscopically as small white dots. Pre-retinal hæmorrhage if relatively small becomes slowly absorbed frequently in a patchy manner from above downwards and the vision is completely restored. If the hæmorrhage has been large and absorption slow some degree of nerve fibre destruction and atrophy may follow.

SYMPTOMS OF RETINAL HÆMORRHAGE: may be few. If in the macular area, the vision is affected. If the macula is spared, the retinal hæmorrhages are discovered during a routine examination of the fundus. Patients are usually referred by their physicians. Attacks of dimness of vision which clear after sometime, mistiness of vision and early tiring of eyes are some of the symptoms.

TREATMENT OF RETINAL HÆMORRHAGE: should be directed towards ascertaining the cause. A complete investigation should be made to find out the cause. In central venous thrombosis anticoagulants are useful; it should be given immediately keeping a watch on prothrombin time. Aetiological treatment of vascular retinopathies improves the various conditions. The physician

should be entrusted with this case. No effective medical treatment for diabetic retinopathy has yet been found. Prevention by good diabetic control may improve the vision. Steroid therapy has not proved useful. Surgical hypophysectomy or adrenalectomy has had no effect. Testosterone propionate 50 mg. per week has been tried with varying results.

Hypertensive retinopathy has been treated surgically by extensive sympathectomy with favourable results which are more consistent, more rapid and more lasting than in any other form of treatment.

In blood dyscrasias, treatment with B_{12} in pernicious anæmia and with iron in secondary anæmias have improved the vision. For polycythemia and leukæmia radio-active phosphorus (P^{32}) is being used in selected cases. Leukæmias may be treated with blood transfusions.

The use of iodine preparations for the purposes of absorbing retinal hæmorrhages and strengthening damaged vascular walls has been used extensively for many years but has recently fallen into disrepute. They are however, still useful. Beneficial results have been obtained in many cases following the use of calcium with Vitamin C (500 mg. doses), Vitamin K and rutin.

CONSERVATIVE TREATMENT OF HÆMANGIOMAS IN INFANTS AND CHILDREN

While there are various types of hæmangiomas, the overwhelming majority in infants and children are the involuting type and tend to recede of their own accord. This fact, pointed out by Lister twenty years ago, was confirmed in a study of more than 700 cases. A certain number were left untreated in the early years to compare their progress with the rest, in which every recognized means of therapy was tried. When it became evident that the untreated lesions were involuting in the same manner as the treated ones, all subsequent cases of the involuting type were left untreated.

Drs. Blackfield, Torrey, Morris and Beer, indicate that frequently the problem becomes one of handling impatient parents who insist that something be done. However, when surgical intervention is forced by parental pressure and is attempted during the growing phase of hæmangiomas of the large involuting type, complete excision is rarely possible and growth of residual vascular tissue continues until the latent period is reached. If the operation is delayed until involution has started, a more conservative excision is possible and residual tissue will involute spontaneously.

If early therapy is insisted upon by the parent, some homœopathic method at infrequent intervals should be carried out. Where there are residual disfigurements from large hæmangiomas, plastic procedures will be necessary, but these will be simpler some years after involution than when attempted in infancy. Radical measures that may damage or prevent growth of normal tissues are contraindicated.—(*Journal of the International College of Surgeons*, Aug. '58, via N.Y. St. J. Med., 15-5-'59).

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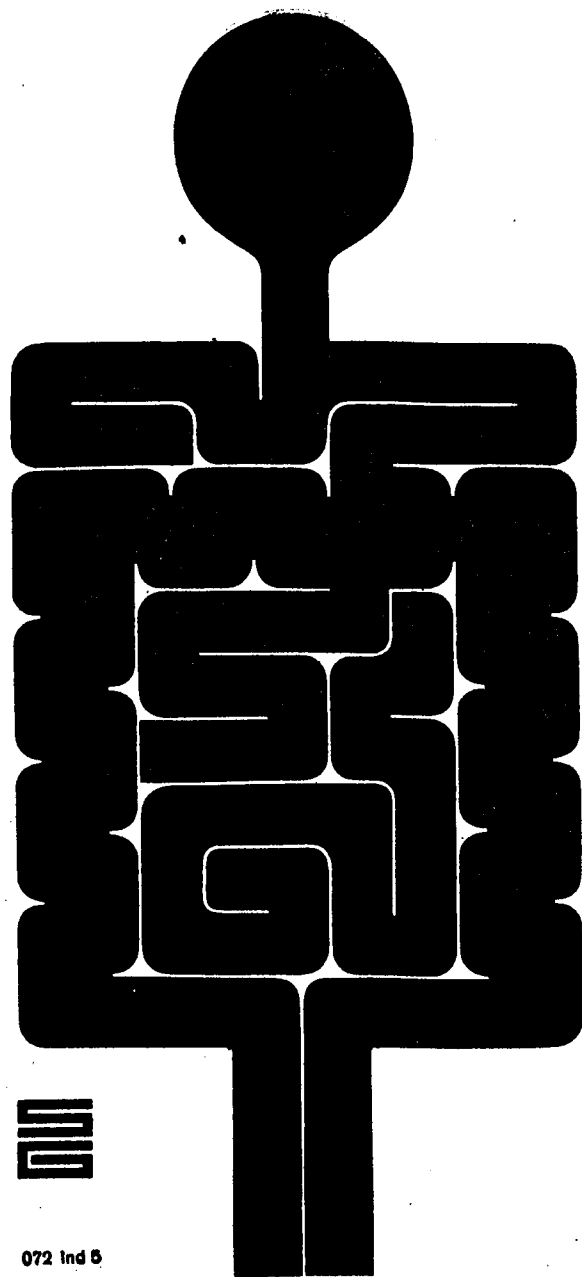
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NEURO-SYPHILIS

P. KUTUMBIAH, M.D., F.R.C.P.,

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(Continued from p. 583, August 1959 issue of ANTISEPTIC)

LECTURE II

CLASSIFICATION.—Neuro-syphilis can be classified on a pathological or clinical basis, the former depending on the sites of the lesion, the latter on their expression in syndromes varying with the routes of infection and the reaction of the tissues. Head and Fearnside (1914) proposed the division of cases of syphilitic diseases of the central nervous system into those of *Syphilis meningo-vascularis* and *Syphilis centralis*. The meaning of the first name is obvious, for, in many cases we know from clinical observation that the meninges and vessels must be affected. *Syphilis centralis* is chosen to include all those cases where the degeneration of the nerve tract or nuclei show that the lesion must lie within the structure of the nervous system itself. This category includes 'parasyphilis' used in the strict sense for those forms of disease which are not materially influenced by our present methods of anti-syphilitic treatment. The name syphilis centralis is selected in preference to 'parenchymatous' syphilis to lay stress on the reaction to the syphilitic virus of both neuroglia and essential nerve structures. The term syphilis centralis is less likely to lead, in the future, to the erroneous view that the nerve elements alone react in these cases to the toxic action of the spirochæte.

Asymptomatic neuro-syphilis.—We owe the conception of asymptomatic neuro-syphilis to Ravaut. If spinal fluid abnormalities are present in the absence of clinical evidence of neuro-syphilis, the condition is known as asymptomatic neuro-syphilis. This form of neurosyphilis may be present in either the early or late forms of the disease, but is found in as much as 35% of the cases of early syphilis, falling gradually until it reaches an average of 15 per cent among those in whom the disease is of more than four years' duration. It is a highly important phase of syphilis since it may be the fore-runner of clinical neurosyphilis; it is a type of neurosyphilis which responds comparatively better to treatment and is thus a preventer of clinical neurosyphilis. The importance of this condition lies in the fact that the spinal fluid abnormalities ante-date the appearance of obvious clinical damage in the nervous system by many years. The potential paretic or tabetic patient is recognizable within the first year, rather than 15 years later, when irreparable damage may already have been done. The latent neurosyphilitic can only be discovered by means of routine spinal fluid examination. If this condition is recognized before the development of clinical symptoms and signs they may be prevented by

appropriate treatment. Patients with early or late asymptomatic neurosyphilis are divided into 3 groups by Moore. *Group I* includes patients with minimal serological abnormalities—increased cell-count and/or globulin content, with other tests negative; *Group II* those with fluids of an intermediate type; and *Group III* those with maximal change (the paretic formulæ). There is a steady rise in the early cases of infection and a sharp drop between secondary and late syphilis. The abnormalities of *Group I* fluids tend to disappear rapidly after treatment, this being more apparent in early than late syphilis; *Group II* fluids tend to increase after two or more treatments. Only after three or more courses of treatment there is a marked fall in *Group II* fluids. Treatment has no effect on *Group III* fluids especially in early syphilis. The character of treatment is of great importance in influencing the spinal fluid abnormalities in early but not in late syphilis. In early syphilis, asymptomatic neurosyphilis is almost three times as frequent when treatment is irregular as when it is carried out without rest periods of any kind; and *Group III* fluids are increased by ten fold by allowing treatment to lapse. In late syphilis, on the contrary, no such effect is apparent. The difference in this respect between early and late syphilis is notably accounted for by the fact that in early syphilis immunity is in the process of establishment and may be suddenly altered or temporarily abolished by anti-syphilitic drugs. Undestroyed foci of organisms in the nervous system, to which penetration of the arsphenamines is admittedly difficult, may then multiply without any hindrance from the patient's own defence mechanism. In late syphilis, on the other hand, immunity is so firmly established that the spinal fluid (probably extends to include the tissues of the nervous system) undergoes slight if any alteration from the shock of the treatment. Although persistently positive serologic tests in early syphilis are frequently indicative of asymptomatic neurosyphilis, negative tests do not mean freedom from the involvement of the nervous system.

What is the significance of spinal fluid abnormalities in patients who are clinically normal? Do they tend spontaneously to disappear? What is their ultimate prognosis?

Of the patients with normal fluids, only 3.6 per cent developed definite or questionable evidence of neurosyphilis in all instances, meningeal or meningo-vascular in type. Of the patients with *Group II* asymptomatic neurosyphilis, the analogous figures are 32 per cent; of those of *Group III* (paretic formula fluids) 73 per cent and in this latter group 30 per cent of the total number of patients have already developed parenchymatous neurosyphilis. *Group I* data is incomplete. The prognosis of asymptomatic neurosyphilis is equally gloomy whether discovered early or late in the course of infection unless the development of clinical

neurosyphilis is prevented by appropriate intensification or modification of treatment. Spontaneous regression of *Group II* and *Group III* spinal fluids to normal is a rare phenomenon. There are no figures available as to the incidence of asymptomatic neurosyphilis among the Indian population. Rajam in an investigation of about 120 cases of early syphilis both primary and secondary found about 26 per cent of abnormal spinal fluids of exclusively of the first and second groups. Paretic curves occurring in early syphilis are by no means uncommon. Statistics of the occurrence of asymptomatic neurosyphilis in all stages of syphilitic infection in India is an urgent necessity.

Syphilitic meningovascularis.—The manifestations of meningo-vascular syphilis may for clinical purposes be grouped according to the situation of the principal lesions into (1) meningitis, (2) encephalitis, (3) myelitis, (4) hemiplegia, (5) muscular atrophy, and (6) combined sclerosis. Only some interesting lesions will be discussed below:—

Meningitis.—The nervous system is more often attacked in the opening phases of syphilis than was once imagined; even during the first few weeks, at the pre-roseolar or roseolar stage, a meningeal reaction in the form of increased cells and protein may occur; disclosed clinically by rachialgia, headache, insomnia, paraesthesia, muscular weakness and altered reflexes or an unmistakable acute meningitis. Merritt and Moore (1935) in an important study of the literature and in 80 cases of their own, found (1) acute syphilitic meningitis is a rare complication of syphilis as it occurs in less than 5 per cent of cases. It usually occurs in young adults but it may be a complication of congenital syphilis. The meningeal symptoms usually develop within one year of the primary infection, but it may develop at any time after the initial lesion and it may be a complication of 'parenchymatous' neurosyphilis. The symptoms have an acute or subacute development. The meningitis is not caused or precipitated by arsenical therapy. (2) Clinically the cases divide themselves into three groups according to the presence of symptoms indicating involvement of the meninges in various regions of the brain as follows:

(a) *Acute syphilitic meningitis*:—Cases with headache, nausea, and vomiting, choked discs and meningeal signs (stiffness of the neck and Kernig's sign) indicating involvement of the meninges in the posterior fossa interfering with the circulation of the cerebrospinal fluid and causing the development of an acute hydrocephalus.

(b) *Acute vertical meningitis*:—Cases with headache, nausea, vomiting, convulsions or mental symptoms indicating involvement of the meninges over the vertex of the brain.

(c) *Acute basillar meningitis*:—Cases with cranial nerve palsies indicating involvement of the meninges at the base of the

brain. In our series of 97 cases of neuro-syphilis there were 7 cases of meningitis with cell counts over 60 and the W.R. of the blood and the C.S.F. were positive with increase of albumin and globulin. There was one case of acute vertical meningitis and one case of acute syphilitic meningitis complicating congenital syphilis.

CASE 1:—H., M., aged 32 years. No history of genital sore at any time. About 6 months prior to admission he had a traumatic sore on the right thumb which did not heal for a long time and became septic. At that stage biopsy of the sore showed granular tissue with numerous plasma cells and lymphocytes. He attended on all sorts of V.D. patients on ships in the routine execution of his duties. Three days prior to admission had increasing and diffuse headache with insomnia. On the afternoon of the third day he felt very bad and all of a sudden lost his consciousness and developed convulsions. This fit lasted for about 15 to 20 minutes. Later he was incoherent for a time and slowly recovered. Physical examination revealed nothing abnormal in the nervous system. Lumbar puncture on admission revealed clear fluid; protein 25 mg. per cent; globulin +; cells 90 per c.mm. Lymphocytes. Blood: W.R. +; C.S.F.: W.R. ++; he was given a seven days' course of 2.4 million units of penicillin and is now, four years after, apparently all right without any recurrence of fits.

CASE 2:—H., M., one year of age. Admitted for treatment of headache, progressive blindness and epileptiform fits. The nose was depressed but there was no deformities of the teeth. Headache was paroxysmal, severe, generalized. No vomiting. Except for the total blindness in the right eye and light perception only in the left eye there was no other lesion discernible in the central nervous system. Fits were epileptiform and occurred at intervals. The blood W.R. ++; C.S.F.: Protein 50 mg. per cent; Globulin +; and 90 lymphocytes per c.mm. C.S.F.: W.R. +; X-ray skull: sutures separated; sella tursica slightly widened; glucose tolerance test: normal. Fundal examination showed papilloedema. Patient was put on anti-syphilitic treatment with remarkable improvement. Headaches much less in duration and severity and fits infrequent after treatment. A case of acute syphilitic meningitis with hydrocephalus complicating congenital syphilis.

Cerebello-pontine angle syndrome in syphilis.—One of the interesting forms of syphilitic meningitis is the cerebello-pontine angle syndrome. Minz (1931) reported four cases of this syndrome in syphilis of the central nervous system. In all the four cases there were noted involvement of the V, VII and VIII cranial nerves (which originate at this angle), cerebral manifestations of various degrees and general brain symptoms headache, vomiting, etc. There also have been observed some remote effects as

paresis of the abducens, of the IX and X or of the IX and XII nerves. Besides cranial nerve involvement there were also symptoms due to pressure on the pyramids (increased reflexes) on the opposite side. As a sequel to intracranial pressure eye-symptoms developed. The women patients complained of amenorrhoea of 4 or 5 months' duration. The W.R. of the blood and C.S.F. were positive in all cases. From a review of the literature the author concludes that cerebello-pontine angle syndrome in syphilitic involvement of the C.N.S. is not rare. In some instances this symptom complex occurs in an almost pure form. In others it is combined with other symptoms. The great practical importance of its early recognition should be emphasized. This is easy with the employment of serologic methods. In cases in which the diagnosis is difficult one should institute anti-syphilitic therapy under which the patient would improve rapidly.

CASE 3:—H., M., aged 35. Admitted for headache, giddiness, tinnitus, and vomiting. Examination revealed loss of sensation over right half of the face. V (sensory), VII, VIII and X cranial nerves on the right side were affected. C.S.F.: W.R. ++, 3 cells; proteins: 60 mg. per cent; globulin +; chloride: 670%; sugar 52 mg. per cent. Langes: 0000123333. He had a course of anti-syphilitic treatment. On 3-1-'46, he reported for a check-up. He felt much better. Giddiness and vomiting had cleared up. Anæsthesia over the right half of the face was still present. His hearing was much better; still has some ringing in the ears. VII nerve paresis had cleared up. Blood W.R. was negative. C.S.F.: Protein 20 mg. per cent; globulin: *nil*. On the other hand, Marburg, Meusberger, Winklemann and Eckel (1933) report cases presenting angle syndromes with a long fluctuating course, which were thought to be instances of multiple sclerosis but were later proved by operation or autopsy to be cases of angle tumour. We had one such case.

CASE 4:—H., M., aged 46. Admitted with inability to walk and dimness of vision of five years' duration. Gave a venereal history. History of headache also. Clinical examination revealed nystagmus, altered speech, intention tremors and signs of pyramidal involvement of both sides. A diagnosis of cerebro-spinal syphilis-disseminated sclerosis type was made. Blood W.R.: negative; C.S.F.: slightly under tension; cells: normal; W.R. + protein 35 mg. per cent; globulin present; Langes: 3221110000. R.E.V. $\frac{6}{16}$: L.E.V. $\frac{6}{16}$. Optic neuritis of both eyes. Autopsy revealed a tumour in the cerebello-pontine angle.

Syphilitic spinal pachymeningitis.—There was one case of this type in this series. The earliest symptoms included pains and paraesthesias in the arms and hands followed by atrophic paralysis of hand and arm muscles, segmentary sensory loss and spastic paraplegia. The C.S.F. showed Froin's syndrome. The

only clinical distinction between gumma of the dura and hypertrophic pachymeningitis appears to be a slower evolution and greater tendency to segmental muscle atrophy and sensory loss in the latter.

CASE 5:—Hindu, male, aged 30 years; admitted for pain and stiffness of the neck and paresis of all the limbs. No definite history of infection, lost two children soon after birth. Rigidity of the neck both upper extremities paralysed and the lower extremities paretic, muscles of the fore arms wasted, especially the extensors, slight wrist drop, the intrinsic muscles of the hand wasted; ulnar nerves on both sides not thickened; B.J. and T.J. absent, S.J. sluggish, K.J. brisk; ankle clonus present on both sides; pupils dilated, equal on both sides, react sluggishly to light; C.S.F.: xanthochromic, 7 cells per cmm.; albumin 600 mgs. per cent; globulin N.A.—; sugar 94.3 mg. per cent; chlorides 688 mg. per cent; W.R.—. Blood W.R. negative. X-ray of cervico dorsal spine: caries of the spine; no cervical ribs.

Encephalitis.—Is one of the rarer forms of meningo-vascular syphilis. There was one case of encephalitis in this series. This form is characterized by gross cerebral symptoms, consisting of dullness, loss of memory, amounting in some cases to acute dementia. It may appear at any time from a few months to twenty years or more after infection. They depend on inflammatory changes in the meninges, with endarteritis of the vessels of the brain followed by a varying amount of secondary atrophy and sclerosis. In young men this form of syphilis occasionally evokes a condition indistinguishable at first sight from dementia precox. The inhibition of mental processes, want of emotional expression and negativism that characterizes this disease may be present but the increased cell count of the C.S.F. and the remarkable improvement under antisypilitic treatment show that it belongs to the acute syphilitic dementia. This should not be confused with the haemorrhagic encephalopathy of arsenical reaction. The condition need not necessarily be acute but may run a sub-acute course.

Myelitis.—Adams and Meritt (1944) observe that syphilis of the spinal cord is a clinical rarity. There were only 31 cases of spinal syphilis among 2231 syphilitic patients at the Boston City Hospital. There were 54 cases of meningeal and vascular syphilis of the spinal cord in our series of 97 cases. This is in marked contrast with the incidence of this lesion in Western countries. Whereas in their series spinal cord cases form less than one per cent of total syphilitic patients, in our series they form 55 per cent. They classify meningo-vascular syphilis of the spinal cord into four groups: (1) Syphilitic meningomyelitis; (2) spinal vascular syphilis; (3) syphilitic spinal pachymeningitis including gumma of the spinal cord and syphilitic hypertrophic pachymenin-

gitis and (4) syphilitic poliomyelitis. In our series there were 22 cases of meningomyelitis; 15 cases of spinal vascular disease (transverse myelitis); and one case of hypertrophic pachymeningitis. Special mention must be made of a form of meningomyelitis called Erb's paralysis. King in his monograph on 'Syphilis of the spinal cord' summarised this syndrome as follows:

"This syndrome is not common. It occurs five times more frequently in males and is sometimes a late complication of syphilis. Clinically the patient presents a picture of a slowly developing weakness, fatigue, and stiffness of the legs with little or no pain. Bladder disturbances are frequent. Examination reveals spastic paraplegia with evident lateral column damage but with little or no sensory loss. At first there is a paraplegia in extension but this later may occasionally become paraplegia in flexion. There is no block in the subarachnoid space. The condition has to be differentiated from a cord tumour, multiple sclerosis, other forms of cord involvement due to syphilis and changes due to pernicious anaemia. The blood and spinal fluid W.Rs. are frequently positive but may be negative. The process is very resistant to treatment and frequently progresses in spite of it."

Muscular atrophy.—The nature of muscular atrophy in syphilitic persons has been the subject of much discussion; but Leri and others have amply demonstrated the existence of a progressive amyotrophy due to meningo-vascular changes. Martin (1925) in his paper on Amyotrophic Meningo-myelitis, spinal progressive muscular atrophy of syphilitic origin critically reviews the literature on the subject and discusses its symptomatology and pathogenesis. From an analysis of 60 cases the main clinical features are given as follows:—atrophy of the atonic type beginning (a) in the small muscles of the hands, (b) in the shoulder muscles or (c) in the muscles on the outer side of the leg; it may be unilateral or bilateral; its onset is not infrequently preceded by pain; bulbar symptoms are uncommon; the vibration sense may be impaired; there may be difficulties of sphincter control. Argyll Robertson pupils were present only in 28.5 per cent of the cases. The W.R. is negative in the blood in 73 per cent of the cases. There was no sure case in his series in which it was negative in the C.S.F. before any anti-syphilitic treatment had been given. The following two cases illustrate the above observations:—

CASE 6:—H., M., 30 years of age admitted for treatment of wasting and deformities of hands and feet of two years' duration. Onset gradual; started in the muscles of hand and feet and slowly spreading up into the fore-arm and leg. No subjective sensory phenomena noticed. He has observed twitching in the muscles. No history of trauma, syphilis or heredity or familial incidence. Below the wrists and knees voluntary movements are greatly diminished. The thenar, hypothenar, lumbricals, and interossei muscles are completely wasted. There is a tendency to Griffin's paw symmetrically present in both hands. Similar wasting of muscles of feet with gross contractures is seen.

Walks on toes which are extended on the metatarso-phalangeal joints and flexed at the interphalangeal joints, and also there is medial rotation of the feet; deep reflexes all lost. Plantars not elicited, cremasteric and abdominals present and equal on both sides; sphincters normally acting. Sensory system: spino-thalamic and posterior columns sensations are normal throughout the body including the wasted areas. Cranial nerves normal. No nystagmus; speech normal; no signs pointing to the affection of the cerebellum. Blood W.R.: negative. C.S.F.: clear; normal pressure; proteins 25 mg. per cent; globulin—; cells 3 per c.mm. W.R.—; Lange's curve: 0011110000. Muscles: react both to galvanic as well as faradic stimulation. Fibrillations are seen in the fore-arm and leg muscles. A diagnosis of Amyotrophic Meningo-vascular syphilis was made. The resemblance to peroneal muscular atrophy is very close.

CASE 5:—Hindu, female, 14 years; admitted for inability to use her limbs and impairment of speech. Duration three months and slowly progressive. Headache not prominent. No stigmata of congenital syphilis. Clinical examination showed it to be a case of amyotrophic lateral sclerosis with bulbar symptoms, the nerves involved being bilateral XII, and later vagus as evidenced by bilateral abductor paralysis resulting in dyspnoea and stridor for which a tracheotomy was done. Fibrillation present in muscles. Blood W.R.—; C.S.F.: protein 15 mg. per cent; globulin *nil*; and W.R.—. The patient was given anti-syphilitic treatment and began to improve rapidly in weight, strength and colour and later on was able to move about with some support. She was under observation for six months and finally was discharged at request with the tracheotomy tube on. A diagnosis of Amyotrophic (parenchymatous form) of congenital neuro-syphilis was made.

Syphilis centralis.—This group comprises:—G.P.I.; Tabes dorsalis; muscular atrophy; optic atrophy; gastric crises and epileptic manifestations. The existence of these types of neuro-syphilis in oriental countries is very much doubted and two reasons have been given for its supposed rarity:—(1) The prevalence of malaria in oriental countries is thought to be antagonistic to the prevalence of these forms of neuro-syphilis. Induced malaria is now the recognized treatment of G.P.I. and to a certain extent of tabes-dorsalis. Malarial therapy is also beneficial in meningovascular syphilis. Though malaria favourably influences the cause of G.P.I. and tabes dorsalis and to a limited extent meningo-vascular syphilis, we have not enough evidence to dogmatise as to whether the development of tabes dorsalis and G.P.I. are prevented in a malarial country. The available evidence on the other hand, points to this assumption being not correct. Vizagapatam District is notoriously malarial and cases of the type included in this series are all from this

district. We have already quoted enough evidence to show that cases of G.P.I. and tabes occur in India. For European countries the figures given by Mattauscheck and Plicz (1920) are tabes dorsalis 2.77 per cent and for G.P.I. 4.7 per cent. The figures for India are tabes dorsalis including optic atrophy 5.6 per cent and G.P.I. 2.7 per cent. Even these figures do not in any manner indicate its true incidence. A large percentage of mental diseases due to syphilis find their place in mental hospitals. A fair number of tabes dorsalis cases are to be found seeking relief for progressive blindness in an eye hospital. (2) The neurotropic strain of *Treponema pallidum* is not common in oriental countries. Before this assumption is taken for granted the existence of a neurotropic strain of *Treponema pallidum* should be proved. Most authorities doubt the existence of the so called neurotropic strain. Unless the existence of the neurotropic strain is proved beyond all controversy it is futile to assume that the supposed rarity of neuro-syphilis is due to the rarity of that hypothetical strain in oriental countries.

There were four cases of tabes dorsalis in this series. Definite history of syphilis was available only in one case. The age of the patients varied from 27 to 40 years. In the case of the patient aged 27 years a history of syphilis 12 years back was definitely given. In all the four cases there was marked ataxy; the knee jerks and the ankle jerks were lost; there was loss of vibratory sense and impairment of joint sense, deep muscle sense and tendon sense in the lower extremities; loss of sensation to light touch over the nose and round the mouth and dulling of sensation to pin-prick over the same area; a band of anaesthesia across the chest about the level of the nipple. The true Argyl-Robertson pupils with fixity and miosis were not noted. But the reaction of the pupils was sluggish to light in two cases. There was no optic atrophy in any case. The C.S.F. was normal with regard to the protein, globulin and cell content in three cases and in one case the protein was 50 mg. per cent; globulin was present and cells were 24 per cmm. The W.R. of the blood and the C.S.F. was strongly positive in all the four cases.

CASE 6:—Hindu, male, 27 years. Admitted for inability to walk for the past two years; gave a history of syphilis 12 years back. He had a course of N.A.B. injections. Four years ago he noticed weakness and pain in the joints. Rhomberg's sign positive; marked in-coordination present in the lower extremities; no tremors or twitchings of the muscle. Muscular power good; deep reflexes lost in the lower extremities, normal in the upper extremities. Abdominal reflexes lost in both upper quadrants and brisk in the lower ones; cremasteric reflex lost on both sides. plantar reflex not elicited. Sphincters were normal; sensation: light touch lost over the toes of the right foot and the dorsum of both feet; a band of anaesthesia at the level of the nipples across

the chest; joint sense lost over the lower extremities. Cranial nerves normal; C.S.F. : protein 50 mg. per cent, globulin *nil*, chlorides 702.5 mg. per cent, sugar 54 mg. per cent. Lange's curve : 000233210. Cells 24 per cmm., W.R. ++. Blood W.R. ++. Fundi normal. Test meal showed nothing abnormal.

There were two cases of G.P.I. in this series. One was aged 30 and the other 47. In both cases the mental condition of the patients was one of apathy and depression. In both there was a history of syphilis but the exact date of infection was not ascertainable. C.S.F. showed characteristic changes. Protein was increased to 35 mg. per cent in one case and to 40 mg. per cent in the other. Globulin was present in both cases. The Lange's curve reading in one case was 155532000 and in the other 4543332110. W.R. of the blood and of the C.S.F. were strongly positive in both cases.

CASE 9 :—H., M., 47 years of age. Tremors of the upper extremities. History of venereal disease years back; addicted to drink; a well nourished individual. Oedema of the ankles and the dorsum of the feet and tremors of the tongue were present. Speech was tremulous and hesitating. Fine tremors of the hand and fingers, worse on exertion. Slight paresis of the muscles of the left side of the face. Pupils unequal, react to light. Sphincters of both rectum and bladder were involved. Mental condition : cerebation slow, speech occasionally incoherent, misses one or two letters of his name in writing. Behaviour queer, apathetic in the day and boisterous at times in the nights. Memory poor. C.S.F. : Protein 35 mg. per cent, globulin (nil)+, Lange's curve 15553200. W.R. ++, blood W.R. ++. Patient rapidly became demented.

Optic atrophy.—Primary optic atrophy occurs so frequently as a complication of tabes that most observers have looked upon it as a manifestation of 'parasyphilis.' Thus Nonne goes so far as to say that primary optic atrophy is always a sign that the case is one of tabes dorsalis even if the knee jerks are present and he adds that it may exist alone for a long period before the appearance of any other signs. Thus it would seem that syphilis can produce degeneration of the optic nerve exactly analogous to the destruction of the posterior columns of the spinal cord in tabes dorsalis. Moore and Woods (1940) in a critical review of the pathogenesis of syphilitic primary optic atrophy discuss the recent theories put forward to account for it. They conclude, it seems probable the pathogenesis of syphilitic optic atrophy, so often (perhaps always) associated with tabes dorsalis is identical with that of tabes dorsalis itself. This in turn is as yet unknown, though recent studies, especially in the field of nutrition, offer hope of its elucidation. There was no case of primary optic atrophy in his series but Rajam has reported 21 cases of primary optic atrophy in his series of 851 cases of neuro-syphilis.

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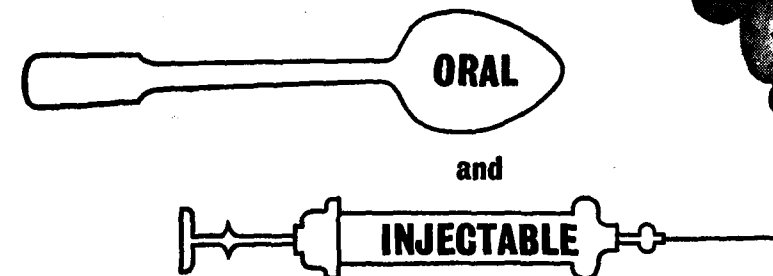
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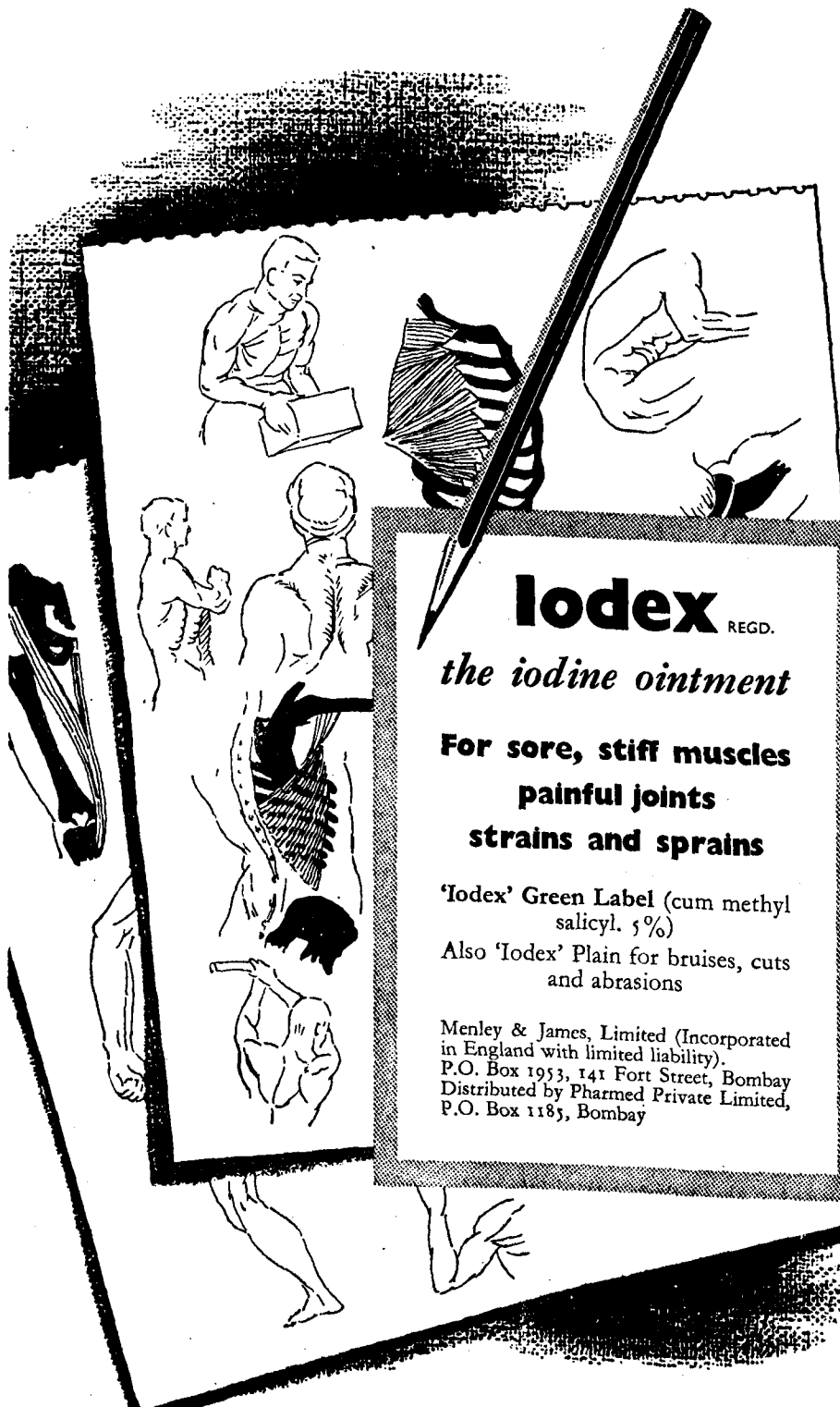
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OSTEOGENESIS IMPERFECTA *

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OSTEOGENESIS imperfecta as the name implies, means *Imperfect ossification*. The designation of osteogenesis imperfecta was introduced in 1845 by Vrolik, to describe a dystrophy of the foetal skeleton, characterized by imperfect ossification and abnormal fragility. This was formerly given the name of idiopathic osteopsathyrosis, Fragilitas ossium, hereditary fragility of bone, and Lebestein's disease. It is considered that these terms should be dropped and the term osteogenesis imperfecta be extended to include the foetal, infantile, adolescent and adult examples of the disorder.

It is believed that this disorder is due to a congenital instability of the mesenchyme or a hereditary hypoplasia of the mesenchyme. Some of the signs of the condition may be explained by mesenchymal hypoplasia, while others cannot be so explained. The question of whether the "early" type of fragilitas ossium with intra-uterine fractures (osteogenesis imperfecta, type Vrolik) is essentially different from "late" type with only post-natal fractures (Osteopsathyrosis, type Lobstein) is as yet unsolved. Rosenbaum (1944) reports several cases which seem to indicate that osteogenesis of the Vrolik type and osteopsathyrosis of the Lobstein type are different manifestations of the same disease. Such observations as these led Bickel *et al* (1943) to divide osteogenesis imperfecta into hereditary and non-hereditary groups.

Clinically, the condition is recognized by defective ossification of the cranium and a multiplicity of fractures resulting from trivial causes. This is due, essentially to a deficiency of osteoblasts and osteoclastic activity rather than to a lack of organic bone constituents. There may be no demonstrable disturbance in the blood-chemistry. In general, however, the "early" type will show slight elevation of the serum calcium and the concentration of the inorganic phosphorus in the serum is top-normal. In the "late" type, the serum calcium is normal and the inorganic phosphorus in the serum is low. The condition occurs at all ages but is seen chiefly in infants and has been diagnosed *in utero*. The most common forms of the disease are the non-hereditary congenital type which appears *in utero* or at birth and the hereditary type. In the former, the sclera may be blue or white and characteristic changes are present in either event. The hereditary type may also be associated with blue sclera and atypical roentgen findings. The following classification has been suggested by Max Ritve for completeness and convenience :—

* Specially contributed to the ANTISEPTIC.

1. Foetal variety.—The patient is still born or lives only a short time. There are numerous fractures of the ribs and long bones. The ossification of the skull is incomplete, in many instances the skull being only a membranous bag.

2. Infantile variety.—This is less severe than the foetal type. The disease may continue for several years, although the prognosis is poor. While the ossification of the cranium is incomplete, it is usually much more advanced than in foetal type.

3. Osteogenesis imperfecta tarda or fragilitas ossium.—The infant is born healthy and may have a normal childhood except for fractures which occur from slight or no apparent cause. The fractures may begin at birth or shortly thereafter. As the patient grows older, the tendency for fractures to occur lessens. Blue sclera, deafness of the otosclerotic type, a peculiar shape of the skull, laxity of the limbs, abnormalities of the teeth, nails and hair, decreased length of the bones and other abnormalities may be present. The characteristics of the three types are not always clearly defined.

Meshan (1956) is of opinion that osteogenesis imperfecta can be divided into two varieties:—(a) the infantile and (b) the adult type "tarda."

He classifies "osteopsathyrosis" as a somewhat related condition. This differs from osteogenesis imperfecta in that it is a much more benign condition. It is less likely to be accompanied by deformity of the bones and there is no blue sclera, but there is an abnormal fragility of the bones with frequency of fractures. In this condition, the general prognosis is more favourable.

He lists fragilitas ossium also as somewhat of a related condition. This is characterized by three special features—blue sclera, osseous fragility and otosclerotic deafness. In addition there are often a hypermotility of the joints and a disturbance of the dental development.

Most of the other authors classify the condition into:—(1) congenital osteogenesis imperfecta (nonhereditary); and (2) osteogenesis imperfecta tarda (hereditary). In the former the abnormality is present at birth or becomes obvious during infancy and in the latter, it manifests itself at the time when weight-bearing first takes place. Not infrequently, however the disease is not evident until puberty or adult life is reached. Blue sclera is seen in many of these cases, owing to the abnormal thinness of the sclera which allows the pigmented choroid to show through. Deafness, usually due to otosclerosis, sometimes occurs but not so frequently as blue sclera and it does not become obvious until after puberty.

In the inherited form, the inheritance usually follows a dominant pattern. The transmission is generally direct and a patient suffering from the disease transmits the abnormality to about one-half of his or her progeny. Those that escape the disease do not transmit the condition to their off-spring, although there are exceptions to this rule. There is no sex-linkage of the trait. Some of the children of a family who do not inherit the bone-fragility may have the blue sclera and brownish colouration of the teeth. The latter is believed to be due to a translucency of the enamel. Blue sclera is an important characteristic of the disease because a careful review of the literature does not reveal a single case of bone-fragility in osteogenesis imperfecta with white sclera.

The significant manifestation of osteogenesis imperfecta is the bone fragility which results in an extremely large number of fractures caused by the very slightest possible trauma. Practically every bone in the foetal type is crushed; but in the lesser degree of dystrophy, whilst some escape fracture during childbirth, others sustain one or more fractures. These fractures readily consolidate. It will be noted that the incomplete fractures are different from those seen in such conditions as rickets, renal rickets, osteomalacia and Paget's disease. In these the incomplete fracture is on the convex aspect of the curved bone, where the bone is relatively osteoporotic and exhibits little reaction, whereas in osteogenesis imperfecta, incomplete fractures may occur on the concave aspect at the key-point of the curvature where decompression is greatest and they are associated with a reaction of dense bone. Fractures heal without any undue callus formation.

It has been noted that patients who have osteogenesis imperfecta are more likely to have sprains than are normal persons. This affords further evidence that the connective tissue of the body is abnormal. The earlier the fractures occur, the poorer is the prognosis, since those who are more disabled by the disease are prone to die of some intercurrent infection.

Pathology.—The underlying pathology appears to be deficiency of osteogenesis. The epiphysis may be relatively normal until late in the disease when degenerative changes appear. Microscopic sections reveal complete loss of the normal bony structure with the Haversian canals appearing as wide space interspersed with embryonal and osteoid tissues. The bony lamellae are lacking. Fibroblasts, chondroblasts and transitional cells replace the osteoblasts.

Sections taken from an area of the callus, may reveal cartilaginous tissue with extensive areas of necrosis. Necrotic areas are present in the diaphyseal portion of bone. The condition is nearly always associated with a peculiar developmental disturbance of the teeth termed dentinogenesis imperfecta. There is marked

progressive narrowing of the pulp chambers and the canals. The abnormality affects only the mesodermal dentin. The enamel which is of ectodermal origin is unaffected. The disease results from a deficiency of bone tissue both in quantity and quality, probably in consequence of a genetic damage to the osteoblasts. These appear to be retarded in their function and differentiation so that they form too little bone and at a slow rate and continue to produce primitive, coarse fibrillar bone at a time when normal lamellated bone should be developing. The osteoclastic activity is not increased and in some instances is apparently reduced.

Pathologically there is a lack of ossification in the skull, more marked in the vault although it does occur in the base to a lesser degree. The facial bones are largely cartilaginous. The vertebrae and pelvic bones do not fracture so easily as do other bones, but there may be a severe scoliosis or kyphosis. The periosteum is usually thickened in the region of the fractures and apparently normal elsewhere. Pathology varies somewhat in the two types of the condition, described as the 'congenita,' and the 'tarda' forms, but Rosenbaum believes that there occurs some alteration in the region of the hypophysis or infundibulum which accounts for the abnormality seen in both types.

PATHOGENESIS:—The bones appear practically normal in length but the growth in thickness of the long bones is more or less impaired. This is due to the fact that transverse growth depends entirely on the activity of the osteoblasts while longitudinal growth of bone in the case of the long bones depends primarily on the growth of the epiphyseal and articular cartilage. In osteogenesis imperfecta, cartilaginous growth and calcification of the cartilage prior to its resorption and replacement by bone are normal. Fractures heal readily and the healing is characterized by the formation of large masses of cartilaginous callus while bony union is retarded. It is believed that genetic dysfunction of the osteoblasts and odontoblasts is part of a generalized disturbance of the supporting tissue.

BLOOD-CHEMISTRY:—There may be no demonstrable disturbance in the blood-chemistry. In general, however, the "early types" will show a slight elevation of the serum calcium and the concentration of the inorganic phosphorus in the serum is top-normal; in the 'late' type, the serum calcium is normal and the inorganic phosphorus in the serum is low.

ROENTGENOLOGICALLY:—(a) Congenital osteogenesis imperfecta shows a thinning of the cortices of the bones with lack of the trabecular structure. The long bones are greatly distorted as a result of numerous fractures. The sites of fractures often show formation of callus, which adds to the irregularity of the outlines of the bones. The bones of the calvarium show extreme

osteoporosis and there is a lack of ossification of the bones of the face.

(b) The bones in osteogenesis imperfecta tarda shows thin cortices and a sparsity of spongiosa, so that the trabecular structure is not distinct. The long bones especially those which bear weight, will be bowed. There will be either new fractures or evidences of old fractures. Where fractures have occurred, there may be periosteal reaction with formation of callus. Frequently the involvement of the skull is conspicuous with thinness and poor development of the bones of the vault. Numerous wormian bones are found lying between the hypoplastic bones of the skull and this gives an appearance known as the "mosaic skull" of osteogenesis imperfecta. In some cases the bones of the skeleton do not show the characteristic roentgenologic appearance which has been described. The cortex may be only slightly thinner than normal and the trabeculae may appear fairly well-formed; however, these patients most often have fractures when the injury has been relatively trivial. When the appearance of the bone is studied, more carefully and the presence of blue sclera is noted the diagnosis of 'osteogenesis imperfecta tarda' can be made with certainty.

CASE REPORT:—Male baby, ten days old, was referred to the X-ray department with the complaints of deformity of extremities and irritability. The patient was the first-born of his parents by natural delivery and a full-term one. The child was breast-fed and took feeds easily and weighed four lbs. and four ounces.

The family history did not reveal similar complaints among any of the members of the family.

General examination revealed a small infant, the facial aspect appearing to be quite normal with the head rather prominent. The forehead was broad and protruded forward. The parietal bones bulged over the external auditory meatus on either side and the ears were pushed downward. The head appeared flattened posteriorly to a slight extent. Blue sclera was present. The arms, thighs and legs were bowed, with an angulation of the distal portions of the forearms and legs. Both the knees and ankles were swollen.

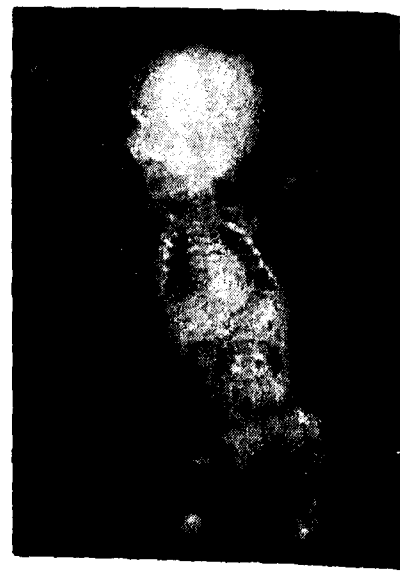
The skull on palpation felt soft and the fontanelles were abnormally wide. Palpation of the calvaria afforded pathognomonic "gum-ball" impression with isolated areas of firm osseous tissue. Fractures were evident in the bones of the arms, thighs and legs.

Physical examination of the cardiovascular, respiratory and alimentary systems did not show any abnormality.

The roentgenograms revealed bones of much diminished density but without significant disturbance of metaphysical development. Growth in length was however, impaired.



Clinical photograph of patient suffering from the congenital type of osteogenesis imperfecta showing the deformities.



Plain X-ray of a patient suffering from osteogenesis imperfecta: male infant, aged ten days. Lack of ossification is noted throughout the skull. It also reveals innumerable fine irregular cracks traversing the posterior

part of the parietal bones, markedly wide anterior fontanelle and a defect in the frontal area of the skull.

The cortical walls are thin except where thickened by callus formation following fractures. The angulation and bowing deformities are secondary to fractures and are thus mechanical complications of the underlying disease.

Roentgenogram of the skull revealed innumerable fine irregular cracks traversing the posterior part of the parietal bones. The sutures were quite wide. Skull defects were seen. Multiple islands of bone were seen. A fracture was seen in the frontal bone. Multiple, complete fractures were seen in the shafts of both the bones of the forearms, in the shafts of the femurs and in the two bones of each of the legs. There was no displacement of the fragments. Dense callus-formation was noted only in the left femur on the concave aspect of the fracture. In the shaft of the right femur, the fracture had healed so perfectly that there was no sign of an old fracture except the marked deformity. The cortex of the long bones was thin and the medullary cavity was markedly widened. The shafts of the bones were extremely slender, while the extremities were expanded.

The spine was affected. There were multiple compressions of the vertebral bodies most marked in the lower thoracic and lumbar areas, with a ballooning out of the intervertebral discs.

Laboratory studies showed normal values for serum calcium and plasma phosphorus. Other routine examinations, such as those of the stool, urine and blood revealed no abnormality.

DISCUSSION:—It is possible to confuse this with *chondrodystrophy*, but the latter condition shows no lack of density of the bones and there are no fractures. The congenital type of osteogenesis imperfecta, like this one, should be differentiated from rickets and congenital syphilis, as also from scurvy. The normal epiphyseal lines and age-factor serve to exclude these conditions. Finally this lesion should not be confused with bone-tumour or osteitis fibrosa cystica.

Summary.—A classical case of the congenital variety of osteogenesis imperfecta has been described—to be added on to the literature.

The available knowledge regarding its nomenclature, ætiology, pathology, pathogenesis, laboratory studies and roentgenological features with special reference to the non-hereditary congenital type of osteogenesis imperfecta and hereditary osteogenesis imperfecta tarda, are discussed in detail.

REFERENCES:

1. Brailsford, J. F. (1953)—*The Radiology of Bones and Joints*, J. and A. Churchill, London.
2. Max Ritvo, (1955)—*Bone and Joint X-ray Changes*, Lea and Febiger, Philadelphia.
3. Pendergrass, E. P. (1956)—*The Head and Neck in Roentgen Diagnosis*, Second Edition, Charles C. Thomas, U.S.A.

ADENOTONSILLECTOMY: SURGICAL TECHNIQUE

When one has decided on the removal of tonsils and adenoids, the best technique for such removal is as under:—

As in all surgery, anæsthesia is important. I believe the safest mode of general anæsthesia for adenotonsillectomy is the endotracheal type. The advantages of this type of anæsthesia for this type of surgery include: (1) a continuously patent airway, (2) nonvarying level of anæsthesia which may be kept light so that protective laryngeal reflexes may become active rapidly after operation, (3) less likelihood of aspiration difficulty of blood, tissue, or other foreign material, (4) improvement in visualization of the field of operation because of freedom of retraction of the tongue allowed by the presence of the tube. This type of anæsthesia requires the services of a trained anæsthetist or anæsthesiologist.

The essence of good surgery is speed with a minimum of trauma to tissue. The careful excision of the tonsil should leave a clean tonsil fossa, both anterior and posterior pillars in tact, the uvula in position. Evaluation of the child for a possible submucous cleft should be performed before adenoidectomy. This child may develop a nasal voice when the velopharyngeal closure is disturbed. One is dismayed at the frequency with which he develops marked distortion of the nasopharynx as a result of tonsil surgery. Many times there is a distracting change of voice in these cases. All bleeding points must be controlled. The clean tonsil fossa is still the best guarantee against post-tonsil bleeding. Certainly, if postoperative suturing of tonsil bleeding is necessary, a clean tonsil fossa makes this a much easier task. The use of sutures to close the tonsil fossa after surgery is not without its complications.

A word about adenoid surgery. The blind removal of adenoid tissue many times produces a very inadequate adenoidectomy. For this reason it is to the operator's advantage to examine the nasopharynx directly, and the use of a dental or laryngeal mirror for this purpose is satisfactory. It is a good practice to introduce the finger, covered by gauze, up into the nasopharynx and use this as a curette in the area of the eustachian tube recesses.

The preoperative care of the adenotonsillectomy case should be similar to that for any other surgical case. Many hospitals still do a bleeding time and coagulation time determination as the only requirement to adenotonsillectomy. I believe that this test tells us little and I prefer to have a complete blood-count and urinalysis as the minimum requirements for preoperative laboratory work. The use of an antibiotic at the time and immediately prior to and after surgery is probably good prophylaxis for infection. The use of blood coagulants as a routine is not necessary, except in the child recently on excessive use of oral antibiotics with failure in the natural production of vitamin K due to sterilization of the intestinal tract. In the day of the oral antibiotic and the busy doctor, it is easy to call a druggist and arbitrarily start antibiotic therapy for almost any complaint. A disservice is done to the child who does not have the opportunity to develop natural immunity.

LONG-TERM TREATMENT OF UROGENITAL TUBERCULOSIS WITH TRIPLE-DRUG (AMINOSALYL STREPTOMYCIN ISONIAZID)

The advantages of treatment of urogenital tuberculosis with a combination of chemotherapeutics—PAS, streptomycin, and isoniazid—are:—(1) lower doses of the preparations can be applied and toxic side-effects avoided, (2) a synergistic effect results, presumably because the preparations have different points of attack on the tubercle bacilli, and (3) the development of resistant strains can be delayed or possibly prevented by the combination of therapeutics. At Ravlanda Sanatorium triple-drug treatment was given for at least a year to 25 patients (17 women and 8 men) with urogenital tuberculosis. In all cases the urine reverted to normal. The average time from the start of treatment until reversion was 2.9 months; the average time from reversion until the last guinea-pig test was 18.2 months. No relapses occurred during this time. Because of the good results of triple-drug therapy at Ravlanda, nephrectomy is performed only in cases where there is marked reduction of function in one kidney because of extensive tuberculous changes. In 12 other patients (9 men and 3 women) given triple-drug therapy for a time, one of the preparations was withdrawn on account of side-effects, however, treatment was continued with the other preparations for at least a year, with good effect.—(C. G. Hansson, *Nord. Med.*, 60: 978-979, July 10, 1958, in Sweden, (Stockholm) via *J.A.M.A.*, Nov. 22, 1958).

SEA GULLS AND DIURESIS

Sea gulls and other marine birds ingest large quantities of salt from sea water. The salt load would be far too great for the kidneys to handle. But salt-retention oedema is prevented by unusual functioning of the nasal (supraorbital) gland, which secretes sodium chloride at higher rates and concentration than the kidney. A cholinergic innervation mechanism similar to that of salivary glands is believed responsible. The nerve reflex is thought to depend on a central osmoreceptor, sensitive to the osmotic concentration of the blood. Researches have found this unusual extrarenal salt excretion in petrels, gulls, penguins, marine ducks and other birds, and marine reptiles.—(*Diuretic Review*, via *N.Y. St. J. Med.*, 15-5-'59).

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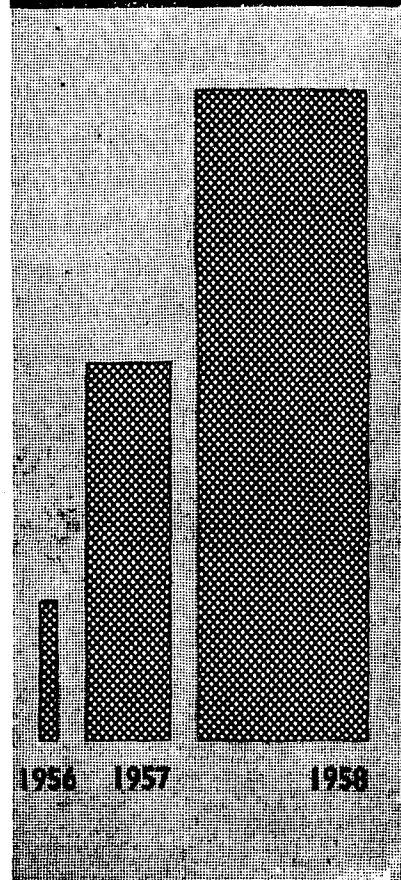
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Facts and Figures



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ESSENTIAL HYPERTENSION*

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[N recent years the problem of hypertension has been tackled from many angles; but we are still unable to predict with any certainty the outcome of increased blood-pressure. Refinements in diagnosis, e.g., Cushing's syndrome, phaeochromocytomas of adrenal medulla, coarctation of the aorta, chronic pyelonephritis and other less obvious forms of renal diseases are side-issues as compared to the main problem relating to the significance of high blood-pressure in the great majority of patients who remain in the category of "essential hypertension." Albutt is of the opinion that this disorder is not incompatible with long life and freedom from serious disease; its complications may however, cause sudden death or life-long invalidism.

Aetiology.—The aetiology of the condition is obscure and causes difficulties in clinical practice.

• Males predominate, and there is no age-bar, but usually people above 40 years of age are affected.

Essential hypertension has been regarded by generations of physicians to be an inherited affliction, and to show a familial incidence.

Dahl and Love have stated that the level of sodium-intake is the primary aetiological factor in the development of hypertension. A high protein diet is supposed to be a factor in causing hypertension.

Habits.—Chronic alcoholics and heavy smokers are greatly prone to this disease.

There has been experimental evidence adduced to connect stress to the pathogenesis of this disease in man; whether stress plays a role in the causation of hypertension or not, it is certainly an aggravating factor once hypertension is established.

Pathogenesis.—Gold Blatt has shown that the presence of an ischaemic kidney produces hypertension, and that a pressor substance, rennin, is produced in excessive amounts in the ischaemic kidney. Rennin is believed to be formed or stored in the first convoluted tubule of the kidney and to combine in the blood with a substance called hypertensinogen to form a pressor substance called hypertension which acts on the arterioles, causes constriction, and later hypertension.

Heyman is of the opinion that tone and tension and distensibility of the arterial wall play a great role in the mechanism of the reflex regulation of arterial blood-pressure. He has adduced experimental evidence in support of this hypothesis.

Specially contributed to the ANTISEPTIC.

Carotid sinus reflex:—After the discovery of the carotid sinus reflex, it has been demonstrated that high blood-pressure could be produced by section of the carotid sinus and depressor nerves. This would appear to indicate that essential hypertension is due to an interference with these reflexes.

Pathology.—It is now conceded that acute fibrinoid necrosis is the anatomical basis of malignant hypertension. The essential feature of acute fibrinoid necrosis is deposition usually in the media but sometimes in the intima and sometimes in both. The accumulation of this fibrinoid substance in which red cells are occasionally entangled, is accompanied by the disappearance of the muscle fibres of the media and is sometimes associated with a mild inflammatory reaction around the vessel.

Fibrinoid necrosis produces an expansion of the vessel-wall with a gross reduction and often complete obliteration of the arteriole. Acute necroses are usually associated with the regenerative intimal thickening of the small arteries and arterioles in which the intima is grossly thickened by the cellular mass which may contain collagen but not elastic fibres. This endarteritis may represent the involution of an arteriole nearly occluded proximally or distally.

Other arterial lesions, elastosis, hyaline fatty intimal thickening are present in various degrees. The pathogenesis of this arteriolar lesion is one of the most important problems in hypertension and forms the basis of the most dangerous phase of hypertensive disease. The idea that acute necroses were due to an arterial pressure that exceeded a certain critical value was first suggested by Wilson and Pickering. This explanation gains support from the occurrence in mitral stenosis of acute arteriolar necrosis of the pulmonary arteries.

Clinical signs and symptoms.—A. NERVOUS SYSTEM:—(1) *Headache* is the most frequent complaint of patients with hypertension; the headache is mainly occipital but may occasionally be felt also elsewhere over the calvarium; it is severe when the patient wakes up, and may be accompanied by nausea and vomiting. The mechanism of the headache is not understood. Ayman and Pratt concluded that as a very early sign it was of psychoneurotic origin.

(2) *Vertigo*:—Occurring in bouts as persistent disturbance aggravated by posture or movement is not an uncommon symptom. It may be sudden in its onset.

(3) *Apoplexy*:—A wide range is comprised under this heading; at one end is the sudden loss of consciousness followed rapidly by cerebral compression and death; at the other end the monoplegia, hemiplegia, or aphasia coming on without loss of consciousness but clearing up in a few days

(4) *Transient cerebral attacks or little strokes*:—Sudden paralysis of a limb or of speech or of vision, a hemiplegia, hemianæsthesia may occur which quickly and sometimes abruptly clears up in a few minutes; the consciousness often remains unimpaired. These little strokes are due to organic vascular occlusion and not to cerebral artery spasm.

B. CARDIOVASCULAR SYSTEM:—(1) *Cardiac hypertrophy*:—In hypertension this affects exclusively the left ventricle; chronic bronchitis and emphysema are however associated findings. Cardiac hypertrophy is achieved not by an increase in the number but by an increase in the size of the individual muscle fibres.

(2) *Congestive cardiac failure*:—In heart failure due to hypertension the cardiac output is reduced. The high pressure in the left auricle produces engorgement of the pulmonary veins and capillaries, a low vital capacity and breathlessness; the high pressure in the right auricle produces distention of the neck veins, engorgement of the liver, and by a process not yet fully understood, retention of water and sodium by the kidney and consequent œdema of the dependent parts, ascites and hydrothorax.

(3) *Left ventricular failure, cardiac asthma, paroxysmal nocturnal dyspnoea*:—The typical attack occurs when the patient is in bed at night. He wakes up with a feeling of suffocation and inability to get enough air into his lungs. This quickly gets worse, the patient sits up, gets out of bed, and struggles to the window for more air. He is terrified that he is going to die. His face is pale and anxious, his pupils are dilated, and his skin is covered with sweat. The breathing is fast, laboured and shallow. His pulse is feeble and fast, his blood-pressure is higher than usual. He becomes cyanosed and rales which are always audible on auscultation, can now be heard even from a distance. Respiration becomes feebler and may finally stop.

(4) *Myocardial infarction and angina pectoris*:—Pain is felt in the centre of the chest radiating across the chest, down one or both arms particularly the left, in the neck and in the angle of the mouth. The pain is often associated with a sense of constriction of being choked or suffocated.

C. FUNDUS OCULI:—According to Keith, Wagner, and Basker, the following classification is widely used:—*Group I*:—The retinal vessels show only a mixed narrowing or sclerosis. *Group II*:—Retinal arteries show moderate to marked sclerosis, of the chronic type characterized specially by exaggerating arterial reflex and arteriovenous compression. *Group III*:—Retinitis of angiospastic type characterized by œdema, cotton-wool patches, hæmorrhages in the retina, superimposed on a combination of sclerotic and spastic lesions in the arterioles. *Group IV*:—Papilloedema is present in addition to the changes noted in *Group III*.

D. ASYMPTOMATIC TYPE:—Essential hypertension in its benign form is often discovered in the course of a routine examination when the patient does not complain of any symptoms.

INVESTIGATIONS:—(1) *Blood-pressure*:—The blood-pressure should be recorded with the patient at rest, and should be checked repeatedly. A persistently high blood-pressure is termed hypertension.

(2) *Ophthalmoscopic examination*:—Emphasis is laid more on the condition of the vessels in the early stages rather than the late ones, for by the time hæmorrhages, soft exudates and oedema of the nerve heads become visible, damage would have been established beyond repair.

(3) *Urine examination* is made for (a) R.B.Cs.; (b) granular casts and (c) the presence of albumen.

(4) *Teleoradiogram* is made in order to assess the hypertrophy of the left ventricle.

(5) *Electrocardiogram* will reveal any preponderance of the left ventricle and inverted T wave.

PROGNOSIS:—Women live longer than men and in them the disease seems to run a milder and a longer course. Cardio-vascular hypertrophy and degeneration develop predominantly in patients whose blood-pressure is sustained at a high level while a more benign course is associated with labile and intermittent hypertension which manifests itself under the stress of medical examination.

TREATMENT:—(1) *Assurance*:—Assurance and suggestion and the creation of an optimistic atmosphere are very important. It is inadvisable to let the patient know the correct blood-pressure readings at any time.

(2) *Rest*:—The patient must avoid excessive physical and mental exertion, and should have nine hours sleep at night, besides a mid-day nap after lunch for an hour. A morning walk may be allowed in mild cases.

(3) *Diet*:—(a) *Kempner's diet*:—This consists of rice, sugar, fruit and fruit juice and no salt. Tomatoes and vegetable soups are prohibited. (b) Salt should be restricted to a minimum. (c) The patient should take only two thirds of what his appetite demands. The food should be simple and easily digested and so well cooked; the total quantity should be taken in four daily servings. The noon meal may be heavy and evening meal light and taken sufficiently early to ensure emptying of the stomach before retiring to bed.

Drugs.—I. **SEDATIVES:**—Barbiturates may be given as indicated for sedation in the treatment of blood-pressure.

II. **HYPOTENSIVE DRUGS** used are:—1. *Those drugs acting mainly through central action*: (a) Hydrarinophthalarine; (b) Veratrum viride; (c) Rauwolfia serpentina; (d) Hydergine; and (e) Thiocyanates which act mainly through central action.

(a) *Hydrarinophthalarine (Aprisoline)*:—(i) Increased renal flow without change in glomerular infiltrate; and (ii) inhibits hormonal pressor substance like hypertension.

The dosage is 12.5 mg. q.i.d. after meal gradually increased to 50 mg. q.i.d. up to second week.

It is better combined with Rauwolfia serpentina. Adelphane is a combination of two drugs, which gives good results.

Toxic symptoms are headache, weakness and nasal stuffiness. Its prolonged use leads to lupus erythematosus and rheumatoid arthritis.

(b) *Veratrum viride* acts on the hypothalamus and vagal nerve endings; the dose is 4 mg. t.d.s. p.c. with an interval not less than 4½ hours. The toxic symptoms are nausea and vomiting.

(c) *Rauwolfia serpentina* causes hypertension acting centrally and produces emotional calmness. The dose is 50 mg. t.d.s. and the toxic symptoms are nasal and conjunctival congestion, flushing, fatigue and depression.

(d) *Hydergine*:—Its action is transitory, and can be given parenterally.

(e) *Thiocyanates* are highly toxic and are mentioned here to be condemned.

2. *Ganglion-blocking drugs* are:—(a) Tetraethyl ammonium compounds; (b) Pentamethonium; (c) Hexamethonium; (d) Pentapyrrolidinum; (e) Ecolid and (f) Mecamylamines.

Ganglion-blocking agents:—(a) *Tetraethyl ammonium bromide*:—Blocks both the sympathetic and parasympathetic nerve ganglia. It may cause sudden collapse, and can be used parenterally.

(b) *Hexamethonium* is absorbed from the gut, interferes with parasympathetic transmission and may produce ileus which allows continuous absorption of the drugs; when gross hypotension is present it may culminate in disaster. The dose is 5 mg. to 50 mg. t.d.s.

(c) *Pentolium tartarate* has longer action and is six times more active than hexamethonium. Its dose is 20 mg. before breakfast, to be repeated after 12 hours. The bowels should be evacuated daily by aperients.

(d) *Mecamylamine* is a secondary amine, well absorbed from the gut with low excretion. It is 90% more effective than hexamethonium. The dose is 2.5 mg. once a day, gradually increased

by 2.5 mg. at intervals of not less than 2 days. Laxative should be given to avoid constipation. Toxic symptoms are constipation, diarrhoea, vomiting, anorexia, abdominal pain, postural giddiness, blurring of vision, depression and drowsiness. This drug should not be used in patients with pyloric stenosis and glaucoma.

3. *Those which act by producing a transient peripheral effect are:* (a) Dibenamine; (b) Benzyloimidazoline; (c) Phentolamine.

COMBINED THERAPY:—It is advisable to use a combination of hypotensive drugs such as hexamethonium and aprisoline or aprisoline with Rauwolfia.

Diuretics: oral chlorothiazide.—It is used as a diuretic and hypertensive drug, especially in case with oedema. Allergic reaction and neutropænia may follow its use.

SURGICAL TREATMENT:—(1) *Venesection:*—The amount of blood to be withdrawn varies from 10 to 20 ounces according to the type of patient, his clinical condition and the effects produced. Surgery is indicated in right sided hypertrophy of the heart and hypertensive encephalopathy.

(2) *Sympathectomy and adrenalectomy:*—The surgical treatment of essential hypertension particularly by means of sympathectomy has not fulfilled the great hopes placed on them. A critical review of the results obtained shows that surgical treatment is only justified when troublesome symptoms prove resistant to medical therapy. The reports published so far indicate that the results of neuro-surgical procedures do not afford any great relief and the condition is not improved by subtotal adrenalectomy.

Summary.—The ætiology, pathology, signs and symptoms and treatment of essential hypertension have been described in detail. The mode of action and toxicity of hypotensive drugs have been briefly indicated.

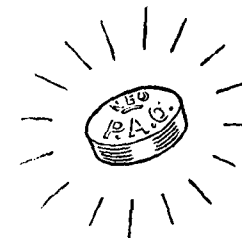
REFERENCES:

1. Price, F. W.—Text Book of Medicine.
2. Pickering—High Blood-pressure.
3. Rehfuess and Price—A Course in Practical Therapeutics.

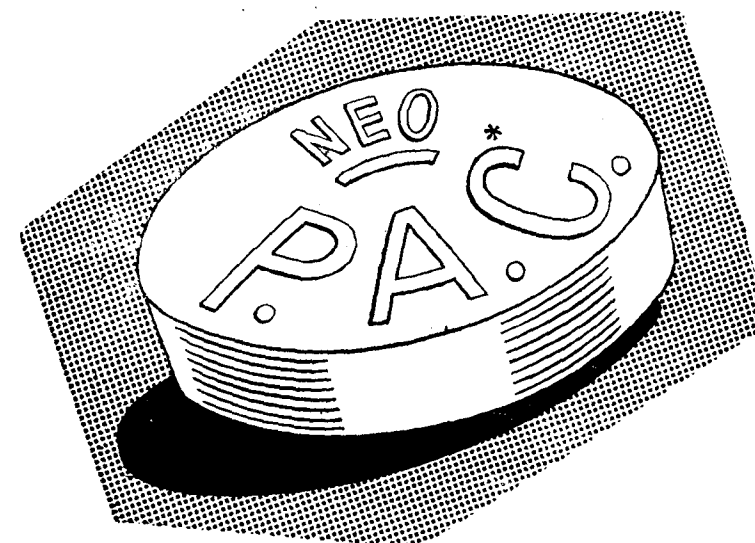
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Intravenous injection of sodium lactate relieves asthmatic attacks in patients who no longer respond to epinephrine. Acting on clues that epinephrine is most effective when the blood is more alkaline than acid, physicians treated 45 patients with the sodium solution only. Relief was immediate and dramatic, apparently because of increased effectiveness of the patients' own adrenalin. Sodium lactate should not, of course, be administered to patients in whom sodium retention would be dangerous. —(Dr. J. S. Blumenthal, University of Minnesota Medical School, Minneapolis, via *Jour. American Medical Association*).

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Indian Journal of Otolaryngology.
1958, 4, 141.

R. A. F. Cooper, M.S.,
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TUBERCULOSIS OF THE STOMACH*

V. PARAMESHVARA, M.B., B.S.,

K.R. Hospital, Mysore

TUBERCULOUS infection of the stomach is an extremely rare condition and has seldom been reported. Little was known about gastric tuberculosis before the middle of the 19th century. Berkhausen is reported to have first mentioned it in 1824. Litton has given a fair report of this condition. Coats (1886) demonstrated specific organisms in the walls of the gastric ulcer. The rarity of this condition will be apparent from the fact that only one case of gastric tuberculosis was detected in a series of 2,500 gastric operations performed at the Mayo Clinic. Good calculated that gastric tuberculosis has been met with in 0.035% of cases in a total of 7416 consecutive gastric operations. Sommerwell and Kini reported one and three cases respectively in their 5,000 and 548 gastric operations.

Case report.—Mrs. S., aged 22, was admitted to the K.R. Hospital, Mysore with the main complaints of distention of the abdomen and vomiting, of about two weeks' duration. Abdominal distress was said to be worse after food and to be partly relieved after vomiting. She was weak, and looked wasted and anæmic, but was afebrile throughout. Her appetite was poor; her bowels irregular and constipated. She came of a middle class agricultural family; she has one child aged about 2½ years. Nothing of importance was elicited from her previous history.

On examination, she was a moderately built but weak, emaciated, dehydrated and anæmic woman. Abdominal examination showed distention mainly of the upper abdomen and a peristaltic wave running left to right now and then. The abdomen was tympanitic all over succussion splash being present after six hours after food. No mass or tumour could be palpated per abdomen. Intestinal movements were well heard on auscultation. The spleen and liver were not enlarged.

Investigations made revealed:—R.B.C. count:—1.9 mil/cmm. and Hb. was 45%; W.B.C. count: 9400 per cmm.; Differential count: poly 65; lymph 29%, mono 1%, and eosin 2%; the blood film revealed microcytic hypochromic anæmia.

E.S.R.—60 mm/hour (Westergreen's method); an X-ray picture of the chest showed nothing abnormal; the B.P. was 100/75. mm. of Hg. Her weight was 70 lbs. No abnormalities were detected in the urine or stools.

The patient was put on a supportive line of treatment with I.V. fluids, minerals, iron, liver extract, etc. Her general condition improved to some extent after one month. The blood-picture

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showed 3 million R.B.Cs./cmm. of blood and the Hb. had risen to 65%.

On 8-1-1959, under controlled respiration with an endotracheal tube, exploratory laparotomy was done by a right paramedian and supra-umbilical incision. On examination, the intestines (including cæcum) were found to be normal, the mesentery and mesenteric glands were normal. The coelic group of glands was enlarged; dense cicatrical thickening of the m.m. of the stomach with tuberculous ulceration near the lesser curve of the pylorus causing an hour-glass constriction of the stomach. The peritoneum and omentum were normal.

As the general condition of the patient and the involvement of coelic glands were not favourable to a resection of the stomach, a posterior, vertical, no loop gastrojejunostomy was done to relieve the pyloric obstruction. The abdomen was closed in layers. However a piece of biopsy material from the coelic set of glands was taken. The *biopsy report* revealed a tuberculous lymph gland with extensive caseation.

The patient was therefore promptly given a course of streptomycin with 300 mg. of isonex daily, besides tonics, minerals and hæmatinics.

She showed good progress, the anorexia disappeared; the appetite improved and the abdominal distress was relieved; on 4-3-1959, she weighed 94 lbs. with an E.S.R. of 22 mm/hour. The blood count showed 3.78 mill/cmm. R.B.Cs. with a 69% Hb. She was discharged on 9-3-1959.

Discussion.—Tubercle bacilli swallowed with the sputum or with tuberculous milk tend normally to be killed by the gastric juice. But there seems to be no adequate justification for the statement that the stomach is relatively immune to tuberculosis. The biological factors involved in the protective mechanism against the bacillus are:—(1) the normal acid gastric juice; (2) the intact mucous membranes; (3) a paucity of lymphoid follicles and (4) the normal muscular action of the stomach. It is possible that there may be a hæmotogeneous infection of the stomach wall.

The incidence of gastric tuberculosis is believed to be greater among adult males than females and to be more in adults than in children.

Tuberculosis of the stomach may take the form of:—(1) ulcers which may be single or multiple; (2) miliary tuberculosis associated with general tuberculosis; (3) a solitary tubercle; (4) pyloric stenosis which may be true or false; there being an excessive scar tissue and tuberculous granulation of the pylorus in the former and extra gastric like tuberculous peritonitis in the later; (5) tumour or a nodule or (6) lymphangitis.

Tuberculous ulcer of the stomach which is the very common form in its typical picture presents undermined ragged edges, the

dirty greyish yellow floor usually not extending beyond the muscular layer and perforation appearing as the last characteristic feature. The site of the ulcer is the posterior wall of the incisura or pyloric end.

Clinically the disease manifests with the signs and symptoms of anorexia, loss of weight, weakness, prompt post-prandial epigastric distress, frequently vomiting, constipation or diarrhœa, sometimes with a palpable tumour and hæmatemesis or/and melæna. Achlorhydria is present in 35% of cases; palpable tumour in 40%; hæmatemesis or melæna in 30%. Roentgen signs resemble those of ulcer or cancer, or pyloric obstruction. The E.S.R. is raised.

The detection and differentiation of a tuberculous gastric lesion from an ordinary gastric ulcer or carcinoma is extremely difficult except perhaps by gastroscopic examination and biopsy. A further source of confusion is that tuberculosis may be associated with gastric carcinoma or ulcer. One should consider the possibility of a gastric lesion being of tuberculous origin if the patient has pulmonary, intestinal, peritoneal or osseous tuberculosis, active, latent or healed. The ultimate diagnosis depends by and large on the information to be had on laparotomy followed by a histological and/or bacteriological examination of the resected tissue.

Treatment should include rest, minerals, acids, a soft high-protein diet, actinic light exposure. But the inability to recognize tuberculous gastric ulcer clinically precludes the use of non-surgical methods of therapy. Treatment is essentially therefore surgical, gastric resection being the procedure of choice.

Conclusion.—The occurrence of gastric tuberculosis is stated to be somewhat uncommon; its incidence cannot however, be rare in India, where other types of tuberculosis are very prevalent among the people.

REFERENCES:

1. Eusterman Balfour.—Stomach and Duodenum.
2. Babcock.—Principles and Practice of Surgery.
3. Somervell, T. H.—Surgery of the Stomach and Duodenum.
4. Boyd.—Surgical Pathology.

PLIGHT OF THE EPILEPTIC

The social and economic problems presented by the convulsive disorders are staggering. It is estimated that over a million people in America suffer from seizures—more than active tuberculosis!

The incidence of epilepsy is comparable to that of diabetes and both diseases have a mild tendency to run in families. In both disorders, the family physician can help many patients; a specialist can help more.

But while every doctor is familiar with the physiology of diabetes, few take a comparable interest in epilepsy. There are hundreds of specialists in the treatment of diabetes, to every specializing epileptologist.—(*Current Medical Digest*, April 1959).

PERIPHERAL ARTERIAL EMBOLISM

One of the most common causes of acute arterial occlusion of the extremities is arterial embolism. This is a serious disorder, for it usually reflects an underlying cardiac disease which in itself carries a substantial mortality. In the usual case peripheral embolism is recognized easily by the sudden onset of pain in the extremity, followed by coldness, pallor, numbness, and varying degrees of paralysis.

Increasing experience has shown that better immediate as well as long-term results are obtained when surgical embolectomy is employed on the larger arteries, for example, the aorta, iliac, femoral, popliteal, axillary, and brachial. Surgical treatment is not usually considered for emboli to the smaller arteries, such as the tibial, peroneal, radial, and ulnar. We, therefore, have considered embolectomy as our primary method of treatment in the majority of cases. Once the diagnosis of embolism is made, treatment should be instituted promptly, whatever its form.

A series of 47 peripheral arterial emboli occurring in 42 patients is presented. Ten patients died in the hospital, giving an over-all mortality rate of 23.8 per cent. Among patients undergoing embolectomy the mortality was 14.3 per cent, while in the non-operated group the mortality was 37.5 per cent. The heart was the source of emboli in 39 patients, a proximal aortic aneurysm the source in 2 patients, and the source was obscure in 1 patient. There were 3 aortic, 7 iliac, 15 femoral, 10 popliteal, 3 tibial, 5 axillary, 3 brachial, and one radial emboli.

Ideal over-all therapy consists of restoration of main vessel blood flow by embolectomy; prevention of thrombosis by anticoagulants, especially heparin; and release of vasospasm by sympathetic block and vasodilator drugs. In the operated group, 3 legs were amputated, an incidence of 12.5 per cent, all due to femoral emboli. In the nonoperated group 1 leg was lost, an incidence of 10 per cent, this due to a week-old popliteal embolus. No upper extremity was lost. Best results are obtained in patients treated within the first few hours after embolization occurs.

Postoperatively heparin is given to prevent thrombosis, the average dose being 75 mg. aqueous sodium heparin every 8 hours or 50 mg. every 6 hours intramuscularly. Vasodilators also are employed, but sympathetic blocks are not done while the patient is heparinized because of the risk of hemorrhage. No external heat is applied to the limb. The application of heat is a frequent error and at times is catastrophic. Heat increases the metabolic needs of the tissues and in the presence of decreased blood supply to a limb may be responsible for precipitation of gangrene. Cold is contraindicated because it induces vasospasm. The limb should be left at room temperature under a cradle. It should never be elevated, but should be kept flat or at a level several inches below the heart since the effects of gravity are considerable in a limb with precarious circulation. —(*Texas St. J. Med.*, April 1959).

STEROID THERAPY

Excessive amounts of ACTH may lead to hypercorticism with development of Cushing's syndrome. Hypertension, oedema, convulsions, mental symptoms, psychosis, decreased carbohydrate tolerance, osteoporosis, peptic ulcer, and growth arrest have all occurred.

Prednisone, prednisolone, and the newer steroids are considered safer than cortisone and hydrocortisone primarily because salt and water retention does not occur with their use. All the other toxic effects however, do occur in relatively the same frequency and to relatively the same extent when the newer drugs are used. The lack of salt and water retention deprives the physician of a danger signal, oedema, which forewarns of greater trouble. —(*N. Y. St. J. Med.*, 15-6-1959).

ROLE OF CALCIUM IN AYURVEDA*

(Its Many Benefits to Man)

BAPALAL G. VAIDYA,

Principal, Ayurveda College, Gopipura, Surat

CALCIUM is one of the chief ingredients in the structure of the human organism. Its vital importance in the cure of the sick, the convalescent and also for the normal individual has been long recognized. It is one of the important salts circulating in the blood, and reaching all the tissues and organs of the body where it is easily assimilated.

In the Ayurvedic system of medicine, natural or organic calcium is used, while in allopathy, the inorganic salts are mainly used. The idea behind using natural calcium in Ayurveda is rational, and beneficial results, from a clinical point of view have been obtained. Inorganic calcium is also used in Ayurveda, but it is prepared and processed with the juices of several medicinal plants so as to render it readily assimilable.

Mode of preparation.—In Ayurveda all the various salts of calcium, organic or inorganic, are treated with different herbal juices like *Amla* (*Phyllanthus emblica*), *Lemon* (*citrus*) *Kumarpatha* (aloes), *Rose water*, etc. Each of these has its own distinctive properties which are utilized for enhancing the basic properties of the particular kind of calcium, like *Godanti*, *Shank*, *Kapardika*, *Mukta* and *Praval*.

To start with, the calciums are purified physically as well as chemically and made ready for their oxidation i.e., *मल्ल*. In Ayurveda the term 'oxidation' is not merely a reduction to ash. Dead drugs do not act according to Ayurvedic concepts. One has to remove the impurities and intensify the original properties of the drug, at the same time. The processes involved in the preparation are intricate and exacting. The juice of the particular plant along with the calcium is made into a paste and then slowly atomized. This process is done by hand so as not to create any heat even though it takes hours and sometimes days together for the paste to get completely dry. '*Praval*' is said to be placed under the moon to add to its cooling properties technically known as *चंद्राय*. All these processes release molecular energy which is profitably utilized by the human body. The traditional practice and experience of Ayurvedic practitioners has very definitely shown that calciums prepared in the proper way outlined above are very well-absorbed and promptly produce the desired effects in the human system.

The juices of the medicinal plants which are incorporated with these calciums also act in their homœopathic doses producing therapeutic effects on the human system. It is a fact known to

* Specially contributed to the ANTISEPTIC.

the medical profession, and mentioned in modern materia medica also, that the absorption of calcium is always far-reaching and greatly augmented by the presence of tartaric or citric acid, along with vitamin C. All these factors may be responsible for an increase in the assimilable property of the prepared calcium. During the metabolic process, Ayurvedic calciums, because of their cooling properties, help anabolism, and so the wear and tear of the system is greatly diminished. A feeling of heat in the hands and feet, acidity, biliousness, the evening rise in temperature, etc., can be effectively controlled with the calciums thus prepared.

These calciums increase the coagulability of the blood and are therefore, useful in conditions like menorrhagia, epistaxis, etc. *Amla*, besides having an abundance of vitamin C (the vitamin C content of one amla fruit being equal to that of three medium-sized oranges), is reputed and used for its cooling properties. *Amla* fruits, having alterative properties and the capacity to maintain youthfulness and delay ageing (रसायन & वयः स्थापन) is pre-eminently a drug for rejuvenation, i.e. this is the drug that keeps one eternally fit. All calciums are said to be alike chemically but their properties vary greatly from the Ayurvedic point of view. One of the reasons for this may be that the organisms producing them differ greatly in their food, their living conditions, their habitat and their environments etc. For instance, *Mukta* is prepared by the pearl-oyster, *praval* (coral) is prepared by certain insects known as anthazon polyps and so on.

Calcium is described separately in Ayurvedic text-books according to its properties but never as a group of calcium. Some properties are common; however, every drug has got its own specific uses also. *Kapardika* and *Shankh*, for instance, are very good stomachics, astringents, carminatives and antacids and are freely used in diarrhoea, dysentery and pain of gastric ulcer, while *Godanti*, *Praval*, and *Mukta* are all largely used in cases of chronic fever, hæmorrhage, leucorrhœa, rickets, etc. and are proved tonics, and *muktha* (pearl) is the best calcium known on earth possessing fine antituberculous properties. It is also useful in biliousness, irritated nerves and, being cool, is used also as a hæmostatic.

In view of the above therapeutic properties, calcium is used with very good results after convalescence. It may safely be said that its use will prevent the recurrence of diseases like typhoid, hæmorrhagic states or diatheses, urticaria, etc. Now let me state how these individual calciums are described in Ayurvedic text-books.

Godanti : (Gypsum) :

ज्वरे क्षये तथा कासे पाण्डुरोगे हयुरक्षते ।

शस्यते बालशोषे च प्रदरे श्वेतवर्णके ॥ (रसामृतम्)

Godanti is useful in chronic fever, tuberculosis, cough, anæmia, rickets and leucorrhœa.

Shankh : (Conch-shells) :

सुश्नतलः क्षारस्त्वल्पित्विनाशनः ।

अग्निमान्धतरो बल्यो ग्राही ग्रहणिकातरः ॥ (रसतरङ्गिणी)

Shankh has got cooling properties, is alkaline in reaction and cures hyperacidity (अम्लपिक्त). It corrects dyspepsia, serves as a tonic and is useful in allaying a dysenteric syndrome.

Kapardika : दीपनी चोष्णा वह्निमान्ध विनाशिनी ।

Kapardika is stomachic and corrects dyspepsia by its hot properties.

Mukta : (Pearl) : भौक्तिकं वृष्यमायुष्यं मधुरं शिशिरं परम् ।

दीपनं दाण्डशमनं नेत्र्यं वर्ण्यं च कीर्तिनम् ॥

जीर्णश्वर प्रशमनं त्वस्थिदन्त विवर्द्धनम् ।

हृद्यं मेदतरं मेध्यं दन्तोदलेदज्वरापहम् ॥

भौक्तिकं सुशिशिरं क्षयापतं श्वासकासपरिकोपनाशनम् ।

अस्थिशोषशयनं विषापहं देहवीर्यबलबुद्धिवर्धनम् ॥ (रसतरङ्गिणी)

This description about the properties of *mukta* will show the great differences between different calciums. Thus, "*Mukta* is a tonic and gives great strength. It is very valuable in keeping one young and healthy (सस्य) and has got the best cooling properties. It is useful in relieving the burning sensations often occurring in the hands and feet, is good for the eyes and is a good skin tonic imparting richness of colour to the skin. It is useful in chronic fever and helps dentition and bone-formation. It is also a heart tonic and is good for the brain. It is helpful in tuberculosis and corrects respiratory disorders. It cures and corrects rickets. It is useful in throwing out waste products deposited in cells and increases the vitality of the body, semen and intellect in general." This elaborate description shows that "there could not be a better form of calcium found on the face of the earth."

Praval : (Coral) प्रवालं सुमृतं क्षारं मधुरं लघु श्नतलम् ।

दीपनं पाचनं चैव हस्तिरोगनिषूदनम् ॥

त्रिदोषशमनं बल्यं विशेषास्फवाननुत् ।

क्षयकासतरं चैव रक्तपित्तप्रणाशनम् ॥

स्वेयातिनिर्गमतरं शक्तिस्वेदपरं परम् ।

विषघ्नभूतशमनं वीर्यवर्णदिवर्द्धनम् ॥

Praval is cooling, corrects and helps digestion, is useful for disorders of the eyes, is a general tonic and is useful in the disorders of पित्त and कफ. It is very useful in tuberculosis and in रक्तपित्त i.e. bleedings of unknown origin and hæmorrhagic tendencies. It controls the evening rise of temperature and helps the body to get rid of toxins (विषजनभूतशमनम्). It imparts radiance to the skin and increases potency in general.

Summary.—The properties of the well-known varieties of Ayurvedic calcium are discussed. They are useful in chronic fever, general debility, convalescence, leucorrhœa, during and after pregnancy and even in habitual abortions, as they are described as विषजन and भूतशमनम्. They prevent and cure rickets, dentition troubles, hæmorrhagic tendencies, and are general tonics for the heart, body, reproductive organs, skin, etc.

A HELPFUL HINT ABOUT THE MEDIAN NERVE

The median nerve is peculiarly vulnerable to compression at two points in its course through the forearm—at the proximal part of the forearm where the nerve passes through or under the pronator teres and the distal part in the median carpal tunnel. The resulting afflictions are appropriately named “pronator syndrome” and “median carpal tunnel syndrome,” respectively.

Symptoms are somewhat similar in both syndromes—clumsiness in use of the affected hand, particularly the thumb, and paresthesia or loss of sensation in the sensory distribution of the median nerve. In addition in median carpal tunnel syndrome, the patient experiences a tingling sensation radiating into the hand when the median nerve is tapped lightly at the wrist (Tinel's sign), and forced flexion of the wrist promptly aggravates the numbness and paresthesias in the median distribution in the hand.

These syndromes have an important practical significance. They can sometimes be relieved completely by surgical decompression of the median nerve at the appropriate point.—(G.P., February 1959).

ADULT CHRONIC BRONCHITIS— CONTINUOUS ANTIBIOTIC THERAPY

The authors report the results of an 18-month follow-up study of 42 patients with chronic bronchitis, 29 of whom were treated with oxytetracycline and 13 were treated with a sulphonamide preparation and autogenous *Hæmophilus influenza* vaccine. Continuous and prolonged treatment with oxytetracycline for one year or more not only prevented relapse in patients with chronic bronchitis but increased the rate of improvement the longer the therapy was maintained. The relapse rate in the group of patients not receiving oxytetracycline was considerably greater than in those treated with this antibiotic; less patients in the group not receiving oxytetracycline were improved and some became worse. Acute exacerbations of chronic bronchitis assume major proportions during the fall and winter, particularly between September and February, when 80% of the relapses tend to occur. It is suggested that continuous therapy with oxytetracycline for one period of about six months in each year, to include the period of maximum relapse, may prevent exacerbations and maintain most patients with bronchitis in effective and useful employment.—(G. Edwards and E. C. Fear, *Brit. M.J.*, 2: 1010-1012, Oct. 25, 1958, London, via J.A.M.A., 24-1-1959).

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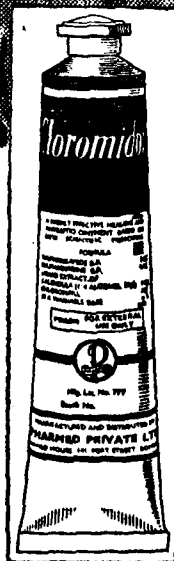
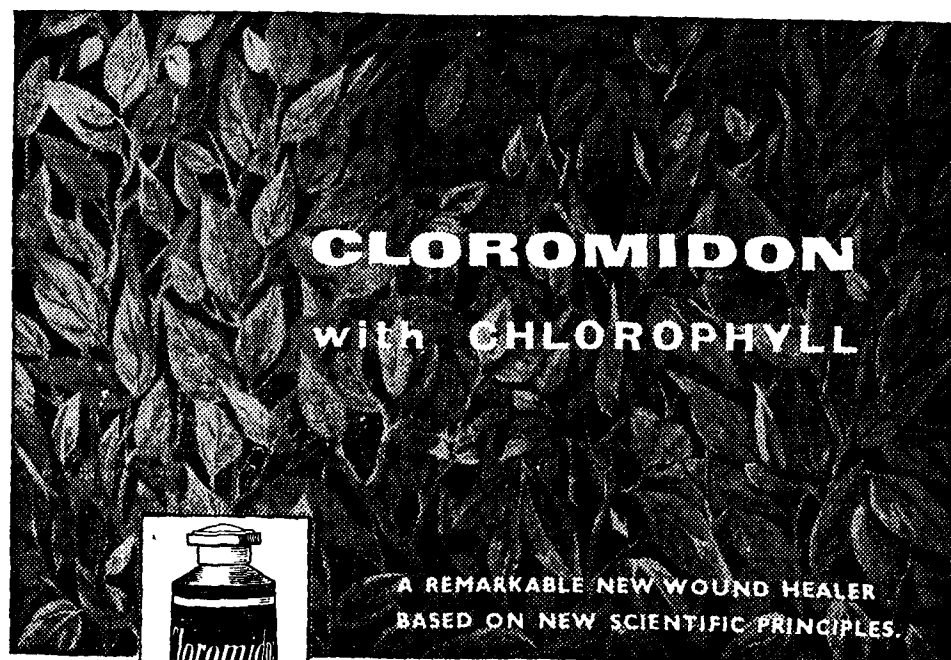
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Cases and Comments

ANAPHYLAXIS FOLLOWING INTRAMUSCULAR INJECTION OF LIVER EXTRACT

MAN MOHAN SINGH WALIA, L.S.M.F., L.T.M. (Cal.),

Medical Officer-in-charge Dispensary, V. & P.O. Shaina Dist. Sangrur, East Punjab

D. K., Hindu, female, aged 25, was suffering from hysteria. As she was anæmic, I prescribed Siotrat forte along with other suitable treatment. The first injection of 2 cc. of Siotrat forte was given on 29-6-'58 at 9 A.M. Within a few minutes, she felt giddy had palpitation of the heart and developed an urticarial rash over the whole body, which yielded to adrenaline hydrochloride injection of 1 cc. 1 in 1000 solution. The giddiness however, continued. Calcium lactate gr. 20 *t.d.s.* was given orally. She was fit to return home only in the afternoon.

CASE 2:—P. V., aged 32, was suffering from abdominal tuberculosis, for which she received a course of streptomycin injections and her temperature returned to normal. As she was very anæmic, I supplemented the treatment with Siotrat forte injections. I gave her 1 cc. of Siotrat forte from another patient's stock with me, intramuscularly at 10 A.M. on 2-8-'58. Within a few minutes, she had a sinking feeling; there was urticaria and a violent shaking of the whole body (like convulsions). She was immediately put to bed and a subcutaneous injection of 1 cc. of adrenaline hydrochloride 1:1000 solution was given. Half-an hour later antistine intravenously and half a tablet of Sonaryl were given orally. Cortisone was not available locally; so an injection was given again of adrenaline; calcium lactate gr. 20 and $\frac{1}{2}$ tablet of Sonaryl were also given. By noon, there was some relief but the shaking of the body continued to be severe. Her pulse-rate could not be counted. A half grain tablet of ephedrine was given. At 4 P.M. another intravenous injection of antistine was given. Gardenal sodium $\frac{1}{2}$ gr. was given orally at 6 P.M. and then again 1 A.M. In spite of this vigorous treatment the involuntary shaking of her body did not stop even on the next day. Gardenal sodium $\frac{1}{2}$ gr. *b.d.*; calcium lactate gr. 20 *t.d.s.* and elixir phosfomin and elixir Vit. B complex 1 dr. each 4 hourly were given on that day. Only on 4-8-'58 did the non-stop shaking of the body change into a periodic one, stopping for an hour or so and then shaking for about 15 minutes alternately; the treatment given till then was continued and there was complete relief on 5-8-'59.

Discussion.—The second of the two cases might have died of anaphylaxis if the dose of liver extract given had been 2 cc. instead of 1 cc. Several cases of anaphylactic shock resulting even in instantaneous death are being reported nowadays following

the indiscriminate and excessive use of procaine penicillin, sera, vaccines and liver extracts. The busy medical practitioner is unable to find some extra-time for testing the sensitivity of the patients against the drugs. Another reason which is true of rural areas while dealing with illiterate people is that the patients fight-shy of two needle pricks at a time. In such circumstances it is my opinion that by way of abundant caution, while dealing with non-emergent cases, such as when liver extract administration is indicated, a first dose should invariably be only 1 cc. for obese and strong persons and only 0.5 cc. for persons with a weak constitution. Secondly, the previous history should always be elicited with regard to the development of any rash, palpitation of the heart, fainting, giddiness or other symptoms after taking any kind of injection. In such cases, the medical attendant should always test for sensitivity to the drug of the patient by injecting a small drop intradermally and see if a reaction (wheal) develops in about 10 or 15 minutes.

OLEANDER POISONING

B. MAHAPATRA, M.B., B.S.,

Medical Officer, Primary Health Centre, Barpali, Dt. Sambalpur, Orissa

THE seeds of oleander are often used for suicidal and homicidal purposes. Due to the uncertainty of the fatal dose and fatal period, many who take the seeds to end their lives survive with very little or no treatment but undergo varying kinds of social humiliation; on the other hand, a few who casually and curiously try to taste the seeds die in spite of vigorous treatment.

The botanical name of yellow oleander is *Cerebra thevetia* or **Thevetia nerifolia* (Juss). It is commonly grown as an ornamental shrub. Every part of this plant is highly poisonous. Thevetin and curberin are two glucosides which are obtained from the milky juice that exudes from all parts of the plant. Besides these, the seeds contain yet another glucoside known as thevetoxin which is still more poisonous.

The seeds and root are used as abortifacients and also as cattle poison. Fatalities after eating the flower have been reported among children.

Four cases diagnosed and treated as poisoning by oleander are reported here:—

* *THEVETIA NERIFOLIA*: belongs to the natural order Apocyanaceæ, and its vernacular names are:—*Skt*: Hapusha; *Hindi*: Guz; *Pila-Kaner*; *Bengali*: Kolkaphul; *Mahr*: Pivalakanher; *Sherani*; *Bom*: Thivati; *Telugu*: Pachcha-ganneru; *Mal* and *Tamil*: Pachai alari or manjarali. [Editor, *ANTISEPTIC*: From Nadkarni's *Materia Medica*].

TABLE I

Showing age, sex, occupation, etc. of the 4 Cases of Oleander Poisoning

No.	Age	Religion	Sex	Occupation	History of taking poison	Purpose	Ultimate result
1.	35	Hindu	Female widow	Housewife	Definite history of taking oleander seeds	Suicide	Treated & cured
2.	13	Moham-madan	Male unmarried	Student	„	Just to taste the seed	Died
3.	40	Hindu	Female widow	Labourer	„	Suicide	Treated & cured
4.	22	Hindu	Male unmarried	Labourer	„	Suicide (?)	Died

All the 4 cases felt a sense of giddiness, oppression and choking feeling in the chest. Nos. 1 and 2 were conscious but the other two were only semiconscious. Nos. 1 and 4 had gripping pain, vomiting and diarrhoea in addition.

TABLE II

Showing Clinical Signs

No.	Dehydration	Pupil	Temp.	Pulse	Respiration	Heart
1.	++ +	Normal sluggish	Normal	38/min. irregular	40/m regular	Heart block present
2.	+	Dilated, equal, sluggish	Subnormal	96/min. regular	40/m regular	Normal
3.	++	Dilated	Normal	40/min. regular	36/m regular	Heart block present
4.	++	Normal, reacting to light	Subnormal (profuse sweating)	40/min regular	40/m regular	Normal

Oesophageal spasm was present only in Cases 2 and 4; cyanosis in Cases 1, 3 and 4, and muscle twitching in Case No. 4 only.

TREATMENT:—The patients were brought within half an hour to five hours of taking the poison. All of them were given analeptics (either Coramine or Cardiazol immediately and stomach wash was done first with plain water, then with Pot. permanganate solution, which came out decolourized in all the cases. In Cases Nos. 2 and 4, the condition became serious soon after the stomach-wash and both of them died within 30 minutes. Further treatment consisting of cardiac and respiratory stimulants artificial respiration etc. proved futile. In Cases Nos. 1 and 3, replacement of fluid and electrolytes by way of glucose saline,

1 to 2 pints was given. Coramine, ephedrin etc. were repeated either *i.m.*, or *i.v.*, route till the condition stabilized. Percotin and *nor*-adrenalin were also given only in Case No. 1 as the pulse condition was not returning with the above measure.

Both the cases had watery motions, vomiting and severe griping pains for two or three days. Besides replacing the fluids, antispasmodics like atropin, octinum, belladonna etc. were given. Starch with opium enema was given to Case No. 1. Vitamin B complex was given either orally or parenterally.

Follow-up:—Both cases Nos. 1 and 3 were discharged 5 days after admission. Pulse rate was 40 and 56 respectively and it was regular with good volume and tension. Both of them were having some gastric upsets at the time of discharge and they were advised to take B complex and polyenzyme. Their pulse was checked after a fortnight and found to be within the normal range. In the monthly checks for four subsequent months the pulse condition was normal and the patients had no complaint whatsoever.

Clinical test—Keller's test:—Stomach contents (washed with plain water) was boiled with equal quantity of concentrated sulphuric acid for five minutes. In the first instance the colour became bright yellow and then gradually turned into a cherry-red, suggesting the presence of oleander poison.

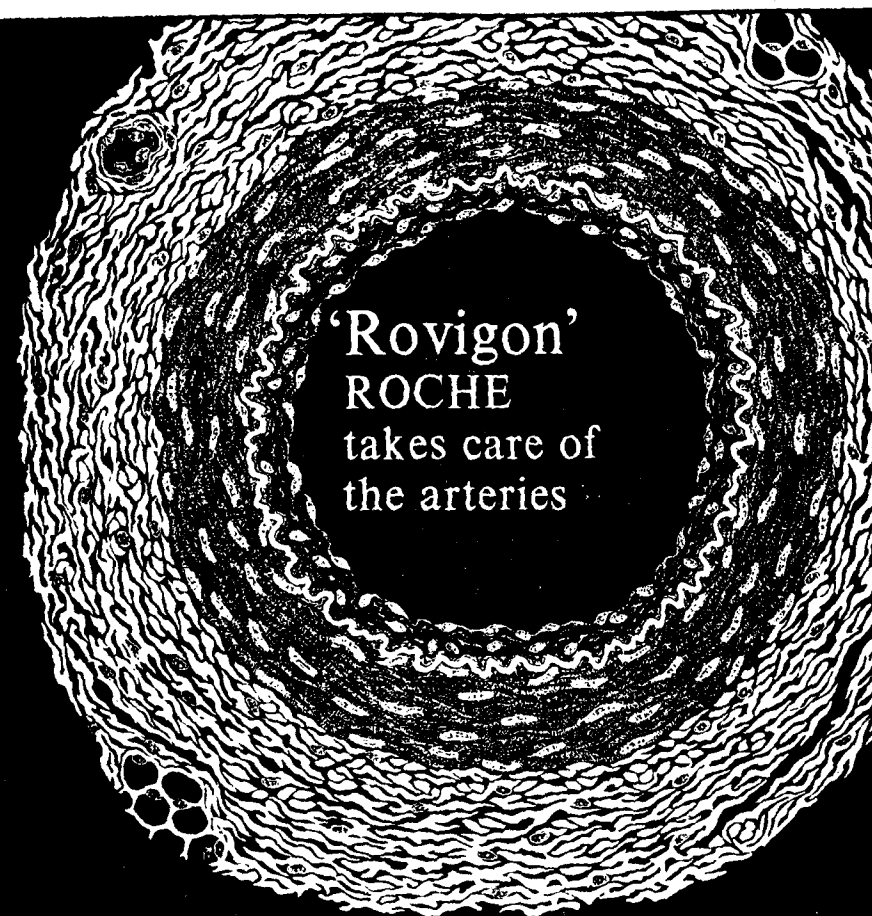
The stomach contents of Case No. 3 were found to have oleander poison by tests performed at the Forensic Science Laboratory of Calcutta.

Summary.—Four cases of oleander poisoning with different motivations are reported. Two cases of suicidal poisoning had apparently graver clinical finding but both of them survived. The temporary heart block caused in both these cases by the poison completely disappeared in less than a month and found to be normal at the monthly check-ups for six months. The other two cases met with quite unexpected and sudden deaths. The oesophageal spasm and spasm of the respiratory muscles found in these cases are probably of graver prognostic significance than the temporary heart-block.

Acknowledgement.—My grateful thanks are due to Dr. S. C. Das, M.B., B.S., D.T.M., Civil Surgeon, Sambalpur for kindly permitting me to utilize the hospital records for this report. I am also thankful to Mr. J. Banerjee, A.F.S.C. (Barpali) for helpful suggestions in reporting the case.

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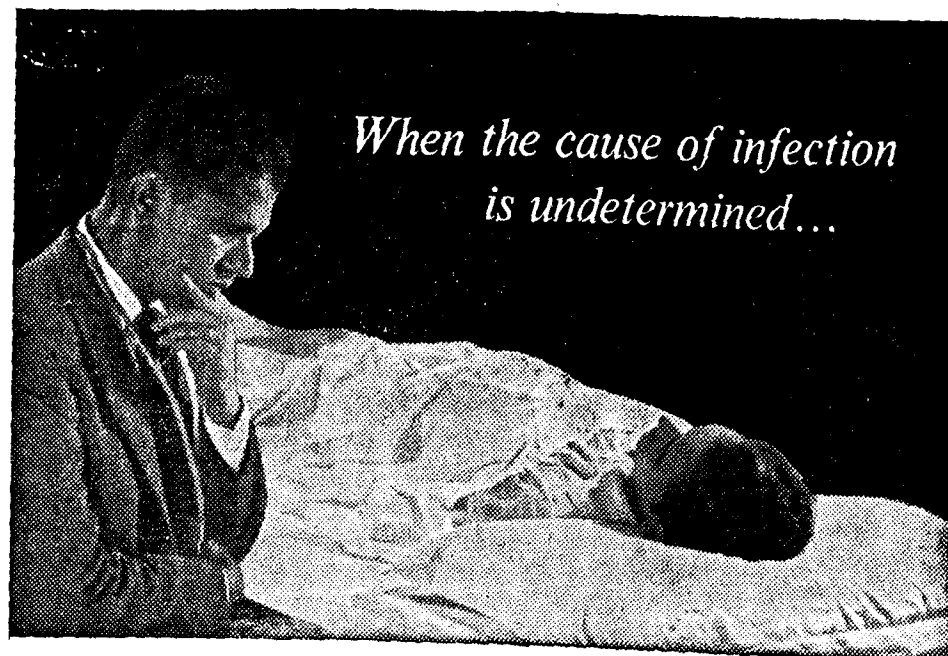
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Annual Subscription: Rs. 7-50 nP. Foreign—Rs. 10—Post Paid

Vol. 56

SEPTEMBER, 1959

No. 9

Editorials

MENTAL HEALTH

(World Health Day Celebrations)

PRESIDING over the World Health Day Celebrations at the Madras Medical College on July 20, 1959, Sri C. SUBRAMANIAM, the Madras State's Finance Minister stressed the need to tackle the world-wide problem of mental illness. He said that they were celebrating the World Health Day in order that people might become conscious of the fact that the community was responsible for the maintenance of the health of individuals. Referring to the subject of mental health, he said that they had often heard the term, 'sound mind in a sound body,' but at the same time they should remember that there could be no sound body without a sound mind. One was connected with the other. Their emotions and passions had an effect on their bodily health.

The W.H.O. has done a very wise thing in including mental illness in its programme. The feverish tension and stress of modern life have largely contributed to a great extent to mental illness all over the world, perhaps to a greater extent in the richer and more sophisticated countries. This is the penalty that modern civilization exacts, and it is necessary that means of at least mitigating its effects should actively be sought. This theme has been chosen for this year's celebrations of World Health Day. Nearly all the speakers at the above meeting stressed the importance of tackling a world-wide problem.

Concepts of mental illness have changed greatly in modern times. In the olden days the "lunatic" was also a criminal, and when he was not ridiculed and otherwise harassed, he was actively persecuted. But it is now recognized that mental illness can no more be helped than any form of physical illness.

A mad man is not wholly responsible for his madness. It is now generally conceded that the human mind being a maelstrom of passions, appetites and desires, mental illness is nothing more than a frailty, for which the victim cannot be held responsible. According to modern concepts, it is attributed at least in part to heredity; but how far this will be generally acceptable is still somewhat uncertain. It is perfectly true that mental deficiency or queerness can only be cured by kindness and humane treatment.

The latest available report on the working of the Madras Government Mental Hospital for 1957, contains an account of how the old methods have been replaced by modern ones. We are told that "the probable main causes" of insanity of the patients admitted to the Mental Hospital during the year covered by the report were "domestic worry, bodily illness, moral stress, physical stress, business worry, and previous attack." A closer examination shows that it was domestic worry that was the most frequent reason both as a "predisposing" and as an "exciting" cause, among men and women. A heavy toll was exacted by the infection of syphilis. While alcohol and opium among toxins caused no patient to lose his or her mental balance, bodily illness and epilepsy were rather destructive. This survey shows clearly enough that "madness" is the consequences of the frantic and unbalanced modern civilization and of infections.

The methods of treatment adopted now at the hospital, we are told, are largely directed towards giving occupational therapy which is known to be a healer, and provision has been made in the Hospital for gardening, weaving, smithy, carpentry, embroidery, mat-making and book-binding among other measures. Continuous rhythmic bodily motion and action is known to produce tranquillity and this principle is well utilized. "Recreation therapy" or more simply games, also can soothe the mind. These remedies are employed in addition to certain forms of medical treatment with insulin and "tranquillizing drugs."

In this context it is just and proper to mention the fact that mental hospitals in Great Britain, and also in some of the States of the U.S.A. are no longer closed dungeons, but have open wards and have become open hospitals. In the late 1940s, there were reports of an open public mental hospital (only one or two wards being still locked) successfully operated at Warlingham Park, near Croydon, in England under the superintendence of Dr. T. P. REES. American psychiatrists who were at first sceptical, paid several visits to this mental hospital, which was completely open in 1950. Dr. REES went to the United States, on invitation, several times to describe the principles and operation of his open hospital to the assembled psychiatrists. World-wide interest was then aroused, following the reports of the American visitors

to the Warlingham Park and other British Mental Hospitals. In 1955 Dr. ROBERT C. HUNT, Deputy Director of the New York State Mental Department was sent to Europe to study the new hospital developments there under a fellowship awarded by W.H.O. at the request of the Surgeon-General of the U.S. Public Health Service. Dr. HUNT, "went abroad deeply sceptical of the open hospital system but returned an enthusiastic convert; and his enthusiasm proved infectious amongst his colleagues." Eighteen mental hospitals which had 83,000 patients in all, soon began to unlock their wards with vigour and these became immensely popular.

The current issue of *World Health* sums up the situation as under:—"The emancipation of mental patients from monotonous soul-deadening confinement in locked wards is going forward and gathers speed. This marks the most heartening development in mental hospital history since the great reforms of Pinel, Tuke and Chirugi in the late eighteenth century."

Let us hope that our mental hospitals also will gradually become open ones, and adopt the methods in vogue in the Warlingham Park at Croydon.

THE PROBLEMS OF TUBERCULOSIS CONTROL

PRESIDING over the Twentieth Annual General Meeting of the Tuberculosis Association of Madras on the 17th August 1959, Sri M. A. MANICKAVELU, the State's Health Minister stressed the need for making early efforts to control the spread of the disease by all suitable means of prevention and prophylaxis. Dr. P. V. BENJAMIN, the Tuberculosis Adviser to the Union Government referred to the several problems relating to tuberculosis control which are well-known but difficult of solution. He stressed the need for a co-ordination of efforts in which the work of the clinics, hospitals and surgical centres must be complementary to one another.

If the hospitals took the patients referred to them by clinics and sent them back to the clinics after necessary treatment for follow-up, it would be possible for the hospitals to cater to a much larger number of patients. The National Anti-tuberculosis programme provides for tuberculosis clinics in every district in the country by the end of the Second Plan period. Expansion of domiciliary services and provision of beds for isolation of infective cases found in crowded and unhygienic homes, would be other measures to combat the menace.

The survey conducted in 1955-57 had shown that about 1.3 per cent of the population—about 5 millions—were suffering from tuberculosis. Out of this two and half to three millions would need special care.

Till now the approach had been to deal with individual patients. While, as before, individual patients would be taken care of, there would be in the new set-up, more emphasis on prevention of the disease in the community and the 'community approach' to the problem would be given a more prominent place.

"The time has now come," said he, "to consider seriously whether tuberculosis clinics should not be under the Public Health Department of the States, instead of under the Medical Department as at present." This is indeed a moot point on which there should be dispassionate discussions and friendly talks between the two departments in every State in order to reach a healthy and sound decision conducive to the welfare of the patients concerned.

One very important announcement made on this occasion by Dr. BENJAMIN was that as not only doctors but also a large number of "ancillary personnel" were needed for a "community approach," the Union Government would be establishing a National Training Centre for Tuberculosis at Bangalore where, in addition to doctors, "non-medical personnel" also would be trained. The W.H.O. and the U.N.I.C.E.F. may be able to provide some of these officials, but obviously a great part of them must be trained in institutions within the country. According to a calculation made three years ago, there were then working in tuberculosis institutions 1,301 doctors, 862 nurses, 155 health visitors, fifteen social workers, 142 X-ray technicians and 2,966 "general personnel." It is easy to see that there is great paucity in almost all these categories, not doctors alone. Tuberculosis, which provides scope for domiciliary treatment, requires a veritable army of people to engage it successfully. The training centre is, therefore, a bare necessity and has not been brought into existence a day too soon.

We learn that in future one of the conditions for central assistance to clinics would be prior appointment of the minimum staff needed for these clinics and their being trained at the National Training Centre at Bangalore.

What Dr. BENJAMIN described as the value of the "community approach" must appeal to all thinking persons. Besides the individual attention given to the patients, emphasis should be placed on the prevention of disease in the community. It is here that health workers can and should play a vital role. We referred in one of our recent editorials to the finding of the recent tuberculosis survey, which stated that the disease is no longer confined to cities and towns but had also appreciably affected rural areas where over 75 per cent of the people of India live. Social hygiene is a neglected phase of healthy living even in most of our cities and towns, and does not so much as exist in the villages where

however the absence of overcrowding and the presence in abundance of fresh air had in the past accounted for their comparative freedom from tuberculosis invasion on a large scale. The spread of the disease into rural areas mentioned in the Survey Report has been caused to some extent by the dearth of facilities for early treatment in clinics and hospitals. Only one bed for every 112 patients is available in hospitals. Obviously those who are not treated go and spread it in the rural areas. 'Community approach' alone would therefore, be able to counter this growing menace to health. For this purpose, a much larger number of ancillary personnel is necessary to teach the masses the virtues of healthy living, and as already stated, the Bangalore centre will certainly help to fill some part of these requirements.

The problem of tuberculosis control is thus so vast that it can be solved only by the whole hearted and enthusiastic attention of all bodies official and non-official and as RAJKUMARI AMRIT KAUR pointed out in April last the Central and State Governments should not "confine their help to institutions under their complete control, leaving non-official organizations to work out their own salvation."

DENTAL HEALTH

(Discussions at the Dental Health Seminar)

It was in the fitness of things that considerable stress on the study of gum disease was urged at the Dental Health Seminar, which met earlier this year in Adelaide, Australia, when forty-four participants from 21 countries (India being one among them) discussed the problems of dental health in their respective countries. The methods of prevention and control of dental disease particularly periodontal disease, was the first problem discussed at some length. This problem was found to be widely divergent in the twenty-one countries. Dental caries were very widely prevalent in most of the 21 countries and the main efforts of the dental health services were concentrated on its prevention and treatment. "Caries control should start early in childhood and continue up to the age of 18 or 20," was the conclusion reached.

In many of the countries belonging to South East Asia the major dental health problem is disease of the gum (pyorrhoea). This may partly be due to the fact that dental caries are not so prevalent, but the main reason is probably that general malnutrition, which is often found in this area, makes the supporting tissues of the teeth less resistant to infection. Besides that, some races seem to be more susceptible to gum diseases than others; this seems to be the case in India and Pakistan where loss of teeth due to pyorrhoea is common, even early in life.

Although the development of gum disease decidedly is influenced by nutrition, vitamin deficiencies, hormonal disturbances and racial factors there will be no disease unless a local cause is involved.

There was unanimous agreement that the main local cause of gum disease is bacterial deposits which are lodged on the teeth so that they will get in direct contact with the gum. The white and seemingly harmless deposit, which is retained on the teeth above the gum margin consists mainly of living micro-organisms and these will sooner or later grow below it. During their growth along the root they will destroy the tissues supporting the tooth, which in a short time will become loose and fall out.

There has been during recent years, increasing interest in Dental Problems and Dental Health, in almost all countries of the World and India has been no exception. Inaugurating the Fourth All India Annual Conference of Dentists' Association at New Delhi on 26th April last, Sri D. P. KARMARKAR, Union Minister of Health suggested the introduction of mobile dental vans in the country with a view to rendering dental service to large sections of the people. He said: "As dental science had not made the required progress in India, it was necessary to extend its sphere. Considering the acute shortage of dental personnel and the rather heavy cost of dental equipment, mobile dental services could be used to reach a much larger section of the population than would be possible otherwise." He asked all those engaged in the dental profession to lay emphasis on the preventive rather than the curative side of dentistry.

Although the number of dental colleges in India had increased three-fold during the last 10 years, "it would be idle to claim," said the Health Minister, "that more than a fraction of what is required has been achieved."

India has earned a reputation of being a nation with healthier teeth than many other countries, more advanced in various other respects. But unfortunately with the changing pattern of life and the altered tempo of living and the extensive use of highly processed and devitaminized foods, there has been a tendency towards rapid deterioration in dental health—manifest largely in the younger generation. Unless we guard against this tendency by active propaganda for dental care, we are likely to suffer badly in the years to come, from dental diseases of various kinds. Dental care and provision for periodical check-up of school children followed by suitable prompt treatment where indicated should be made an integral part of our school health services. The Dental Health Seminar has drawn pointed attention to these requirements and we hope that they will receive due consideration at the hands of Governments and non-official health organizations.

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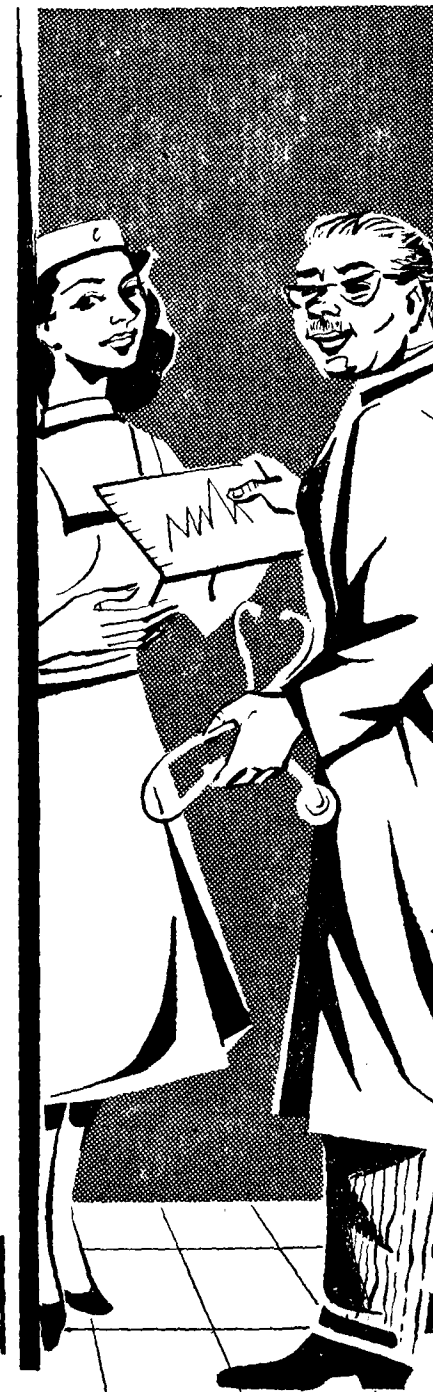
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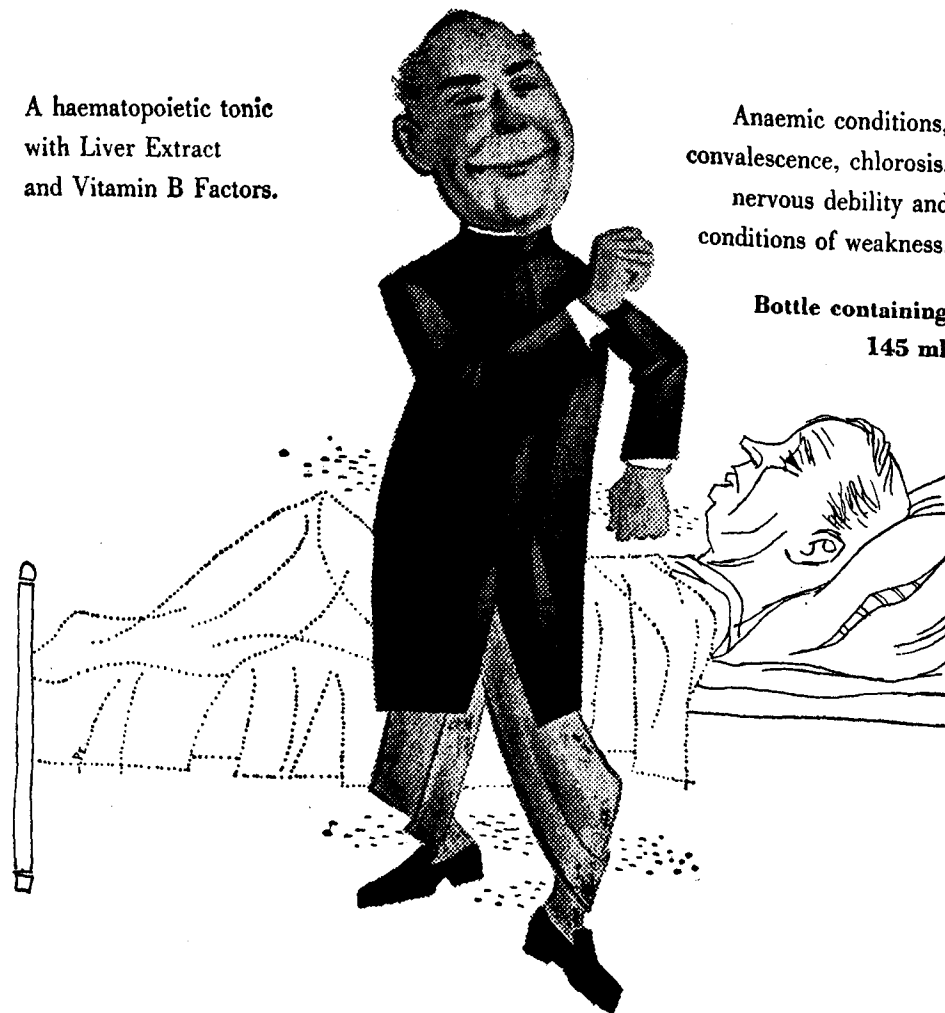
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Special Article

THE SECOND NATIONAL ADVISORY COUNCIL FOR THE EDUCATION OF THE HANDICAPPED IN INDIA

C. A. AMESUR, M.S. (Lond.),

(Member, The National Advisory Council for the Education of the
Handicapped in India. Chairman, Sub-Group on Welfare
of the Handicapped, the Aged and the Infirm of Plan-
ning Commission, for III Five Year Plan and a
Member of its Central Welfare Group, Bombay)

FOR the past few years it has been the earnest endeavour of the Union Education Ministry to find ways and means to quicken the pace of rehabilitation of the handicapped people. With this object in view, a 'Committee on Deafness' was appointed in 1952. The terms of reference to this Committee were to assess the causes and extent of deafness in India and to recommend measures for the prevention of deafness and for the educational rehabilitation of the deaf. The Committee met only once—on the 12th and 13th January 1955 and submitted its recommendations.

Thereafter, Shri Lal Advani of the Union Ministry of Education—himself a handicapped person visited the United Kingdom, and surveyed the Blind Welfare in that country. He embodied his impressions in a booklet 'Blind Welfare in the United Kingdom,' published by the Union Ministry in 1954. He put forward many valuable suggestions, and some of which the First Advisory Council have recommended for implementation in our Second National Five Year Plan and some more in the Third Plan.

The Union Ministry of Education, at the Seminar for the Welfare of the Blind at Mussoorie in April 1955, submitted a long list of resolutions. This was followed by another seminar, this time for the benefit of the deaf also at Mussoorie, in September 1955. The invitees included representatives the staff of the Ministry of Education, and teachers and social workers in the cause of the deaf; I was the only representative of the medical profession. Twelve draft resolutions drawn up by me were all accepted; these resolutions and my speech at the Deaf Seminar were published in the December 1955 issue of the *Indian Journal of Otolaryngology*. The Seminar for the deaf submitted recommendations covering 22 type-written pages.

The First Council met in October 1955 and again in January 1957 at Delhi; its standing committee met several times and did useful work. The first council and its Standing Committee suggested that the handicapped not only needed medical care, but education, vocational training, and a placement service. Dr. Shrimali stressed that it would be most desirable to integrate all these three services at a few centres in our country. This

being a very expensive task, he counselled very close co-operation between the State and the voluntary agencies.

Dr. C. A. Amesur and Dr. C. Satyanarayana's exposition on the Audiology centre (*I.J.O.*, Dec. 1955) was accepted by the First Council (1955). Thus the integration-suggestion by the Union Education Minister appears feasible. The newly formed Second Council met in September 1958 at Mussoorie with a seventeen item agenda; this meeting was addressed by Dr. Shrimali, the Union Minister of Education, who stated "No State can have a healthy economy if a large group like the physically and mentally handicapped within it remains unproductive."

The reconstituted Second National Advisory Council passed a resolution to implement the establishment of the Audiology Centre in the III Five Year Plan; and elected Dr. Amesur to its Standing Committee, which met in October 1958 and passed a resolution regarding the establishment of the National centre for the Deaf. This centre was to consist of (1) a Training Centre for the Adult Deaf, and (2) the Audiology centre. The first one is being implemented in II Plan period, while the second is left over for the III Plan.

At St. Louis, U.S.A. at the International Conference on Audiology, Amesur and Satyanarayana read a paper on the proposed "Audiology Centre in the National Centre for the Deaf in India" (*The Laryngoscope*, March 1958, pages 675-676). As stated at the outset it has been the earnest endeavour of the Union Government to find ways and means to quicken the pace of rehabilitation of the handicapped persons. The authors insisted, as at the Deaf Seminar, that a room in this centre be reserved for the rehabilitation of laryngectomized persons (those who have lost their voice box and speech). (*I.J.O.*, Dec. 1955, p. 131).

Prof. H. W. Ewertsen stated that in Denmark every Danish inhabitant with hearing troubles of a chronic character, is allowed free admission to the rehabilitation programme, including examination by an otologist, acoustic evaluation of pure and speech audiometry, fitting of hearing aids, vocational guidance, teaching and follow-up.

The capricious problem in the matter of fitting hearing aids is training in the use of the apparatus. It takes them at least one month's perseverance to adapt themselves to its secondary noises. All are referred to classes of up to four hours' instruction and more than 50% are trained in lip-reading, and hearing training and speech correction. Difficult cases are admitted to the College for the Hard of Hearing at Fredericia, a rather unique institution unknown in most other countries. The training of children is supervised by home travelling teachers.

As compared with all other medical cases the audiological rehabilitation of the hard-of-hearing person must be considered

an inexpensive and efficient measure, which not only often totally changes the entire outlook on life of the person, but also of his dejected relatives.

The Planning Commission of the Union Government has since appointed a Working Group of Social Welfare for the III Five Year Plan, the President of which is Smt. Durgabai Deshmukh. The National Advisory Council for the Education of the Handicapped is represented by me; and I have been elected Chairman of the above sub-group.

An International Committee on the problems of the deaf child has been organized by the W.H.O. and UNESCO, in Geneva. There was general agreement on certain points:—

(1) That the aim of all special education for children suffering from impaired hearing to any degree, should be rehabilitative, and should fit as many children as possible for attendance at ordinary schools, at some stage during their school careers, and all deaf children for living with ordinary people.

(2) That the best period of life during which such children can learn to talk, is from the ages of one to five years.

(3) That a majority of children, who have hitherto been described as deaf, or partially deaf, can benefit from audiological treatment and that most of them can to a very considerable extent, rely on hearing with the help of vision.

(4) That, in the training of teachers for the deaf, it should be ensured that they gain experience and study the development of ordinary children; that they should become familiar with every provision made in other countries for the educational training and treatment of such children (including work in audiological clinics, nursery schools for the deaf, where they exist and schools for the partially deaf).

It was reported from the International Labour Organization, that deaf people have been found to follow a very wide range of occupations. Therefore, they agree that as far as possible, ex-pupils of the schools for the deaf should be helped to acquire training in occupations, along with ordinary people and not in separate, segregated institutions.

There is almost universal agreement among authorities responsible for education, that special educational treatment for children with impaired hearing and for other handicapped children, should be provided, as soon as possible, with a 100% support from Governments because dependence on charitable support is unsatisfactory and should therefore, as far as possible be avoided.

Prof. and Mrs. Ewing agree with us that in all such work the best beginning would be in the establishment of an audiological clinic with which a model school for young children with impaired hearing is associated. (*I.J.O.*, Dec. 1955, pages 142-143). Professor Sir Alexander Ewing, who is an authority on Education and Welfare of the Deaf in U.K. in a personal communication to me dated the 16th June, 1959 has stated:—

"I entirely agree that schooling should be available for deaf children from the age of three years and that it should be preceded wherever it is possible by parent-guidance given through audiology clinics, which can be attached either to hospitals or to public health departments."

We have a mounting volume of evidence that money is much better spent when helping young deaf children to learn to use hearing aids, to understand speech and to talk before the age of five years, than when it is paid for the education of deaf children who have had no training or education before the age of six years and have, therefore, become habituated to wordlessness and to ignoring such sounds as they can hear.

TABLE I

Schemes for the Handicapped : Proposal to be included by the Union Ministry of Education in the Third Five Year Plan

Name of the scheme	Target	Provision in lakhs		Remarks
		2nd Plan	3rd Plan	
Model School for Blind children	(a) 25 in Kindergarten (b) 100 in primary (c) 25 training teachers	6	18.50	At present school is in a hired building. New building will cost Rs. 11 lakhs
Sheltered workshop at D. Dun	75 men 25 women	7	20	Beginning was made in July 1954. New building
Sheltered workshop at Delhi	100 children	-	17	Although it is agreed that emphasis should be gradually shifted from sheltered to open occupations. The sheltered industry has to play its part in the beginning
Workshop for the manufacture of Braille appliances	—	3	7.50	Building and help from U.N. Technical Assistance Administration
Braille library	25,000	—	12	This was in the Second Plan, but on account of overall cut in the Budget, had to be postponed to the III
Physiotherapy school for blind	20	—	15	School as part of Victoria Memorial School for Blind, Bombay
National centre for the deaf.	100	—	17.50	
(a) model school				
(b) Training centre for adult deaf	100	8	10	Trades like tailoring, carpentry, cabinet making, printing, book-binding, commercial painting, machine work, electroplating etc.
(c) Model audiological centre	—	—	10	
Model school for orthopaedically handicapped children	100	2.75	12	In a hired building in II Plan in 1959-61

Note :—Several other schemes of Scholarship etc. are also included.

Parents, brothers and sisters of the deaf child show great anxiety about the abnormal member. For fear of being teased, the relations even ignore taking the child out frequently; and thus the early useful years for rehabilitation are lost. It will be wise therefore, to give him a square deal by giving auditory training between the ages of 1 and 3; so the necessity of an audiological centre to be fully equipped and run by the centre. (See Table I, p. 716).

On the termination of the first Standing Committee, a second enlarged Committee of nine members was constituted to advise the Government of India on the speedy implementation of the various schemes. The Ex-officio Chairman of this Committee was Shri R. P. Naik and Dr. R. H. Bhan was the Member Secretary. The seven other members were (1) Dr. C. A. Amesur, (2) Dr. C. M. Bhatia, (3) Shri U. A. Basurkar (*Since deceased*), (4) Dr. P. K. Doraiswamy, (5) Dr. D. Ganguly, (6) Smt. Evelyn Khan, (7) Smt. Kamala V. Nimbkar.

Shri U. A. Basurkar, the most active member of the Council since its inception who presided over the Deaf Seminar in 1955 and formulated a valuable detailed scheme for the establishment of a combined workshop for the handicapped, did not unfortunately live to continue to give his valuable and useful service and help. His scheme was approved in principle by the Council as a pilot project and referred to a Joint Sub-committee of representatives of the Education, Health and Labour Ministries and the Planning Commission.

The Council endorsed the suggestion of the Standing Committee that in exceptional cases educational qualifications might be relaxed, but in no case should the standards of performance be relaxed in those handicapped persons seeking employment in the Central services; it further recommended that Regional Committees should be appointed to frame Contracted Braille Codes for the various regional languages; The Government of India was requested to consider the desirability of asking the Central Social Welfare Board to give large capital grants to voluntary institutions willing to start hostels for working handicapped persons.

The Council agreed with the Ad Hoc Committee's detailed report on the proposal Technical Training Centre for the Adult Deaf Central P.W.D.'s estimate for such a building is Rs. 7,83,000/-. It was also suggested that the Ministry of Health be requested to issue instructions to all Local Bodies making it compulsory for all dais and midwives to notify all cases of congenital deformities.

Our grateful thanks are due to the Education Ministry and to Shrilal Advani in particular, for his valuable help and co-operation in our labours.

DIAGNOSIS OF PATENT DUCTUS ARTERIOSUS

Three cases are described to show that conventional cardiac catheterization is not accurate enough for the preoperative diagnosis of patent ductus, even if the catheter is successfully advanced in the aorta. Aorta-pulmonary septal defects can only be excluded with certainty by selective angiocardiology with dye injection into the duct or by retrograde aortography.—(*Kreisl-Forsch, Berlin, 48 : 1959, via Ger. Med. Monthly, June '59*).

NEWS-LETTER FROM THE UNITED STATES

WHILE major research efforts of the world are directed toward finding the causes of many still baffling diseases, other research is constantly being conducted to improve upon old techniques or theories. A new technique for treating Meniere's disease was described by R. P. Ariagno before the annual meeting of the Illinois State Medical Society in Chicago. Up to this time, medical management was not always satisfactory and since surgical treatment meant destruction of the labyrinth, its use was limited to patients with the disease in one ear only and in those whose hearing was below the practical speech level. The new technique uses ultrasonic waves produced by an ultrasonic emitter with a frequency of about 800,000 cycles per second. The patient is irradiated under local anaesthesia. Results of the procedure suggest that vertigo can be controlled, tinnitus improved, and hearing level maintained. The procedure, however, was not used until medical management proved ineffective. A new approach towards the treatment of strokes has been described by E. S. Crawford and co-workers before the Scientific Sessions of the American Heart Association in San Francisco. It is commonly believed that strokes always originate within the brain, but this is denied by Dr. Crawford who states that many strokes are caused by clots blocking an artery of the neck or upper torso. If this occurs, it is possible to use surgical procedures similar to those used for correcting circulatory deficiencies in the arms, legs or anywhere else in the body. Dr. Crawford's theory is backed up by 67 operations performed on 50 patients, who subsequently obtained relief from such problems as paralysis, speech loss, visual disturbances, convulsions, and headache. Patients who had had small recurrent attacks and patients who were treated soon after being diagnosed got best results from surgical therapy.

Most acute respiratory diseases that affect children are well-known, but acute epiglottitis is a condition which is relatively rare and which has a dramatic clinical course, according to the *British Medical Journal* (2: 500, 1958). Early recognition of the disease and prompt institution of treatment is mandatory. The infection, caused by *H. influenzae* Type B, occurs in children of all ages, but particularly in those aged 4 to 5 years. Onset of illness is sudden with severe sore throat, fever, and respiratory difficulty. Shock exists out of proportion to the short duration of difficulty in breathing and the disease progresses rapidly. The most significant physical finding is extreme swelling of the epiglottis. On deep depression of the tongue, the epiglottis is fiery red and resembles a cherry. Although the most effective treatment is tracheotomy, this is not always essential. Supportive and antibiotic therapy help. The antibiotic of choice is *Chloromycetin* given in doses of 50-100 mg. per kilogram of body weight.

A heart monitor that can be attached to a patient's arm while he is undergoing surgery warns the surgeon and anaesthesiologist when the patient's heart ceases to function properly. The monitor, described by W. F. Veling in the October 11, 1958 issue of the *Journal of the American Medical Association*: 168: 753, has many advantages over the standard larger machines. It weighs only six ounces and is a self-contained unit operating on batteries. It emits a "beep" which eliminates the necessity of constant watching required on older machines. Dr. Veling foresees the possible routine use of this monitor on critically ill patients, especially those with heart disease.

Cancer of the colon could probably be cured surgically in about 90 per cent of patients if precancerous conditions (polyps) were detected and treated, according to B. D. Braun reporting in the April issue of *The American Journal of Roentgenology, Radium Therapy and Nuclear Medicine*, (81: 661, 1959).

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The method of early detection advocated by Dr. Braun involves two barium enemas administered in immediate succession. Of 393 hospitalized patients examined roentgenographically, only 29 per cent were considered to have had satisfactory examination after one barium enema whereas 63 per cent were considered satisfactory after two.

A weight-reduction programme lasting six months was carried out on 48 women who were excessively overweight by R. C. MacIntosh and co-workers who report in the March-April issue of the *American Journal of Clinical Nutrition* (7: 132, 1959). Only 25 women successfully completed the programme which included dietary evaluation and education, medical supervision with administration of an anorexigenic drug, Obolip, and in some instances, physical exercise. A few patients with oedema were given Neohydrin. Most of the total weight loss occurred during the first 12 weeks and it was during this period that Obolip was considered to be most effective. Of the 48 patients enrolled in the programme, 85 per cent had had tendency toward overweight since childhood.

POLIO DIFFERS WITH THE SEXES

Does the incidence and course of polio differ with the sexes? The disease appears to afflict males more often than females, particularly in the under twenty and the over thirty-five age groups.

However, the risk of polio is greater for women during the child-bearing years. In pregnant women, it strikes most frequently in the second trimester, where more than half the cases occur. It is more severe when it occurs in the third trimester, with about three quarters of its victims contracting the paralytic form.

There is evidence that polio tends to occur in the first trimester in women carrying a male foetus and in the third trimester if the foetus is female. Infants of mothers who have had polio early in pregnancy are not as well developed as other babies and weigh less at birth.

The disease is usually less severe among women, although among children up to fifteen years of age, quadriplegia occurs more frequently in girls than in boys. In young adults (persons sixteen to thirty-nine years of age), men account for about 54 per cent of quadriplegia cases, while cases in which paralysis develops in only one leg occur mostly among women (72.7 per cent).—(*Patterns of Disease*, via *New York State J. Med.*, Feb. 15, 1959).

DECUBITUS ULCERS IN PARAPLEGICS

Lesions of this type fail to heal because of poor nutrition of the patient and because of poor circulation in and around the ulcer itself. Furthermore, most of the ulcers are complicated by chronic osteomyelitis or chronic osteitis of the projecting bone over which the breakdown always occurs. Hence a cure can be obtained only after the general nutrition of the patient is corrected by a high vitamin, high caloric, and high protein diet, adequate transfusions of whole blood, and antibiotic therapy. All projecting bony points must be removed along with the chronic ulcer itself and the resulting surgical defect covered with a local rotation flap containing an adequate subcutaneous fat pad. The donor site from which the flap is taken is then covered with a split-thickness skin-graft. Once the wound is healed, it must be remembered that the patient is still a paraplegic and consequently must avoid prolonged pressure on these points in order to prevent future breakdown.—(Quoted in *Current Medical Digest*, April 1959).

GLEANINGS FROM THE MEDICAL PRESS

OBSTETRICS & GYNÆCOLOGY

Radiation menopause.—(*Strahlentherapie*, 107: 1958, 520, via *German Med. Monthly*, June 1959).

The development of radiotherapeutic sterilization is outlined. X-rays are preferable to intrauterine radium because of the lower incidence of complications. The ovarian deficiency symptoms are milder after radiation than after ovariectomy, and milder after radium than X-rays. A follow-up study was undertaken of 170 women aged from 35 to 56 years who had been sterilized by X-rays through 3-4 fields with a total dose of 400-500 r. Lasting effects were obtained in 157 patients (92.4%). Total failures amounted to 4.1% and partial failures to 3.5%. Slight or moderate deficiency symptoms developed in 35.3% and 44.7%.

Hyperemesis gravidarum as a cause of congenital malformations.—(*Zbl. Gynak.*, 80: 1958, 1785, via *German Med. Monthly*, June 1959).

98 women who suffered from hyperemesis gravidarum gave birth to 6 malformed children (one anencephalus, 2 cases of congenital heart disease, one case each of cleft palate, spina bifida and multiple hæmangiomas). The incidence of malformations was 6.1% against an average of 1 to 2%. A causal relationship is suggested; it may be due to glycogen depletion which causes a reduction or inhibition of oxidative processes and interferes with normal development. Early treatment of hyperemesis gravidarum is definitely indicated.

Dihydroergotamine in the treatment of postoperative and postpartum retention of urine.—(*Zbl. Gynak.*, 80: 1958, 1718, via *Ger. Med. Monthly*, June 1959).

38 patients with post-operative and 12 with post-partum retention of urine were treated with dihydroergotamine intramuscularly in doses of 1 cc.

daily and orally in doses of 20 drops twice a day. In 42 cases normal micturition returned in 12 to 24 hours. The failures were attributable to operative trauma, and in 2 cases to psychogenic spasm of the sphincter. The average duration of retention in the unsuccessful cases was 3 to 4 days. The results confirm the view that retention can be successfully combated by reducing sympathetic tone.

Pregnancy following isodisplantation of endometrial tissue.—(*Zbl. Gynak.*, Austria, 80: 1958, 1699, via *Ger. Med. Monthly*, June 1959).

In a 28-year old multipara the uterine cavity had become completely obliterated as the result of abortion and curettage. Hormone therapy was repeatedly tried but was obviously doomed to failure, although the ovarian cycle with bimodal basal temperature curves was normal. After amenorrhoea had lasted for one year vaginal hysterotomy was performed; a new cavity was created and filled with a Fehling glass mould. The cavity was irrigated daily with dilute solutions of penicillin and hydrogen peroxide for 10 days. It was then lined with endometrium in the proliferative phase obtained from the excised uterus of a 43-year old woman belonging to the same blood group. The implant was kept in position by a slightly shorter glass mould which was left for 7 days. 4 weeks after transplantation there was a menstrual flow lasting for 4 days. She conceived after the second menstruation, but the pregnancy ended in premature birth (33 cm; 700 gm.). Manual removal of the placenta was necessary.

Prednisone in the treatment of chronic inflammatory pelvic diseases.—(*Zbl. Gynak.*, 80: 1958, 1655, via *Ger. Med. Monthly*, June 1959).

150 patients with chronic inflammatory pelvic disease, e.g., chronic

salpingitis and parametritis, received 5 mg. of prednisone by mouth twice daily for 2 weeks. Half the patients had a further period of 10-14 days on 5 mg. once daily. Physical therapy was dispensed with in these patients. In 40 out of 120 cases of unilateral or bilateral salpingitis the masses ceased to be palpable, and in 60 they regressed. In the rest prednisone was a failure, but in 6 of these this was due to a wrong diagnosis (ovarian cyst, endometriosis). The glucocorticosteroids never caused exacerbation of the inflammatory process. Gastric pain, complained of by only 9 of the 150 patients, could be prevented by taking the tablets immediately after a meal or with an alkali.

Cytologic detection of uterine cancer.—(*New York State J. Med.*, May 15, 1959).

The cytologic examination of cellular material from the cervix has been proved to be an effective method in this detection of cancer of the uterus. By means of this method cancer can be detected in its preclinical form and at an earlier age; consequently, it offers greater opportunity for complete excision of the lesion. It also calls attention to atypical nonmalignant lesions and makes the study of the progress of these lesions possible. In addition, it makes available a procedure for following post-irradiated malignant lesions.

The collection of cervical material is a simple procedure which can be performed by any practitioner of medicine in his office. If adopted as part of a pelvic examination, it could make every doctor's office a cancer detection centre. The absence of tumour cells in a properly collected and well-preserved specimen is a very significant and worth-while health finding.

Technique.—Patients should be instructed not to douche or take a tub-bath for at least forty-eight hours before examination. Specimens should be collected before manual examination is done. The speculum should be inserted without any lubricant. Two cervical specimens should be submitted. The first should consist of the

cervical plug and may be collected with a swab inserted into the cervical canal. The surface of the cervix should be gently wiped to remove any excessive mucus and blood. The second specimen should be collected with the wooden spatula by inserting the smaller end into the cervical canal and rotating. When the cervix is eroded or ulcerated, the specimen should be collected from the border of the lesion with the broader end of the spatula. This should provide a specimen containing epithelium rather than blood.

Making the slide preparations.—Material should be spread gently uniformly, and rapidly to prevent drying, injury to cell clusters, and excessive thickness of the film preparation. The spatula is held so that the handle makes a 45-degree angle with the plane of the slide. With a smooth, sweeping motion, a large letter "U" is made by pushing the top of the spatula down near the edge, circling it toward the opposite side, and drawing it back along the far side. Thus, secretion and cells are transferred to the glass slide. Excessive to-and-fro motion should be avoided since the cell picture may be impaired by breaking up cell clusters.

Fixing the slide preparations.—It is extremely important that the material on the slide be fixed immediately before drying has occurred; otherwise there is a loss of cell definition. Preparations should be fixed in equal parts of ether and 95% alcohol for at least twenty minutes. Before the fixing solution has dried, one to two drops of glycerin should be placed on the slide, and the slide should be covered immediately with another clean glass slide, for microscopic examination.

Reporting of results.—Reporting of laboratory results should be factual. The findings may be reported in one of four ways, provided the specimen is satisfactory. (1) Tumour cells consistent with a malignant tumour of the cervix or endometrium; (2) abnormal cells suggestive of a malignant tumour of the uterus; (3) atypical cells probably associated with an inflammatory lesion; and (4) no abnormal cells.

Hormones in obstetrics and gynecology.
—(*Texas reports on Biology and Medicine*, 17: 2, Summer, 1959).

L. C. Powell, Jr. and Garth L. Jarvis of the Department of Obstetrics and Gynecology of the Texas University, state that the intelligent use of hormones is very difficult, unless one has a basic understanding of the physiology of menstruation and reproduction and uses this knowledge in hormonal therapy. Since hormonal treatment is replacement therapy, there should be sound basis by either adequate diagnostic criteria and studies or astute clinical judgement, for the use of hormones. The hormone should either replace the product of a hypofunctioning organ or inhibit the secretion of an overactive gland. One must remember the action of the various hormones before using these medications.

In the normal physiology of menstruation, we know there is a delicate balance and interplay of the hormones secreted by the pituitary, ovary, thyroid, and adrenal.

Menstrual disorders are among the most common symptoms seen by the obstetrician-gynecologist. Ovarian function, due to either functional or anatomic obliteration, as seen in the menopausal syndrome, is characterized by an ovary that ceases to respond to stimulation. This removes the normal brake on the pituitary and causes an excess secretion of FSH and the ovary is unable to secrete oestrogen and progesterone. Thus, menstruation stops and the uterus atrophies.

In the woman with the uterus intact, there is a continuous threat of bleeding from a hyperplastic endometrium with continued oestrogenic therapy. Androgen or progesterone in sufficient dosage tends to counteract this bleeding effect through end organ response. Androgen or progesterone also increases the vasomotor response level. Thus combinations of oestrogen with androgen or progesterone are effective in long term therapy. Dosage, in general, is individualized and the effects of therapy can be judged by the subjective relief of hot flashes.

The greatest abuse of hormonal therapy in the menopause, which we see far too often, is hormonal therapy in patients with irregular bleeding without proper investigation as to cause. The physician, who gives hormones to the menopausal patient without regard to her intense need for reassurance and emotional support so necessary in handling the emotionally insecure patient, is missing perhaps the most important facet of the menopausal syndrome.

Amenorrhoea always must be thought of as a symptom and not a diagnosis. Amenorrhoea, due to endocrine disturbances has the basic abnormality of anovulation and failure of progesterone secretion. However, the cause of amenorrhoea should be searched for, as hypofunction of the thyroid (borderline or real) and the adrenal gland may be the etiologic factor in this symptom complex and replacement therapy should be with thyroid or corticosteroids. This may be corrective without resorting to the use of female sex hormones.

The uterus may be small if there is persistent anovulation, with the unresponsive uterus giving a negative progesterone, bleeding test and little or no endometrium on biopsy.

The principle of treatment in the functional type should be to correct the anovulation if possible. Psychotherapy of the superficial ventilatory type may be corrective over the long term but can be aided markedly by cyclic therapy. Single doses of progesterone, 25 to 50 mg. at 28 day intervals or 10 to 50 mg. for three to five days is usually sufficient.

Dysfunctional uterine bleeding or more commonly called functional uterine bleeding is another symptom that may be due to disturbed hormonal secretions. This condition occurs most frequently at the menarche or the menopause. The hormonal picture is usually like that of anovulation, or poor ovulation, with bleeding from a poor or non-secretory endometrium.

The key diagnostic procedure is uterine curettage properly timed to be done on the first day of bleeding or the

day before, always remembering the possibility of aborting a pregnant patient. Hormonal therapy can be aimed at this same effect (the so-called medical curettage) by giving the patient 50 mg. of progesterone, thus converting the endometrium to secretory and causing complete shedding of the endometrium. It is wise to warn the patient of possible heavier bleeding. Frequently one treatment is all that is necessary but if there is no bleeding in 30 days, repeat the progesterone, then if there is no bleeding in four to five days, the patient may either be pregnant, have insufficient stimulation by oestrogen, or will have had spontaneous ovulation and uterine bleeding will follow within two weeks. If the bleeding response is not sufficient or absent, a full cycle with oestrogen and progesterone is necessary.

Minor degrees of thyroid and to a lesser extent adrenal hypofunction and hyperfunction may also mimic the picture of dysfunctional uterine bleeding and in these patients proper therapy would be to replace or suppress the glandular function with the proper hormone or drug.

Oestrogens have certain metabolic effects, one of which is that of the retention of water and electrolytes (sodium, potassium and chloride), therefore, its use in the treatment of such conditions as premenstrual oedema, toxæmia of pregnancy and oedema in certain types of arthritis is ineffectual and perhaps might be harmful.

Massive oestrogen therapy also has a place in the treatment of endometriosis, even though this may be symptomatic therapy rather than curative.

Topical oestrogens are invaluable in senile, atrophic, irradiation and prepuberal types of vaginitis because of the ability of the oestrogens to thicken and cause cornification of the vaginal mucosa.

Use of oestrogens in the treatment of threatened and habitual abortion is probably worthless.

Since progesterone effect in general depends on prior oestrogen effect, it should be obvious that progesterone

administration to treat an atrophic endometrium is valueless. Progesterone is of no value in threatened or habitual abortion unless laboratory studies have shown a decreasing level and then only massive doses (100 mg. each day and higher) have been of value.

Amniotomy with semi-sharp hook.—(*Northwest Medicine*, May 1959).

Drs. Albert F. Lee, M.D. and Walter S. Keifer, M.D. of Seattle, Washington, have developed a membrane rupturing instrument which is a hook with a recessed, semi-sharp point. The advantage of this simple instrument is that one can easily, and with little discomfort, rupture the amniotic sac.

The instrument.—The instrument is made of stainless steel. It measures 9 inches in length. The operative end is a loop with a diameter of about $\frac{3}{8}$ inch, with the open end of the loop displaced about $\frac{1}{4}$ inch posteriorly from the shaft. The point is tapered away from the operative side with the sharp edge protected by the loop and also by its posterior displacement. By this feature, only bulging tissue will fall into the semi-sharp edge. The handle is a holding loop turned 180 degrees from the operative loop. This serves as a guide to the position of the loop cutting end.

Method of use.—The instrument may be used to rupture membranes either by vaginal or rectal palpation and guidance.

After the degree of cervical dilatation, the cephalic position, the station and the condition of the membranes are determined, the perineum is cleansed with pHisoHex. By vagina, examination is done and the hook is guided, with the loop flattened against the finger, to the membrane sac. The instrument is then rotated to 90 degrees, a cutting position, and withdrawn slightly to entrap and rupture the amniotic sac. The instrument is again flattened against the finger and withdrawn.

By rectum, the same technique is observed except that the guiding finger is in the rectum.

DISCUSSION:—The recessed hook, which is unique in rupturing the bulging membranes, has the effect of allowing the amniotic sac, rather than the walls of the vagina, the cervix or the foetal scalp, to fall into the lancing point. The membranes can be ruptured eccentrically for slow amniotic fluid drainage, if this is desired. This is done by sliding the hook into the cervical os before traction. Central rupture is achieved by following the instructions given above. There is no need for clamping, twisting or stabbing to achieve rupture.

To those of us who have used Kelly clamps, Allis forceps, finger lancets, thimbles, uterine dressing forceps, sharp hooks, bent horse blanket pins, tenaculums, metal catheters and other devices, this simple yet effective instrument is welcome. We have had no vaginal, cervical, foetal or other injury from this instrument and we recommend it as a simple, safe and sensible device for amniotomy.

We have used it in over 200 sac ruptures without untoward incident. The patient experiences less pain and patient discomfort than with membrane rupture by clamp or other means.

OTOLARYNGOLOGY

New operation devised for correcting "lop" ears.—(*New York State J. Med.*, June 15, 1959).

The only way an "outstanding ear" can be made less prominent is by taking the spring out of the cartilage that provides its skeleton, according to Dr. Edgar M. Holmes a Boston ear, nose, and throat specialist. Cartilage is "nearly a perfect spring in that it may be bent for long periods of time, but once the force which holds it is released it will spring back to its former shape."

Any procedure to alter the shape of a "lop" ear must first "remove the temper of the cartilage before it will remain in its new position," he said. A number of procedures have been used, but most of them present such

varying difficulties as scars or ugly creases in the skin of the back of the ear. Dr. Holmes, however, has developed a new surgical procedure that seems to work better than the older methods. He described it in the April, 1959 *American Archives of Otolaryngology*.

In the operation, the skin on the back of the ear is folded back, exposing the cartilage. A row of small cuts from top to bottom is made in the part of the ear nearest the head. Following this more rows of tiny cuts are made, overlapping each other, until the entire area to be bent is covered. This gives the appearance of fish scales or shingles on the roof, and also breaks the spring of the flat surface which is to be bent. When the spring has been sufficiently broken, the ear will remain nearly in its new position without holding it. When the ear is in its correct position, there is a small amount of excess skin, which is removed before the skin is closed. A pressure dressing is applied and left in place for a week, when the stitches are removed.

The new technique permits the bending of a malformed ear to a more normal position without creating secondary undesirable deformities or irregularities.

Use of polyethylene prostheses in mobilization of stapes surgery.—(*New York State J. Med.*, June 1, 1959).

The success of the mobilization of the stapes operation used in otosclerotic deafness depends on the restoration of sound conduction via the ossicular chain to the cochlea. The conductive impairment of sound in otosclerosis is due to ankylosis of the stapes. Whether it can be mobilized will depend on its degree of fixation and its anatomic variation.

In approximately 25% of cases it is not possible to mobilize the stapes where both crura and the footplate remain intact. The primary cause of failure has been that the delicate crura fracture before the locked footplate is loosened within the oval window.

In an effort to establish a procedure for these cases of crural fracture that would be predictable and have some reliability and permanence, the use of a polyethylene prosthesis was adapted. It is used when the crura of the stapes fracture and there is no hearing improvement.

It is indicated when the crura break, whether or not the footplate has been loosened. The technique can be used only after the footplate is mobilized if: (1) the oval window well is wide open, (2) the adjacent anatomy has not encroached on the footplate, (3) the footplate is completely visualized, and (4) the angle between the lenticular process of the incus and the footplate is correct.

The polyethylene tube prosthesis technique was used in a series of 80 patients. Seventy-eight of these cases had their crura fractured during attempts to mobilize the whole stapes. Included in this group are 15 cases in which the fracture had been produced during previous surgery, prior to the use of the operating microscope.

Two cases also included in this series had stapes that were completely mobilized, but there was no improvement in hearing because of a widespread incudostapedial joint. Purposeful fracture and implantation of a polyethylene tube gave the desired results in each instance.

Sixty-eight of the patients in whom the crura had been unintentionally fractured had a significant result with the polyethylene tube. Therefore, a total of 70 patients in this series of 80 obtained improved hearing. The air bone gap was closed in 24 cases.

Thirty-six cases came within 20 decibels of the bone conduction level in the major speech frequencies, a gain of 15 to 75 decibels. Ten patients improved 10 to 15 decibels in these same frequencies.

DERMATOLOGY

Results of treatment of leprosy with D-cycloserine.—(*Revista Brasileira De Leprologia*, Vol. 26, No. 2, April-June 1958, via *Leprosy in India*, 30: 4, 1958).

A summary in English of the article: "The authors present the minute report of 20 patients treated with *D-cycloserine*, a new antibiotic extracted from *Streptomyces orquidaceus*. Most of the cases were untreated advanced or reactivated sulphone-resistant lepromatous forms of leprosy. The daily doses were no more than 4 to 6 tablets of 250 mg. The first cases have undergone 11 months of treatment and the most recent ones, one month only. In four cases, sulphone was associated to the referred antibiotic, while in case Tb 1 was associated.

The clinical results were precocious and evident. The improvement was discreet in some cases but marked in others; no full clinical cure was observed up to now. On the other hand, neither aggravation nor signs of drug-resistance were observed.

The results of the bacterioscopic examinations were favourable, since both qualitative and quantitative alterations were observed. Rigorously speaking, however, no case can be considered negative yet.

Although the histopathological results are discrete, they speak in favour of the action of the new antibiotic in the treatment of leprosy.

The tolerance of *D-cycloserine* can be considered good; blood or kidney alterations are not noticed. Intolerance observed in the central nervous system is light and easily avoided.

The classical phenomena of reaction such as erythema nodosum or erythema polymorphos were hardly observed except in one case where they lasted a little over a month's time. Focal reactions, of good prognosis usually coinciding with beginning of treatment, were observed. The drug seems to act directly upon the Hansen's bacillus and the authors attribute great advantage to the association of the drug with the sulphones mainly because their mechanisms of action are different.

Facing the results already obtained, the authors conclude that *D-cycloserine* is active in the treatment of leprosy, that it is the drug of choice in the treatment of reactivated sulphone-resistant cases

and that clinical results are relatively precocious. They conclude also that, for further conclusions, it is necessary to continue with experiments based on a longer period of time, which is an indispensable requisite in a therapeutic investigation among advanced lepromatous patients."

Leprosy and tuberculosis. A comparative study with the aid of skin tests with tuberculin, killed BCG and the Dharmendra lepromin in South African Bantus.—(*Internat. J. of Leprosy*, 26: 1, 1958, pp. 24-40).

Kooij and Rutgers studied the immunological relationship between leprosy and tuberculosis, with respect to the theory that tuberculosis protects against leprosy. Their results indicated that the late reaction to lepromin, produced in some tuberculin-negative healthy people was slightly intensified and accelerated in patients with tuberculosis and tubercloid leprosy, which could be explained by the non-specific Dienes effect (adjuvant effect of tubercle bacilli). Cross hypersensitivity cannot be ruled out as an explanation. If gross hypersensitivity in our study were identical with cross immunity, which is not certain, it would mean that BCG has a protective influence against leprosy. Because the cross hypersensitivity revealed in this study was slight, one would expect the possible cross immunity also to be slight. However, it is difficult to draw conclusions on the degree of protection by BCG from this study. We used killed bovine tubercle bacilli and a weak Dharmendra antigen in our skin tests. Perhaps skin tests with killed human tubercle bacilli and a Wade-Mitsuda lepromin might show a stronger cross hypersensitivity. The nonspecific Dienes effect could also have a protective influence on leprosy.

With skin tests with killed and living bovine tubercle bacilli (BCG) we could not confirm the observations of Chaussinand that patients with tubercloid leprosy always showed positive skin reactions to killed tubercle bacilli even if the tuberculin reactions are negative.

Oral treatment of pruritic dermatoses.—(*Current Medical Digest*, January 1959).

Antihistaminics have become an integral part of the physician's armamentarium for treatment of allergic disease. While the therapeutic value of the antihistamines may be known, the side-reactions, especially fatigue, dizziness, drowsiness, and nausea, frequently overshadow their efficacy in particular cases.

A new oral repository technique of controlled, sustained antihistamine-decongestant therapy in various dermatoses and allergic hypersensitivities has been shown by Dr. Roy L. Kile of Cincinnati, Ohio to have therapeutic advantages (*Antibiotic Medicine and Clinical Therapy*, September 1958). This study was begun 1½ years ago in private practice, and the patients were those requiring definitive measures of relief. The drugs were used by 311 patients, most of whom presented pruritic symptoms, as the oral medication in various dermatoses. Each tablet contained phenylephrine tannate, 25 mg.; Prophepyridamine tannate 37.5 mg.; and Pyrilamine tannate 37.5 mg. combined with a colloidal complex.

In general, 2 tablets daily controlled symptoms throughout the day and night.

Of all patients studied, 244 or 78.5%, received a definite therapeutic advantage. This was measured by those patients showing "good" and "moderate" results. Those patients having an associated hypersensitivity with dermatosis obtained an even greater suppression of allergic symptoms. A milder effect was observed in 12.9% interpreted as "fair." Thus, it can be stated that 91.4% of 311 patients were relieved to some degree. Only 8.6% had no measurable evidence of improvement. These were classified as "poor" responses.

The incidence of side-effects in this study was remarkably low (2.2%). Evidence of sedation was minimal (1.2%).

RADIOLOGY

X-ray examination during pregnancy and leukæmia in childhood.—(*Strahlentherapie*, 108: 1959, 107, via *Ger. Med. Monthly*, June 1959).

The case-records of the Pædiatric Clinic, Budapest, were examined in order to investigate the possible relationship between radiography during pregnancy and leukæmia or malignant neoplasm in the offspring. An analysis of 40 out of 46 cases of leukæmia in children showed that two mothers had been X-rayed during the second half of pregnancy. In a control group of 346 children 10 of the mothers had been X-rayed. The effect on the foetus of radiological examination of the mother is considered to be of less importance as a cause of leukæmia than other, as yet unknown factors.

Hazards of cerebral angiography and their prevention.—(*Fortschr. Roentgenstr.*, 89: 1958, 659, via *Ger. Med. Monthly*, June 1959).

According to the published reports, cerebral angiography carries a 3-10% risk of complications and a 0.2-0.35% risk of death. These hazards can be greatly reduced by skilful technique to avoid thrombosis. Allergic reactions to the radiopaque medium can be largely prevented by premedication with anti-histamines and by using the correct concentration and volume. The correct timing of the second injection in two-stage angiography, and the occurrence of vascular spasm and ocular lesions are also reviewed.

Radiation hazards in gynecological practice.—(*Geburtsh. u. Frauenheilk.*, 18: 1958, 201, via *Ger. Med. Monthly*, June 1959).

The International Radiation Protection Committee has recommended that the permissible radiation dose for doctors and nurses should be reduced to 0.1 r per week. This entails the following safety measures in gynecological radium treatment: where radium is much used the medical and nursing staff must be changed at fre-

quent intervals, particularly in the case of young doctors and nurses. Doctors who perform more than 10 radium applications a week should be protected by lead around the gynæcological chair as the intra-cavitary insertion of radium exposes the gonads to a dose of 30 mr. At the bedside of a patient with radium in the uterus doses of 60 to 100 mr per hour have been measured, and at the adjoining bed doses of 8-12 mr per hour. Treatment lasting for 20 to 30 hours therefore, exposes the patient in the next bed to a total radiation dose of up to 400 mr. Patients receiving radium treatment should be nursed in single rooms or together with other cancer cases. Wards should be tested regularly to make sure that the doses are kept within the permitted limits.

Recent advances in radiotherapy.—

Dr. John C. Evans, M.D., Head of the Department of Radiotherapy in the Albert Einstein College of Medicine at New York City states in the course of an article on the subject:—

The most interesting and possibly the most promising recent advances in radiotherapy are those in the application of radiobiologic observations to treatment of human cancer, particularly in regard to substances which might protect the irradiated normal tissues or sensitize the cancer cell selectively to radiation damage.

The first factor observed to alter tissue sensitivity is the degree of vascularity, presumably by alteration of the tissue oxygen. The diminished sensitivity of skin when the vascular supply is impaired by compression, cooling, or adrenalin injection, was also observed in deep organs, such as the ovary and in tumour transplants. This observation has been utilized clinically to protect the skin in the treatment field, by means of compression cones, but not to protect deep organs in the field of irradiation. It is not known if the normal tissues would be protected selectively or if the cancerous tissues would be protected to an equal degree. Also, the technical difficulties of applying a brief interval

of anoxia during irradiation are considerable.

The converse of this observation, that tissues are more sensitive to irradiation with greater than normal oxygenation, is being applied clinically in spite of even greater technical difficulties. Cancers of the lung and a few of the breast, pharynx, and larynx have been irradiated with patients breathing pure oxygen at 3 atmospheres of pressure. This requires anaesthesia to prevent convulsion and bilateral myringotomy to protect the tympanic membrane from pressure change. The treatment of secondary infection in and around a cancer before irradiation has been shown to increase the available oxygen in the capillary bed by preventing stasis. Attention to these simple measures has resulted in the cure of over 50 per cent of cancer of the uterine cervix in all stages. When the disease was limited to the cervix, 80 per cent were controlled.

Hormonal substances known to influence the tumour stroma and even the growth potential of certain cancers, such as those of the breast, uterine cervix, ovary, and prostate, have been given limited trial as sensitizers to radiation. In cancer of the breast, radiation response did not appear to be enhanced. Alteration of diet, particularly in vitamins which influence connective tissue characteristics, might affect radiation response. A diet deficient in vitamin C has been reported to increase radiation response in human cancer, particularly of malignant lymphoma.

SURGERY

Child's elbow may be injured by sudden jerk of hand.—(*New York State J. Med.*, June 15, 1959).

A sudden jerk on a small child's hand, which lifts him off his feet, may injure his elbow, a North Dakota orthopaedist warned. The injury, first described in 1671, is sometimes called "nursemaid's elbow." Actually it is a dislocation of the upper end of the radius, which, being directly fixed to the bones of the hand, is pulled out of

the ligaments at the elbow. The injury usually occurs in children between the ages of two and four years and rarely after the age of six.

Writing in the April 11 *Journal of the American Medical Association*, Dr. George M. Hart reported seven cases of the injury. They had occurred in several ways—when the child rolled on the arm, when a cousin twisted the child's arm, and when the child fell on the arm. The most common means of injury, however, is when the child's hand is jerked and he is pulled off his feet. After injury there is pain in the region of the elbow, the child refuses to use the arm, and he holds the elbow slightly bent and the forearm with the palm turned down.

The treatment is simple, Dr. Hart said. The affected elbow is grasped with one hand with the thumb on the head of the radius. The forearm is held with the opposite hand at the wrist and extended. The forearm is then forcibly turned so the palm faces upward and at the same time slight pressure is applied at the radius head with the thumb. Upward pressure may be made on the forearm so that the radius is pushed upward. As the manipulation is carried out, a slight click is often felt over the head of the radius and pain and limitation of movement are relieved.

"Reduction is usually so easy that it may occur spontaneously," Dr. Hart said, "or may be accomplished by the parent or X-ray technician during manipulation of the arm."

After the bone is back in place, the arm should be put in a sling for a few days and care should be taken that the child's forearm is not pulled, he said.

Physical findings in early rheumatoid spondylitis.—(*New York State J. Med.*, June 15, 1959).

Rheumatoid spondylitis is a systemic inflammatory disease, occurring with greatest frequency in young men and characterized by involvement of the sacroiliac joints and the apophyseal joints of the spine. Arthritis of

the peripheral joints may occur in about 25% of patients with this disease. Rheumatoid spondylitis may be intermittent or chronically active and often is progressive, with ascending involvement of the spine.

The earlier the diagnosis of this disorder is made and the earlier therapeutic and deformity-preventing measures are instituted, the better the long-range prognosis.

Early rheumatoid spondylitis may be very difficult to diagnose. Physical findings were evaluated as diagnostic measures in a small group of 22 early or nonadvanced spondylitic patients. A control group of 50 patients with low back pain not due to spondylitis was also studied.

Limitation of thoracic cage excursion with respiration and limitation of lumbar spine motion were of little diagnostic value in the small group studied.

The iliac crest compression and separation test was the best single diagnostic screening method among those used to elicit physical findings in this small group of patients. This test is done as follows: With the patient supine, the anterosuperior iliac spines are sprung apart. With the patient lying first on one side and then on the other, the sacroiliac joints are compressed by manual pressure on the uppermost iliac crest.

Forearm fractures: Exercise essential.—(*N.Y. St. J. Med.*, 15-5-'59).

Even though a person has his elbow, forearm or hand in a cast, he must raise the arm above his head several times a day, otherwise he may end up with a stiff and ever painful shoulder. Drs. Thompson and Compere two expert Orthopaedic Surgeons of Chicago state that "most patients with forearm fractures or fractures of the hand are afraid to do what may appear to them to be unnecessary movements" (*J.A.M.A.*, 28-2-1959). Lack of exercise even for as brief a period as 2 to 3 weeks may cause a shoulder to become quite stiff. Physicians must repeatedly advise their patients to raise their injured arms above their heads several

times a day. This applies to every patient with a fracture involving the fingers, hands, forearms, or elbows and who is wearing a short or long arm cast, with or without a sling. If the patient raises his fractured arm above his head several times a day "much future suffering and disability can be prevented." In addition patients should be shown how to move their hands when they have injuries of the elbow and forearm. It is not enough simply to wiggle the fingers; a complete fist should be made.

Midline incision for cholecystectomy.—(*Jour. Mich. St. Med. Soc.*, 57: 11, 1958).

Dr. Millington O. Young, M.D., F.A.C.S. of Detroit, Michigan, calls attention to two facts: (1) unexcelled exposure of the extrahepatic biliary system is obtained via a high midline incision and (2) unequalled ease of performance of the various technical manoeuvres of biliary tract operations is obtained by use of the high midline incision with the surgeon standing on the patient's left side.

Cholecystectomy is the most common upper abdominal operation. Surgical custom dictates that the operator stand on the patient's right side and use a right vertical or subcostal incision.

In recent years, the midline incision has become increasingly popular for upper abdominal operations. This incision has several advantages. It is easier and quicker to open and close. No muscles or nerves are transected with the result that the patient experiences less discomfort during the postoperative period and permanent damage to the abdominal wall is minimal. The higher location of the incision with respect to the costal arch reduces the chance for dehiscence since the tension exerted is less at this level and the liver underlies a good portion of the incision.

In 1954, Moore reported his experience using the midline incision for fifty-six biliary tract operations. The excellent exposure of the structures of the hepato-duodenal ligament

obtained when cholecystectomy had been performed with gastrectomy *via* a midline incision had been noted and led to the routine use of this incision for operations on the biliary tract. Exposure was good in all instances, regardless of the patient's obesity or the size of the costal angle. Saint and Braslow described the beneficial effect of removal of the xiphoid process in increasing the lateral retraction of the wound margins.

I have used the midline incision routinely for upper abdominal operations. Additional experience using this incision for biliary tract operations has led to the conclusion that its many advantages deserve wider notice. The surgeon, standing on the patient's left side, inserts a self-retaining retractor. A deep blade attachment is used to retract the padded liver upward. A folder pad is placed over the duodenum which is pulled downward using a broad malleable (or other suitable) retractor held by an assistant. A pad is inserted to displace the hepatic flexure and any small bowel on the right and, if necessary, another is used to displace the stomach on the left. This allows an excellent view of the tensed hepatoduodenal ligament. The fundus readily comes into view when traction is made on the gall bladder. The latter is usually removed from below upward after injection of its bed with saline. Drains and tubes are brought out *via* a small stab-wound through the upper end of the right rectus muscle. The single thick fascial layer is closed with interrupted figure-of-eight sutures of 00 serum-proof silk. Stay sutures have not been used.

There have been no wound complications in seventy cases in which this incision has been used for cholecystectomy and/or choledochostomy.

Surgery of arteriovenous aneurysm of the brain.—(*Wien. klin. Wschr.*, Austria, 69: 1957, 725, *via Ger. Med. Monthly*, June 1959).

After reviewing the clinical and diagnostic features of arteriovenous aneurysm of the brain, Kruger discus-

ses the surgical treatment. The most effective operation is ligation of the communicating vessels followed by total extirpation of the tumour. It was used in one case, and in a similar case in which total removal was impossible good results were obtained by gradually reducing the volume of arterial blood emptying into the aneurysm. The success of this procedure disproves the assertion that the condition cannot be cured by partial ligation of the vessels communicating with the angioma.

Simultaneous traumatic rupture of the spleen and stomach.—(*Munch. med. Wschr.*, Austria, 100: 1958, 1697, *via Ger. Med. Monthly*, June 1959).

A case of simultaneous rupture of the spleen and stomach was caused by blunt trauma to the abdomen. This type of injury involving one parenchymatous and one hollow organ is extremely rare—only one such case has been described in the last 10 years—though simultaneous lesions of two solid organs are comparatively frequent. A 25-year old woman, an agricultural worker, was wedged between a wall and a runaway hay cart, and was admitted to hospital in shock. Operation revealed a stellate rupture of the spleen as well as a perforation of the gastric wall.

MEDICINE & THERAPEUTICS

Amines may lead to drugs useful against mental illness.—(*Texas State Journal of Medicine*, May, 1959).

Basic research at the National Heart Institute on the functions of amines as brain hormones and on the enzymes that make and destroy these chemicals in the human body is leading to the development of drugs which may be useful against hypertension, epilepsy, and mental illness, according to the United States Department of Health, Education, and Welfare.

The amines of greatest current interest are serotonin and norepinephrine. These are found in the brain and other body tissues, where they may influence

blood-pressure, emotions, and other functions that are beyond conscious control. The drugs under study are compounds which counteract monoamine oxidase, an enzyme which normally destroys these amines in the body.

Staphylococcal pneumonia and empyema in infants and children.—(*Texas State Journal of Medicine*, May, 1959).

Staphylococcal pneumonia ranks among the more serious bacterial infections which physicians are called upon to treat. Especially in infancy where it is more likely to occur and relentlessly progress to empyema, pyopneumothorax and death, the presence of pneumonia necessitates prompt consideration of drug resistant staphylococcus as an etiologic possibility. In infants less than 6 months of age where classic signs of the disease may be lacking, being keenly alert to its possibility may be the physician's most valuable diagnostic tool. The presence of pyopneumothorax, a grave prognostic sign, demands prompt surgical intervention as well as appropriate antibiotic therapy.

At the University of Texas Medical Branch, among 19 infants and children treated for pulmonary disease due to staphylococcus there was an over-all mortality of almost one-third. In 12 instances pyopneumothorax developed and quickly terminated in death in 3 patients. Surgical drainage and antibiotic therapy resulted in gradual but complete resolution of the process in the remaining 9 infants.

Successful treatment of bacillary dysentery with chloramphenicol.—(*N.Y. St. J. Med.*, 15-6-'59).

Seventy-seven individuals, residents of New York City and the suburbs, were exposed to bacillary dysentery while residing at a farm in Putnam County. Thirty-three individuals became ill; seven were not contacted. Cultures made from rectal swabs taken from 65 individuals grew out *Shigella sonnei* in 16 cases.

There were no fatalities. Two adults were hospitalized. Eighteen recovered

spontaneously, 14 were treated with chloramphenicol, 1 g. a day, four doses for five days in the case of adults, 25 mg. per kg. of body weight per day per child, or 80 to 100 mg. per kg. of chloramphenicol palmitate suspension in the case of infants and children.

Following treatment with chloramphenicol, a second stool culture taken in those individuals whose original culture had been positive for *Shigella sonnei* was reported as negative.

Bacterial contamination and infection in the severely burned patient.—(*Texas State Journal of Medicine*, May, 1959).

The present world-wide concern about virulent hæmolytic staphylococcus aureus is really a "new look" at an old problem which was well recognized even in Biblical times and which has been brought to the fore once again by the development of antibiotic-resistant strains. In more recent times it has become increasingly evident that antibiotics and chemotherapy play a less important role in the prevention of local and systemic infection than had been anticipated. Attention is being redirected to study the relationships between the natural body defence mechanisms and the bacterial flora which present real or potential hazards to the healing of burns, as well as wounds in general.

A burn wound may be sterile at first, but bacteria in hair follicles and sweat glands may survive and contamination from outside may be anticipated unless special care is exercised. Indiscriminate use of antibiotics is to be condemned. Healthy granulation tissue and skin grafting usually permit the body's protective mechanisms to destroy harmful bacteria.

During the first week following burn trauma, therapy is directed toward emergency measures combating the shock-œdema phenomenon and toward general supportive care in the redistribution of fluids and electrolytes. The most treacherous bacterial offender at this time is the *beta* hæmolytic streptococcus which has the ability to spread readily and rapidly through the tissues and into the blood-stream. Because

of the organism's continued susceptibility to penicillin, this antibiotic is the most effective prophylactic measure, virtually eliminating the danger of blood-stream infection. The staphylococci, generally, have a much lower invasive tendency than the *beta* hemolytic streptococci, particularly during the acute phase when the burn eschar provides a mechanical barrier and the factors of host-resistance have not been significantly altered. The routine prophylactic use of any antibiotic against staphylococci is virtually useless unless proper sensitivity patterns of the particular strain are first established, since the high incidence of antibiotic-resistant staphylococci is well known and resistance simultaneously to several agents is common.

With the softening of the eschar which provides a pabulum for microbial growth during the second phase of the burn wound, therapy must be directed toward removal of this moist dead tissue and maintenance of as dry a wound as possible by selective sharp debridement and coverage of open areas with a single layer of fine mesh gauze (applied either dry or moistened with saline solution or glycerine). Systemic antibiotics tend to eliminate susceptible organisms but allow rapid emergence of non-susceptible types. After eliminating most of the gram-positive flora by the use of penicillin, the resistant strains of staphylococci found so commonly now in all hospital environments will persist, along with the generally nonsusceptible gram-negative flora. When antibiotics generally effective against the gram-negative flora are administered, proteus and pseudomonas species tend to remain by virtue of their usually high resistance to most antibiotics. Locally applied chemotherapeutic preparations have shown no significant effectiveness in clinical studies at this stage.

General supportive maintenance of the patient with correction of anæmia, hypoproteinæmia, and so forth is not to be overlooked during this phase of care.

As soon as healthy granulation tissue is formed on the burn wound to serve

as an effective barrier to bacterial invasion, "routine" antibiotic therapy is not indicated and should be reserved for specific situations. As mentioned previously, mechanical cleansing and frequent dressing changes are the most significant factors in therapy at this stage. By covering the exposed granulating areas with skin grafts the continuity of the skin surface is restored and the surface exudates are eliminated.

Ergotamine tartrate in the treatment of migraine.—(*New York State J. Med.*, June, 15, 1959).

Ergotamine tartrate has been used effectively in the symptomatic treatment of migraine for the past twenty-four years. However, in spite of the advantages of this agent, there still is a great deal of hesitancy and misunderstanding on the part of many practising physicians concerning its use.

Friedman *et al* of the headache unit, Montefiore Hospital, review the use of ergot and discuss the pharmacologic and clinical aspects of ergotamine as a treatment for migraine.

The physiologic effects of ergot in humans are exceedingly variable. In some persons there is a slowing of the pulse and a slight rise in the blood pressure and in the cerebral spinal fluid pressure. Ergot may delay the emptying of the stomach, presumably by direct action on the gastric musculature.

Ergotamine in the treatment of migraine headache acts as a vasoconstrictor on the affected vessels, thus interrupting the vasodilator mechanism responsible for the pain.

In the symptomatic treatment of 2,500 patients with migraine, ergotamine tartrate proved to be the most successful and useful drug, as reported by Friedman and Merritt. A composite study of this group indicated that the highest percentage (83 per cent) of symptomatic relief was obtained by early and adequate administration of ergotamine and caffeine, alone or combined with antispasmodic drugs and/or sedatives.

The administration of ergotamine or dihydroergotamine is contraindicated in the presence of peripheral vascular diseases, angina pectoris, impaired hepatic or renal function, and septic states associated with intravascular diseases, thyrotoxicosis, cachexia, avitaminosis, or pregnancy.

When properly used, this substance is valuable and safe in the practice of medicine. Singly, or especially when combined with caffeine, it is the most successful symptomatic agent in the treatment of migraine. Its unpleasant side-effects can be minimized or eliminated when the drug is properly administered. Only in rare instances has ergotism been a serious consideration in its use. Massive doses given over prolonged intervals have in many instances been without ill-effect. Minimal properly controlled dosage is recommended in all cases, despite seeming safety in occasional massive dosage.

Clinical epidemiology of mononucleosis at a State University.—(*Northwest Med.*, May 1959).

The hypothesis that mononucleosis is usually transmitted as the result of intimate oral contact as proposed by Hoagland in 1955 has been received sceptically and favourably in different quarters.

A survey of paediatric practice in Seattle, Washington, U. S. A. shows that the incidence of mononucleosis is higher in the college age-group. At equal patient loads the University Health Service sees at least 17 times as many proven cases.

The student-health physician constantly attending patients of both sexes with mononucleosis has a panoramic view of certain epidemiologic peculiarities and patterns of personal behaviour that lend strong circumstantial support to Hoagland's hypothesis of transmission by kissing.

Salient features of mononucleosis in this population include a much higher incidence among the unmarried as compared with the married students. The failure to discover a single example of this disease, during a 15-year

period, among the negro and oriental segments of this student-body is a perplexing observation. A consistently recurring peak incidence has been recorded during the short month of February. Without applying any correction to compensate for the fewer days in February this difference is highly significant. In this area mononucleosis appears to attack in a truly sporadic manner, the prevalence among college students being over 17 times as great as that in paediatric practice.

It would appear that mononucleosis among university students is frequently antedated by a period of ardent and loving companionship. Many of these people are judged to be in love and announcements of engagements and weddings are commonly forthcoming. The much higher attack rate among unmarried students and the absence of mononucleosis in a military hospital serving troops in an area lacking access to female companionship all add credence to the kissing theory. Certain personality traits of the patients as well as the uniquely motivated behaviour of a particular visitor both support the belief that intimate oral contact plays a basic role in the transmission of this disease.

Antihypertensive effects of chlorothiazide.—(*Northwest Medicine*, May 1959).

Chlorothiazide was administered as the only antihypertensive agent to 6 patients with sustained diastolic hypertension and was given together with constant doses of other drugs to 15 patients with sustained diastolic hypertension. Chlorothiazide in the doses used was found to be weakly antihypertensive when administered alone. Given with other antihypertensive drugs, chlorothiazide will frequently, although unpredictably, potentiate the anti-hypertensive effect of these agents. No significant toxicity was noted in using this drug.

Ambulatory chemotherapy in pulmonary tuberculosis.—(*International Tuberculosis Yearbook*, 1959).

Despite differences of opinion, which are perhaps partly due to the misunderstandings caused by inexact definitions, the significance of the principle of ambulatory chemotherapy is clearly established. It is extremely useful when the number of available beds is inadequate or in the case of an excessively lengthy waiting period before hospital or sanatorium treatment can be instituted. Nevertheless it should never impose a limit on treatment or result in the emergence of bacterial resistance as reported by Hoppe in some 31% of cases for I.N.H., in 4% for Streptomycin and in 3% for a combination of these two drugs. To consider ambulatory chemotherapy and hospital treatment as two competing methods seems as pointless as a comparison of their results. It is true that if there are very satisfactory living conditions and if the patient is sufficiently aware of his own state of health it would occasionally seem possible to dispense with sanatorium treatment; but that is only justified in some specific forms of pulmonary disease. The impressive results obtained by means of ambulatory chemotherapy alone (75% of improvements were recorded in the case of 5,988 cases of active pulmonary tuberculosis and 66.4% of sputum conversions among 2,855 cases) can probably be explained by the fact that the patients in question were specially selected cases.

Treatment of acne vulgaris with tetracycline—A 4-year study:—(*Texas St. J. Med.*, April 1959).

Forbes and King have used tetracycline hydrochloride and tetracycline phosphate over the past 4 years in 567 cases of pustular acne. In this number are included 485 which have been followed long enough to warrant reporting. Some of the 72 not reported had good initial response but were lost from observation. The ages varied from 10 to 40 years, but well over 95 per cent were between the ages of 15 and 22. Since it has been previously shown that this antibiotic does not cure pustular acne, the terms *controlled* or *failure* are used in reporting results. If the patients were poorly

controlled, they were classified as failures.

The authors conclude that tetracycline controls the pustular element of acne vulgaris in the majority of cases. There is no difference in the effect of tetracycline hydrochloride and tetracycline phosphate. These antibiotics may be given over a period of several years without serious side-effects and without losing their beneficial effect. The effective maintenance dose is lower than we originally thought. The exact mechanism of the beneficial effect is not completely understood and tetracycline reduces post-acne scarring.

Pulmonary tuberculosis and diabetes.—(*International Tuberculosis Yearbook*, 1959).

The combination of diabetes mellitus and pulmonary tuberculosis makes a compromise necessary between the divergent therapeutic requirements of the two diseases. Overfeeding—all forms of which are contra-indicated—is generally replaced by a diet poor in carbohydrates with proportionately more proteins and containing the appropriate amount of fats. The administration of insulin and zinc insulin should keep glycosuria at the lowest possible level, but without its disappearance being obtained at the cost of an often latent hypoglycaemia. In the case of tuberculous diabetics, chemotherapy achieves remarkable clinical results and an improvement in the prognosis which is expressed in the lower mortality rate after 5 years: the figure was 86% before tuberculo-static drugs became available as against 20.25% at the present time. But I.N.H., which has perhaps a harmful effect on carbohydrate metabolism or phosphorylation, must be used with caution and in maximum daily doses of 5 mg./kg. body-weight. Although suitable anti-diabetic treatment does not prevent collapse therapy or surgical intervention, advanced vascular diabetic changes restrict their use. Diabetic retinitis occurs at the rate of 3.8% during the first year of diabetes, and can be found, in approximately 2/3 of patients, between 16 and 20 years later.

REVIEWS OF BOOKS AND REPORTS

A Look at Cancer—By Dr. V. R. KHANOLKAR, M.D., 1958, 87 pages. Indian Cancer Research Centre, Parel, Bombay. [Price: Rs. 5/-]

Cancer is, now-a-days, a subject of great importance. Even the educated public in this country are unaware of its great dangers and all the efforts and achievements of modern medicine in this field. Its intrinsic principles, the unremitting search for a scientific basis of its hypotheses, an experimental verification of its ideas, and its emphasis on prevention rather than cure are matters which merit much wider publicity. Dr. Khanolkar, who writes this book, is the foremost authority on the subject in India. He has been connected with the Tata Memorial Hospital, Bombay, ever since its inception in 1941. He is the Director of the Indian Cancer Research Centre and has accomplished many distinguished posts in the field of International cancer work. Nobody in India is better fitted to write about the subject than he. In this little book he has answered some of the common questions people ask. What is cancer? How does common cancer spread? Is cancer inherited? Is it contagious or infectious? Can cancer be prevented or cured? Is there a cancer germ? These and many other questions are answered in a very clear and authoritative manner in this book.

This book must be read by not only medical men but also by lay men so that much of the wrong information that is now spreading may be removed. We congratulate the author.

Mental Health Problems of Aging and the Aged—Sixth Report of Expert Committee on Mental Health. 1959, 51 pages. World Health Organisation Technical Report Series

[Price: 3s. 6d.]

This Report contains the collective views of an International group of experts who have made a study of this subject. The Report is divided into eight chapters dealing with the extent of the problems, the sources of the problems, the protection and promotion of mental health in old age, the classification and prognosis of mental disease in old age, the organisation of geriatric mental health services, the specific treatment measures and rehabilitation, and the training of personnel and organization of research. In the opinion of the Committee the key to the problem lies in the organization of mental health services for the aged within a comprehensive geriatric service. They feel that these services should comprise facilities both for the preservation of mental health and for the treatment of mental disorder. The Committee stresses the principle of looking after the old as far as possible in their own homes and of re-integrating them into the community as soon as possible after the treatment away from home. By these means, the Committee hopes greater advantage may be taken of the longer period of productivity and the increasing number of old people, whose experience can be a valuable contribution to the community.

BOOKS RECEIVED

Cholera—R. POLLITZER, World Health Organization, Palais Des Nations, Geneva.

Lecture Notes on Ophthalmology—By an Experienced Teacher, M/s. S. Bhattacharya & Co., Medical Pub.

and Book-Sellers, 117, Armenian Street, Madras-1.

Essentials of Biochemistry—By S. N. BANERJI—M/s. S. Bhattacharya & Co., 117, Armenian Street, Madras-1.

PREPARATIONS AND INVENTIONS

Capyna—New Anti-tubercular Therapy—CAPYNA (Rudanti Compound Tablets) and CAPYNA Plain (Pure Rudanti Tablets) have been introduced by the Himalaya Drug Co. for the treatment of all forms and stages and for localization of T.B.

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The manufacturers claim: "Both products are non-toxic; the symptoms of pulmonary, glandular or other types of tuberculosis such as fever, cough, toxæmia, anorexia and tiredness gradually abate in 3 or 4 weeks with CAPYNA. Patients sleep better and there is a subjective feeling of well-being and the signs gradually improve, bringing improvement in the appetite, general condition and weight. The pathological process gradually regresses and in due course healing occurs bringing about general improvement."

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Diatrinat:—M/s. J. B. Mody & Co., Pharmaceutical Distributors of 121, Fort Street, Bombay-1 have placed on the market a new product 'DIATRINATE' (a brand of Dimenhydrate USP) which is reported to have been used with success in motion sickness, vertigos of different ætiologies, intolerance to drugs, in the nausea and vomiting of pregnancy, post-anæsthetic vomiting, and for electro convulsive therapy.

Being an antihistaminic, slight drowsiness may be felt by some patients, especially when higher doses are taken though it is frequently not undesirable. The drug is manufactured by the Unique Pharmaceutical Laboratory, Box No. 609-A, Bombay 1, and distributed by Messrs. Mody & Co., who state that this useful drug is available in bottles of 12 and 36 tablets of 55 mg. each; the dosage for adults is stated to be 50 mg., every 4 hours orally or rectally. Larger doses may also however be given in conditions where drowsiness is not objectionable. For children the drug is to be administered in graduated doses according to age.

NEWS AND NOTES

W.H.O.'s South-East Asia Conference

Sri Dr. U. Krishna Rau, Speaker of the Madras Legislative Assembly and consulting Editor of the ANTISEPTIC has been invited by the World Medical Association to be an Observer at the South-East Asian Conference of the World Health Organisation to be held in Kandy (Ceylon) from September 23 to 29. He has accepted the invitation.

Seventh Madras State Ophthalmic Conference

The Seventh Madras State Ophthalmic Conference will be held at Madras

on Saturday the 17th and Sunday the 18th October 1959.

The Reception Committee welcomes all readers to attend the Conference and assures them of a comfortable stay in Madras during these two days. Any suggestions with regard to the Conference are welcome and may be sent to:—

Lt. Col. V. Rangachari, M.C., M.S., D.O., Convener, 155/1, Lloyds Road, Royapettah, Madras-14.

Dr. B. Ramamurthi

Dr. B. Ramamurthi, Professor of Neurosurgery, Madras Medical College

and Neurosurgeon, Government General Hospital, Madras, has been elected to represent India at the forthcoming meeting of the *World Federation of Neurosurgical Societies in Copenhagen in September, 1959*. He will also represent the Middle East Societies at this Conference.

Following the conference he will deliver an address in Scandinavia on Tuberculomas of the Brain. Later, he will go to Russia where he has been invited to spend sometime as a guest of the Neurosurgical Institutes in Moscow and Kiev to study the latest methods of Brain surgery.

Tanjore Medical College

Work on the construction of buildings on an extensive site of over 100 acres in Tanjore for the proposed Medical College will commence shortly.

The authorities hope to have the College function in the new buildings in 1961. Meanwhile, about 75 students have been selected this year for admission to this College. These students are now undergoing their course of study in the Madurai Medical College where special staff has been appointed for them.

Health Services Development:**UNICEF Aid to India**

Economic aid totalling 2,238,000 dollars to India for four Government health programmes was recommended by Mr. Maurice Pate, Executive Director of the United Nations Children's Fund (UNICEF) on 15th Aug. '59.

A statement issued by UNICEF said that India had been the chief beneficiary of the Fund's assistance during the last 11 years and nearly 25 million dollars in aid had been approved for various projects, concerned mainly with improving the health and welfare of mothers and children.

The largest single sum out of the present allocation is for expanding a national programme for the development of health services in relation to community development with special emphasis on basic maternal and child welfare training.

UNICEF would provide clinical and other equipment for 25 hospitals, 10 laboratories, 126 main health centres, and sub-centres; 144 vehicles 3,126 midwife and public health nursing kits; drugs and diet supplements, equipment for health education and stipends for trainees.

Village-Housing Projects

The Government of India have decided to modify the village housing projects scheme to enable State Governments to utilize part of the loans sanctioned under the scheme for the acquisition of land in selected villages where this is necessary for thinning out densities, provision of additional housing sites, streets, community buildings and other facilities.

Funds needed for the provision of services in the acquired land may be obtained from other Central or State Government schemes meant for this purpose.

The basis for the recovery of the loan from the beneficiaries has been left to the discretion of the State Governments. The State Governments will have, however, to recover the cost of the site along with the loan for building a house in 20 years as laid down in the village housing projects scheme.

These decisions have been taken by the Government on the basis of the conclusions of the seminar on village housing held last year in Mussoorie and the recommendations of the Housing Ministers' conference held at Darjeeling in October, 1958.

Madras State Health Officers' Conference held at Coimbatore

The three-day Conference of the Madras State's Health Officer's concluded on 22nd August '59 at Coimbatore, and Sri M. A. Manickavelu, Health Minister participated in the deliberations on all the 3 days. The Conference passed important resolutions. By one of them, it requested the State Government to make provision for the construction of a six-bed Infectious Diseases Shed in every Public Health Centre in the State. It

also urged the Government to provide full grant for the construction of I. D. Hospitals in urban areas.

The conference resolved that stress should be laid on the human factor in the training of health workers. In this connexion, it was stated that a Health Education Bureau was being formed to frame a comprehensive scheme for health education and the training of field workers in health education.

It wanted a health assistant to be appointed for an area having a population of 10,000 in each district for registering births and deaths, thus divesting the Village Munsiffs in these areas entirely of this work.

The conference urged that a Study Committee and an Industrial and Occupation Health Bureau might be formed at the Office of the Director of Public Health, Madras, to consider ways and means to implement the Expert Committee's Report.

Nurses' Education in Madras

At a function got up at the premises of the Medical College on Aug. 17, students in nursing were awarded prizes and medals for academic distinction in their examinations by Mr. M. A. Manickavelu, Health Minister.

Dr. V. R. Thayumanaswami, Director of Medical Services, who welcomed the guests, underlined the important part played by the nursing profession in the treatment of patients. He said that there was a great demand for

nurses which they were not able to meet. At present there were 1,300 persons working in the State medical service and an equal number in the nursing service. They should have a larger number of personnel in the nursing service than in the medical service. He also felt that the time had come for upgrading the diploma course in nursing to a degree course so that the nursing profession could take its rightful place in the administration of hospital service.

Mr. Manickavelu said the Government were trying to meet the problem of shortage in personnel in the nursing service.

Miss E. Gillespie, Public Health Nurse of W.H.O. who is working in the General Hospital, was present.

Children's Hospital for India

Collection Drive in Amsterdam

A sum of 28,000 guilders (about Rs. 21,000) collected by the school children of Amsterdam for the construction of a children's hospital in India was handed over to Mr. G. L. Puri, India's *Charge d'Affaires* to The Netherlands, at a ceremony held recently, according to a message received here.

The collection drive has been initiated by the U.N.E.S.C.O. Centre of The Netherlands.

The second phase of the campaign will begin in September when collection from the general public in Amsterdam will start.

AN APPEAL

By the Assam Medical Relief Committee
Uzanbazar, Gauhati

Dr. P. C. Duarah, Hony. Secretary has issued an appeal for funds:—

"The State of Assam, since its cruel devastating Earthquake of 1950, has become the victim of annual floods and epidemics. This year too, the State has had to face an unprecedented flood which has affected 7 districts, North Kamrup, Cachar and Sibsagar districts being the worst affected. The task of rendering medical relief in the affected

areas, has become such a gigantic problem that the Government alone cannot be expected to tackle it adequately. Needless to say, the active and generous help of philanthropic concerns, organisations and individuals both inside and outside the State is essential.

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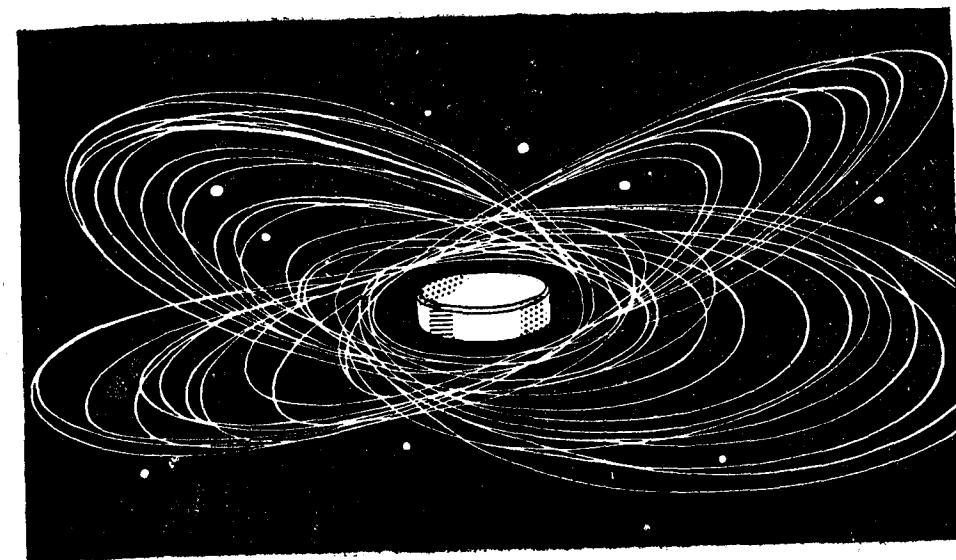
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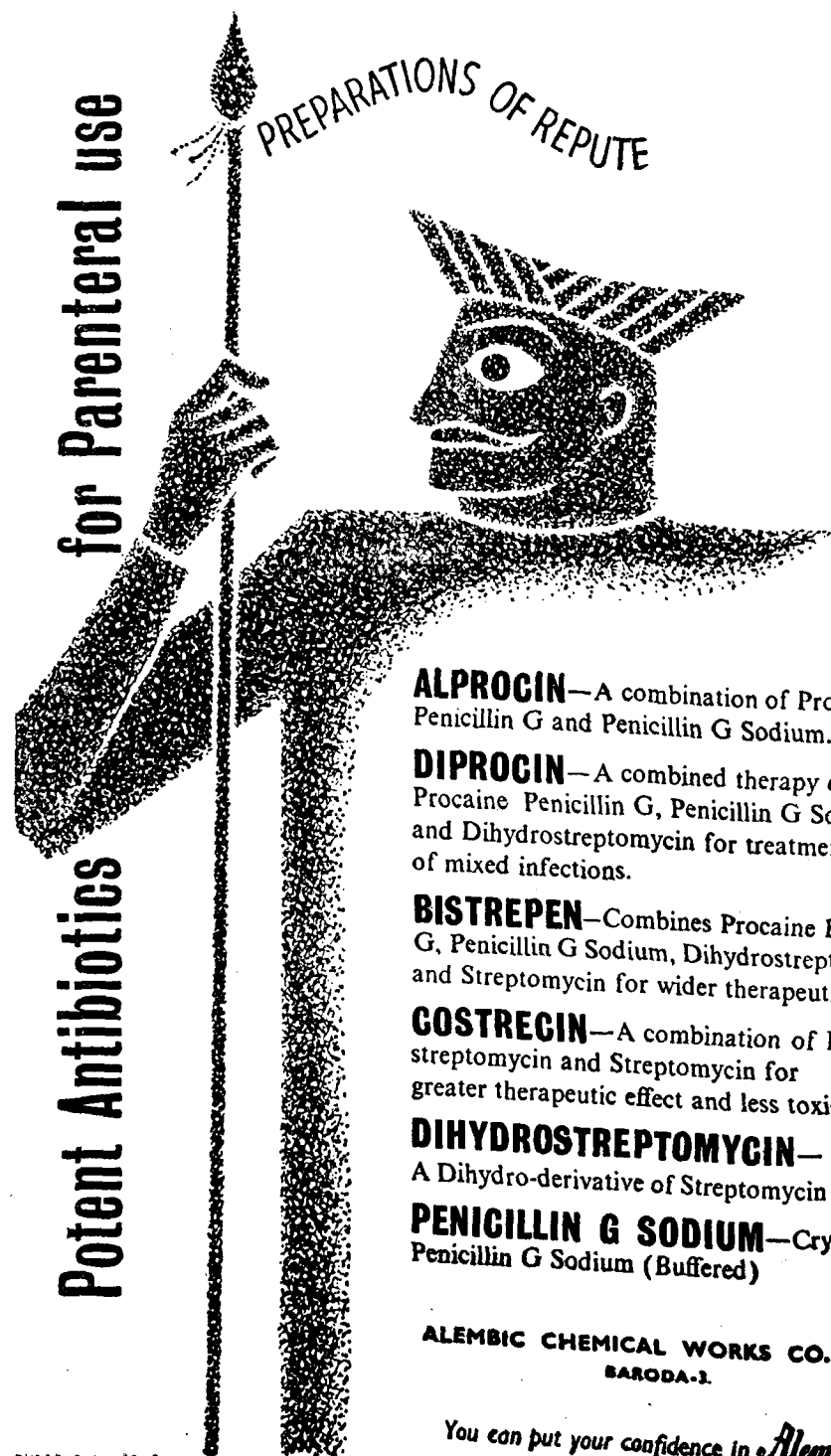
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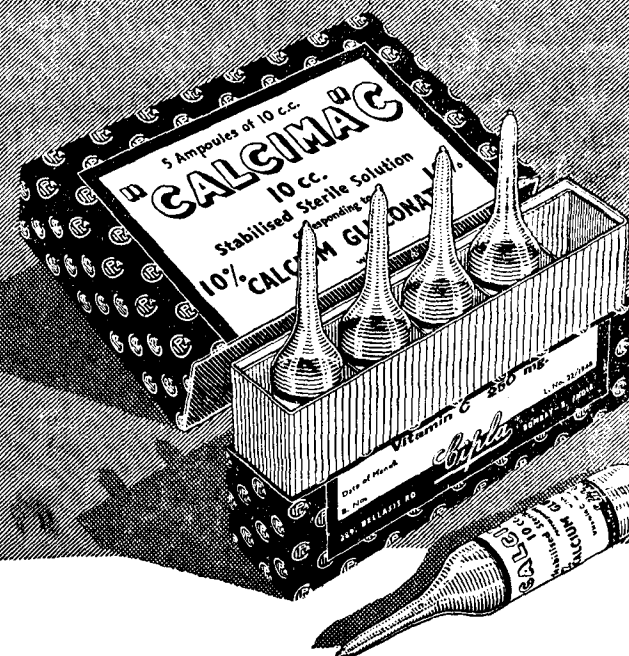
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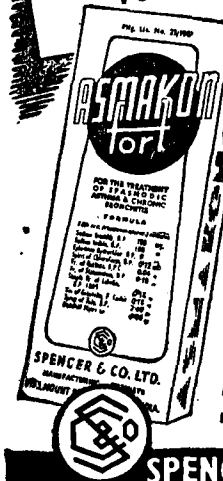
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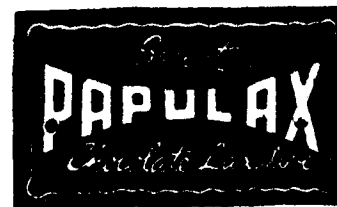
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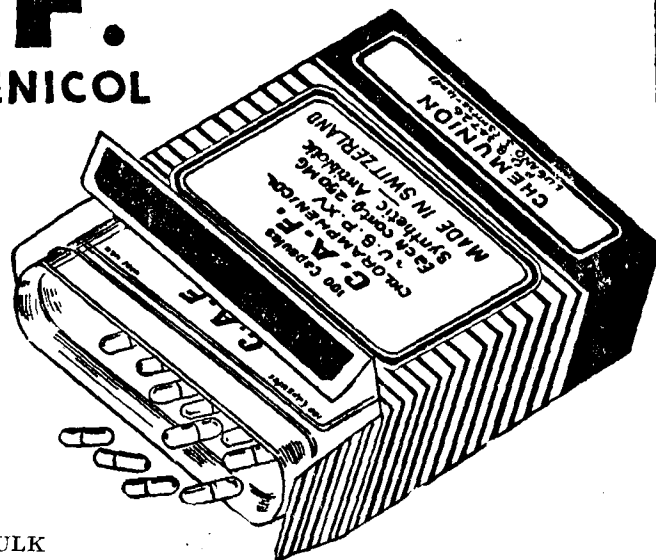
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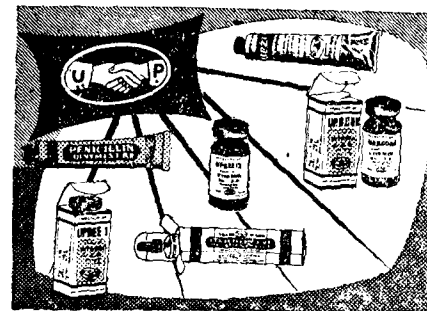
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UPBEE 1 (Vitamin B1) 50 mg. 1000 Tabs. ...	17-50
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Mag. Carb. 1 lb. Light ...	1-25
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	AGE	TABLETS (number)	SUSPENSION (teaspoonfuls)
THREADWORMS: Daily Dosage 7-day Course of Treatment	Under 2 years	2	1
	2 to 6 years	4	2
	6 years and over	6	3
ROUNDWORMS: 1-day Treatment May be given as a single dose or in divided amounts	Under 2 years	3	1½
	2 to 6 years	10	5
	6 years and over	15	1 fl. oz. (28.5 ml.)
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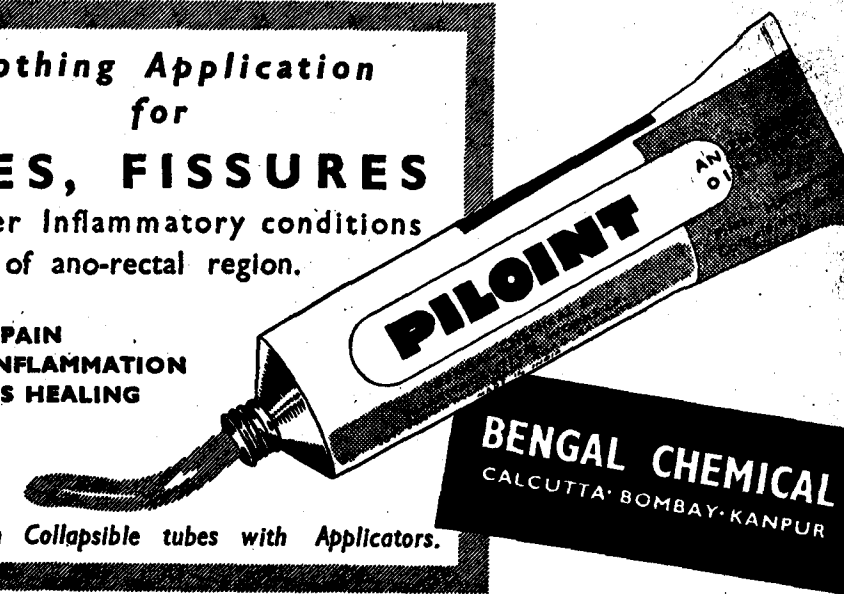
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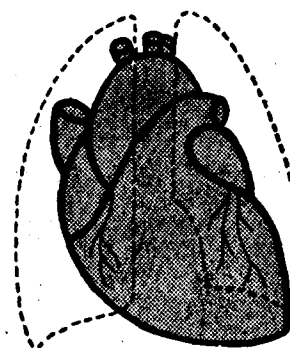


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Each tablet contains:

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