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The Antiseptic

A Monthly Medical Journal

Edited by

Dr. U. Rama Rau, M.L.C. & U. Krishna Rau, M.B.,

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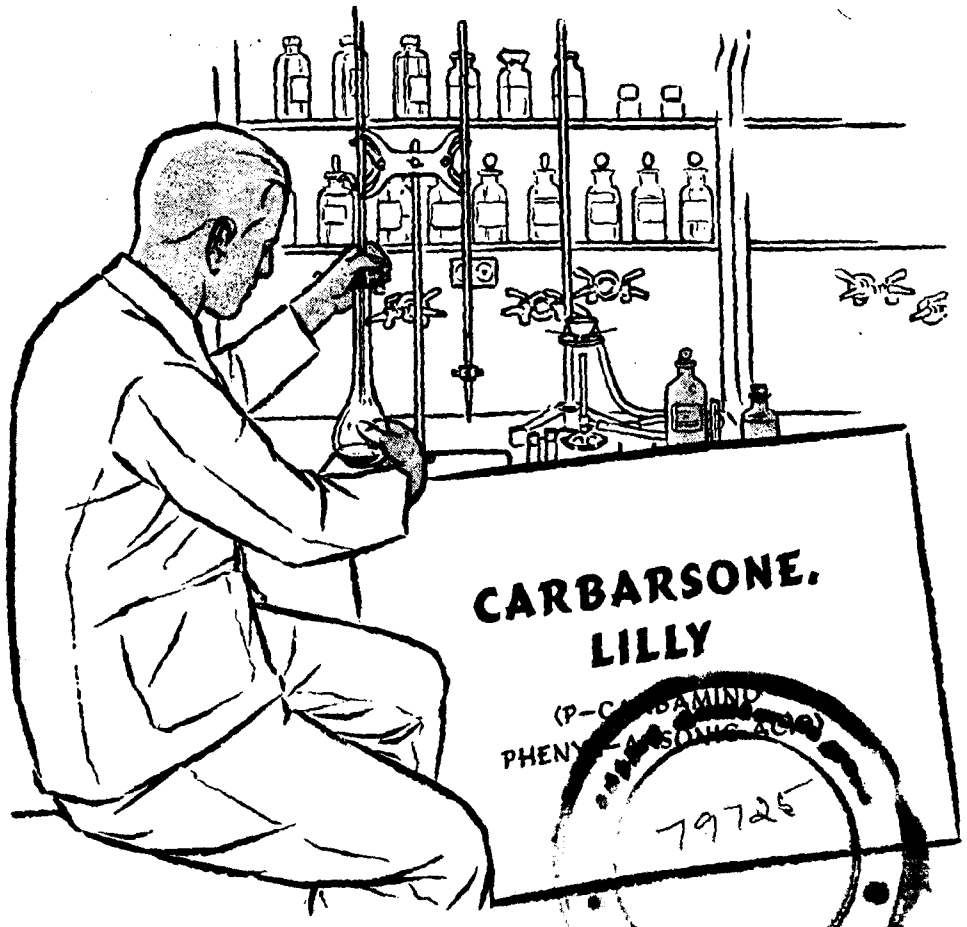

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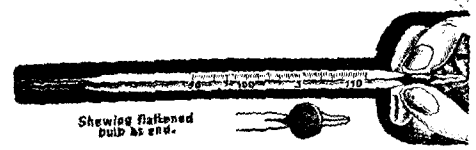

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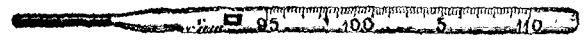
OUT OF FOCUS  ACCURATE

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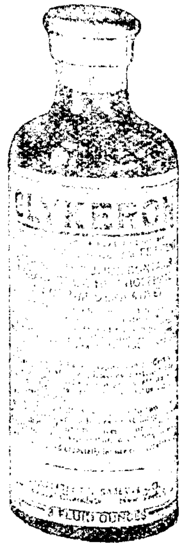

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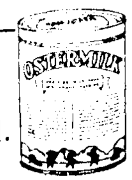

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ORIGINAL ARTICLES

Seeing Ourselves*

BY

Dr. M. V. Govindaswamy, M.A., B.SC., M.B., B.S., D.P.M. (Eng).

Superintendent, Mental Hospital, Bangalore.

I. **Introduction.**—Three years ago, when I visited Professor Jahnel's Klinik in Munich, I was profoundly impressed by the behaviour of a hibernating dormouse. The dormouse is an animal resembling a squirrel and in its periods of activity, has a temperature of over ninety, and any alteration beyond a few degrees brings about its death. During hibernation, however, its temperature is as low as twenty degrees and it is remarkable that its metabolic activities should have been adjusted at this level, consistent with life. In these animal groups, where choice and free will are limited, biological determinism offers the best method for their survival. The speculation is fascinating as to how much there is in common between this phenomenon of hibernation and the stupors, trances and depressions exhibited by human beings under stress. In human beings, however, we are dealing with psychologically determined behaviour with its variety, unlike the single track behaviour observed in purely biologically determined conditions. I am excluding from these

* Specially contributed to "The Antiseptic"

states, abnormalities of sleep and movement due to nervous diseases like sleeping sickness where there are definite changes in the brain. No such change has been found in the phenomena we are concerned with, and these stupors and allied conditions like trances and ecstasies, are usually regarded as reactions to strains and stresses of life. It would be a mistake to consider that these are the only reactions possible. Since it takes all sorts to make a world, all types of reaction could be met with, dependent on heredity, physical constitution, racial characteristics, and training; and this inspite of the fact that the problems of life are fundamentally similar to all human beings.

Kretschmer's work has shown that people of different physical build react differently to similar situations. The thick set type react with a compensatory disorder like Mania, whereas the lean thin type react with morbid introversion and symptoms of disintegration of personality. Even the physical diseases that such people might develop are different. Compensatory abnormalities like new growths are common in maniacs, whereas Consumption—a decompensatory process,is frequently seen in the morbid introverts. Significant instances of racial peculiarities affecting mental reactions are quoted by Professor Seligmann. The Malays are reported to run amok on the slightest provocation. Melancholia is common in Scots, and relatively rare in Chinese and Japanese; and much rarer amongst them is delusional insanity; rigid catatonic states are also less common in Chinese, and it is suggested that it might probably be due to their increased suggestibility, particularly to visual stimuli. It is interesting to note in this connection the observation that it is easier to control mentally disordered women in Japan, which is quite contrary to the experience in India and Europe. The nervous system of the Irish and Italians is more vulnerable to alcohol and that of the Germans to syphilis, although the degree of alcoholism and promiscuity is more or less the same in all communities.

II. **Dynamics and Statics of Behaviour.**—But no satisfactory explanation was forthcoming to account for these puzzling phenomena, until the genius of Freud blazed the trial. His publications aroused intense antagonism in some quarters, and were welcomed with as much raw enthusiasm in others, and in both, with a complete absence of sanity. This intense antagonism can be explained in the light of later experience as due mainly to the content of his studies which were sexual, and which Freud could not help because of the nature of his pathological material.

In his methodology, and in his fundamental contributions, Freud lit another lamp in the Temple of Knowledge. It is a well-founded historical generalisation that the last thing to be discovered in any science is what the science is really about. Men go groping for centuries, guided merely by a dull instinct and puzzled curiosity, till at last some great truth is loosened. In their methodology, psychological studies differ from those of purely physical sciences. We must remember that physical sciences resolve themselves to number, measure and scales. Studies of psychologically motivated behaviour deal with presentations in the mind, how they are arranged, how they interact and how they take effect in behaviour.

A simile might be offered in this connection to help to understand these intricate reactions, with the proviso that like most similes it does not take us far. Imagine a hanging curtain of intricate pattern woven in strands of different degrees of transparency. A lamp plays upon it from behind, which concentrates or diffuses its light and moves about. As we look at the curtain the pattern seems to change, different sets of lines and shadows are emphasised or fade from view, and different features in the pattern are successively brought into prominence. The part in relative obscurity at any moment corresponds with the normal unconscious of any moment. Sometimes the pattern on it appears simple and striking, sometimes confused and intricate.

Try to visualise an obstacle placed close to the flame of the lamp so as partially to screen it from the curtain. A part of the curtain relatively dim is now the only part lit up at all. This corresponds with the abnormal unconscious which has, as it were, taken on a significance of its own, disconnected from that of the main field of light to which it properly belongs. This obstacle symbolises various conflicts in life, which acting on a personality so moulded by hereditary and environmental factors is exteriorised as symptoms, peculiarities, and abnormalities.

Recent researches have emphasised that the factor of "Time" is as important in biological, psychological and even sociological studies as in purely physical studies. The terms heredity, and environment are not merely static terms, but dynamic factors, which profoundly affect the human organism. They can broadly be translated into limits and possibilities. All treatment and attention would be merely a waste of time and money if we assume the static conception of the inevitability of the hereditary background in behaviour, normal and abnormal, which determines in its very inception and for all time what the consequences

shall be. With such a formula there would be nothing to be done about mental diseases at all, and we might as well fold our hands, and let the world wag along without worrying ourselves about the results, or exciting ourselves to change them.

But if we would understand the human organism, and particularly the human mind, from the point of view made possible by the present-day psychiatry, we must realise that we will have to change our thinking processes completely.

As William White puts it, "It is only because we act now 'as if' we could modify human beings, 'as if' their difficulties were removable, 'as if' they could be cured, so to speak, of certain disabilities, it is truly remarkable what extraordinarily beneficial results are obtained. Every reaction of the organism is both hereditary and environmental. Heredity only takes place in an environment, and development itself is a function of the unfolding organism. Whether we attribute more to heredity, and less to environment, or the opposite, is wholly a matter of personal opinion, personal prejudice or individual temperament. Up to the present perhaps we have thought of heredity more especially as presenting certain limitations to the organism. It can as well be thought of also as presenting certain possibilities, the possibilities, however, only to be realised by exposure to stimuli adequate to their development. The element of growth, of development is only a function of time, which is as significant as the space-time continuum of fourth-dimensional physics.

All behaviour can be formulated in terms of discrepancy between desire and attainment. This is equally true of the individual as well as of the group. What "form" the behaviour might take, what its "individual content" is likely to be, is however determined by heredity, and possibilities afforded for development, physical and mental.

III. **Fear, Guilt and Inferiority.**—In this determination of behaviour, its form and content, three psychological factors are of profound importance.

They are feelings of fear, guilt and inferiority. The primitive functions of fear are associated with physical safety, while those of guilt are associated with moral safety. Their biological utility has become less important with the development of the human race. In fact, feelings of fear and guilt, persistently associated with the idea of punishment, actually hinder the development of the individual, the group, and the nation, and keep them in a state of "perpetual immaturity". Fear is

obviously associated with evident external danger like a serpent or a mad dog, with the introduction of the sudden and the unfamiliar, with the feeling of inadequacy such as may occur in the common fears of the dark or of being alone, or may be associated with feelings of punishment. We must not forget that this feeling of inadequacy, to meet the strains and stresses of life is a very important factor in determining that retreat into oneself—*a stupor*.

Fear might manifest itself in several other ways where the causes are less obvious. The abnormal fears termed phobias, which are intense, and yet unreasonable can only be interpreted in terms of symbolism. These phobias might be for closed spaces, open spaces, heights, and might extend to travel in trains, buses, or trams. The person himself recognises its unreasonable nature, and is very much distressed about it. Various explanations have been offered for these phobias. For example, the fear of heights is usually said to occur in that type of individual in whom ambition is associated with timidity. The sensory impressions of unfamiliarity on these heights, are interpreted as those of insecurity and the need is for protection and safety. It is typical of many unconscious tendencies that their impulses may lead to action which have quite an opposite effect to that which is desired. In the unconscious, to reach the bottom means safety even if when the action is carried out by jumping from a height, it may be fatal.

The fear of closed spaces (Claustrophobia) and very nearly allied with it, fear of open spaces (Agoraphobia) are interpreted to be the result of a fundamental attitude towards life on the part of the patient, in which, because of his fear, he has chosen the path of loneliness rather than co-operation, and projected his own feeling of unfriendliness towards life, on to life, which has thus become personified and pictured in terms of loneliness and compulsive confinement.

The bully, the bluffer and the braggart are all examples of over-compensated fear. The apprehensive personality who, because of his inadequacy and fear, wants to clutch hold of and cling to even weeds is another type. All of us are familiar with people, who protect themselves with formulæ and shibboleths, who refuse to think lest they be startled by something unfamiliar, who always crave for "detail" of no importance. They are great talkers, because words are something to hold on to, but they are terrible bores. With them it is "must" and is "must" and "always" where "perhaps" and "sometimes" meet the

facts. Many politicians and officials, can be recognised in this class.

Guilt is in very close relationship with fear and inferiority, and is of the greatest importance in the ultimate development of the sex-life in particular, and the satisfaction of "desire" in general. Feeling of guilt is however relative to the standard which authority imposes; where the parental or the familial attitude is of the Calvinistic type, and religious teaching in terms of sin and punishments in lurid colours, prudishness extreme, the guilt feeling is liable to become exaggerated to a dangerous extent, and is a very common source either of subsequent neurosis, or the other extreme, of rebellion and vagabondage.

IV. All superstitions are based upon fear of punishment, and associated guilt feelings and seek to deflect the punishment by an act of propitiation of a symbolical kind, addressed towards "whatever Gods there be" alive or dead.

Much more spectacular are the so-called obsessions, which can only be interpreted in terms of symbolism, and defensive propitiatory ritual. The apparently ridiculous repetitive rituals of hand washing, touching objects, or counting, are merely a few of the ways in which unconscious feelings of guilt come up to the surface. The sleep walking scene of Lady Macbeth is a magnificent portrayal of the unconscious mechanisms associated with guilt.

The common over-compensation for guilt is priggishness, and the prig is at his happiest when finding fault with others. The "Nosey Packers" the over-conscientious, the enthusiasts of "purity leagues" and the upholders of social morals; a large number of them illustrate clearly the "projection" mechanism of guilt.

When we turn to the causes of inferiority, a feeling often inseparable from that of guilt, we find that they are many. The feeling of inferiority might be due as in the case of children to their relative inadequacy in comparison with the adult. The most familiar example of conscious organic inferiority is that associated with the psychology of those whose stature is below the average in height. Other causes of organic inferiority may be an early infantile paralysis, with deprivation of the full use of an arm or leg, or the possession of a squint which marks a child out for notice, as different from and inferior to his fellows. The feeling also might be hereditary, circumstantial, and unconscious.

Conceit and pomposity, are typical over-compensations for feelings of inferiority. The pomposity, associated, usually with very short people, is due to a defensive tendency to put everything in the shop window in order to disguise the deficiency within. The typical instance of over-compensation for organic inferiority (lameness) is that of Lord Byron "The beautiful but blighted coxcomb. He posed all his life long." On the other hand, the life of Franklin Roosevelt, the present President of America, is an instance, how by sheer grit and will, even such a terrible handicap as that due to paralysis of the leg, could be overcome, and was not merely overcome, but acted as a stepping stone for greater successes.

The School Master, the Clergyman, and the Parent, are often far from being free from feelings of inferiority, and resultant projection mechanisms. They are placed in positions of authority, and by sarcasm, criticism, mirth, pompous precepts, often tend to assume a moral and domestic, stature that exercises its superiority by daily demonstrations of the inferiority of junior members of their family, school and congregation.

It is also wise to remember that in the psychology of criticism, the destructive critic, is being destructive because of his inferiority feeling.

Lastly, it must be emphasised that in feelings of inferiority is the source of fear of reality and phantasy. And in this direction lie ultimately achievements in imagination, its omnipotence, and insanity.

V. **Wit and Humour.**—The most rational and satisfactory defence for these three feelings of fear, guilt, and inferiority is the development of a sense of humour. The purpose of wit and humour is to take the edge off a reality which is too kind. This accounts for humour's close association with tragedy. A classical example is the close association of the Fool with Lear specially in such Scenes as the declamation of Lear against the elements. The greatness of Charlie Chaplin lies in this subtle touch of his, the supreme artistry of portraying lifes's ironies, little and big, with delicate tints. By making us laugh when we are afraid, he helps to restore in us the balance of courage. Humour is probably the most harmless way in which wishes associated with guilt can achieve some means of fulfilment. A feeling of guilt is responsible for a great many funny stories, especially of the sexual kind. Droll tales from Balzac, the Decameson, the short stories of Guy DeMaupassant are a few of them.

A sense of humour will always blunt the edge of inferiority, giving it at least the more tolerable quality of the comic and the ridiculous. Whether it be shortness of stature, feeling sea-sick, getting drunk, or being a valetudinarian, it is always good to see it from the funny side. There have been no greater benefactors of humanity than men like Charles Dickens, Thackeray, Mark Twain, and in our own times W. W. Jacobs, Wodehouse, Herbert Jenkins, and the immortal cartoonists of Punch. Pickwick, Micawber, Wellers, father and son, Huckleberry Finn, and Tom Sawyer, Bindle, Jeeves, Bertie Wooster, Ukridge, and the trinity of Sam Small, Ginger Dick, and Peter Russett, are as alive now, as they ever have been before, and as they are ever likely to be in future. On the screen too, though in a smaller way than Chaplin, Laurel and Hardy, Eddie Cantor, Tom Walls and Ralph Lynn, have great claims to the gratitude of humanity. During times of national and individual crisis, have not the cartoons of Strube, Low, Bateman and others made us more tolerant towards the failings of others, and also made life more bearable. Growth and a sense of humour, are the psychological normal, and desirable means by which we rid ourselves of the undesirable feelings of fear, guilt and inferiority.

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On the Medico Mycological Meaning

of the

Word Levurosis, its Causative Agents, with Special Reference to the Frequency in Tropics of their Incidence in the Respiratory Viæ

BY

Prof. Col. I. Froilano de Mello.

(Nova Goa).

THE term *levurosis*, derived from the French word *levure* (yeast) was created by me in 1918 as indicating the various stages of commensalism in human beings, of yeast-like fungi possessing or not a pathogenic action. It was created on similar lines as the term *flagellosis*, so commonly used in clinical protozoology, and whose best examples we find in human intestinal flagellosis where various agents, some highly pathogenic such as *Giardia*, others of a doubtful pathogenic nature such as *Trichomonas, Chilomastix, Embadomonas*, others finally definitely saprophytic such as *Bodolive* and multiply in the intestine, often causing enteritic disturbances sometimes of a distressing tenacity. In *Archivos de Higiene e Patologia Exotica, Lisbon* Vol, VI. Page 68, we have stated : " nous ne pouvons accepter la designation de Castellani- *bronchomoniliase, bronchooidiomycose, bronchoendomycose* comme un terme generique. Pour designer des maladies causees par les levures en general nous preferons le mot *broncholevurose*, la maladie in special devant etre appelee d'apres le genre botanique de l'agent et la region affectee. Nous aurions ainsi une *endomycose bronchique*, une *saccharomycose pulmonaire*, une *zymonematose du larynx* et comme designation generale une *pneumo, laryngo levurose*. Que l'on m'excuse la creation d'un terme dans une langue qui n'est pas la mienne."

Later on, we have seen constantly in French authors, the name *levuride*, indicating special anatomopathological lesions caused by yeasts, a word similar to *lepride tuberculide*. And on this line our former designation has taken a wider sense and we have definitely kept the name *levurosis* in the meaning already defined in the beginning of this paper.

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* Specially contributed to " The Antiseptic "

But, is there any need of a neologism to include in one single clinico-mycological term the mycoses of this nature? We firmly believe: yes, as the word *Blastomycosis* which designed them formerly has had so many different meanings, varying, of course, according to the botanical sense assigned to the word *Blastomyces*.

A discussion on this matter will first of all show that the word *Blastomyces* cannot subsist in botanical nomenclature, where it is a *nomen nudum*. Castellani rightly points it out in his paper *Champignons observes dans la Blastomycose nord americaine : pluralite des especes* read at the 1st International Congr. of Microbiology 1930: Or com me, malheureusement pour des raisons de botanique, le genre *Balastomyces* ne saurait se soutenir, j'ai emis l'idee de la creation d'un genre nouveau *Blastomycoides*, which the author defines in following terms: *Blastomycoides* Castellani 1926. Syn. *Blastomyces*, *Oidium* p.p., *Cryptococcus* p.p. *Zymonema* p.p. Oosporaceae with abundant mycelium and aereal hyphæ on glucosed agar; abundant mycelium, often with lateral conidia in glucosed bouillon or peptone water, no sugar fermented. These fungi are found in the lesioned tissues under the form of large roundish or oval cells, often budding, surrounded by a well defined double wall and possessing some well marked granulations in the protoplasm. No mycelium in the tissues.

The genus created by Castellani, whatever be its botanical value cannot comprise the whole group of yeasts or yeast-like fungi which were formerly designated under the name *Blastomyces*. Secondly, it does not seem to possess a definite botanical meaning as such—a logism, being synonymous of the old mycological genera, is partly based on characters of the fungus on parasitised tissues and this fact deprives a botanical classification of its full systematic value.

After these remarks on the genus *Blastomycoides* of Castellani let us come back again to the meaning of the word *Blastomyces*. Created by Persoon, it has been successively employed under the following three senses:

(1) A strictly morphological sense, *viz.* "a fungus which buds." Under this acception the most varied fungi, *Endomyces*, *Sporothricum*, *Saccharomyces*, *Oidium*, even the *Mucorinæ*, all fungi giving rise to yeast-like budding cells; might be classified in the group of *Blastomyces*. This word becomes therefore synonymous of fungus, and the clinical term *Blastomycosis* is a paraphrase of mycosis.

(2) The word *Blastomyces* continues to be the expression of a budding fungus, but certain well defined genera, such as

Oidiums and *Endomyces* are excluded, *Saccharomyces* and the so-called *Cryptococcus* should represent the true *Blastomyces*. In this interpretation it is not only the budding aspect of the fungus in the parasitised tissues which forms the base of the classification, but also the character of the cultures. Or, we know that in culture media some fungi give mycelial hyphae and others keep always their aspect of yeasts. The first ones belong to *Mucedineae*, the latter should constitute the *Blastomyces*.

A slight criticism will show that this second meaning cannot also subsist for the following reasons:

(*a*) If we are going to exclude from the group of *Blastomyces* certain well identified genera such as *Endomyces* and *Oidium*, there is no reason to keep the genus *Saccharomyces* which was well defined by Meyen in 1838, long time before the genus *Endomyces* created by Rees in 1870;

(*b*) If the group *Blastomyces* must be based on cultural characters and in the absence of mycelial filaments there is no reason to keep there the so-called genus *Cryptococcus*, whose most known species, *C. gilchristi* the agent *par excellence* of American blastomycosis, shows in cultures large mycelial filaments, provided often with chlamydospores. It will not be out of place to record here that many fungi which do not show mycelial threads in some media, present them in great abundance, when cultured in other media more suitable for their development;

(*c*) We cannot say; on the present knowledge of mycological science, that the genus *Cryptococcus* should constitute the only representative of *Blastomyces* as the so-called *Cryptococcus* is an ill-defined group which modern mycology rejects and tries to dismember.

According to the interpretation which we are now discussing the word *Blastomycosis* would be the clinical meaning of a mycosis caused by *Saccharomyces* and *Cryptococcus*. What should be then the appropriate word for designating the mycoses caused by a *Geothricum* or a *Candida*?

(3) The third acception reserves the word *Blastomycosis* for those cases where the budding fungus has not been classified either because the descriptions are very old and devoid of elements allowing a definite classification; or for those where the

budding fungus has not been cultivated. According to this meaning *Blastomycosis* should include: a) old cases described as such and where no other information is available; b) dermatoses, ulcers, abscesses caused by fungi provisorily classified as *Cryptococcus*; c) diseases caused by yeast-like budding fungi which have not been classified or it was impossible to classify.

The Anglo-American authors apply the word *Blastomycosis* " a toutes les affections dues a des levures et a des champignons a forme de levures ou champignons bourgeonnants, mais dans la pratique en Anglaterre et dans l'Amerique du Nord il ne sert a la plupart des dermatologistes qu'a designer une entite clinique ou, pour parler plus correctement, un group d'entites etroitement liees entre elles, caracterisee par la presence de lesions granulomateuses, papillomateuses ou framboesiformes dans lesquelles on trouve certains champignons a forme de levures (Castellani loc. cit.").

According to this acception the cases where the anatomopathological lesions pointed out above do not exist or those where the lesions are only of inflammatory nature with some erythema covered or not by a membrane could not be labelled as blastomycosis.

It is for all these cases, considered as a whole, that we find necessary the term *levurosis*.

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If the designation *levurosis* comes from the word *levure*, we must first of all define this last word. Its common meaning is of a micro-organism which in contact with a sugar solution gives alcohol and carbonic acid, i. e, which gives rise to the alcoholic fermentation. In Botany the word *levure* takes a more restricted sense: every unicellular fungus of oval or spheric form able to multiply by budding.

As every one sees such a definition is rather vague, as yeast-like form may characterise and often 'more or less permanently many higher fungi: the *basidiospores* of certain basidiomycetes, the *ascospores* of some ascomycetes are a fair example of such pscudo-yeasts.

Guilliermond uses the words *levures vraies* and *formes levures*, but the differences between them are not enough marked: if the former resist to anaerobic conditions and may function as ferments, many *levuriform organisms* do the same, however to a less degree. In contraposition many yeasts are devoid of fermentative power.

Indeed a good differential character may be found in the mycological evolution of these fungi; true yeasts possess internal spores. But it is possible that many levuriform organisms will show the same, when placed in media more favourable to their development.

Such are the difficulties one has to face when starting the study of *levurosis*.

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What are then the agents which should be considered as causes of *levurosis*?

In this chapter it is not possible for the present a pure botanical systematisation, considering the subject on a combined clinical and mycological ground, studying the different classifications of various authors, whose systematics are subject to natural *tatonnements* bearing them often to reject a classification claimed as perfect some months before, I include in the *levurosis* producing group the following fungi:

I. The family *Saccharomycetaceæ* with the following genera: (1) *Schizosaccharomyces* Lindner; (2) *Zygosaccharomyces* Barker; (3) *Debaryomyces* Klocher; (4) *Schwanniomyces* Klocher; (5) *Torulaspora* Lindner; (6) *Saccharomycodes* Hansen; (7) *Saccharomycopsis* Klocher; (8) *Saccharomyces* Meyen; (9) *Hansenia* Lindner; (10) *Pichia* Hansen; (11) *Willia* Hansen; (12) *Monospora* Metchnikoff; (13) *Nematospora* Peglion.

From this family genera 5, 8, 10 11 have already been recorded as human parasites.

II. Genus *Endomyces* from the family *Endomycetaceæ* with some species recorded as human parasites.

Among the anascosporated levuriform organisms:

III. Genus *Candida* Berkhout 1923, Ciferri & Redaeli 1929, comprising the most of the so-called *Monilia*, a name already preoccupied by another fungus totally different and some of the so-called *Cryptococcus*, a designation which should be rejected.

IV. Genus *Goetrichum* Link 1809 emend Cif. & Red. and Langeron & Talice.

V. Genus *Geotrichoides* Langeron and Talice, including moreover the characters given by the above named authors, fungi whose cultures show intermediate characters between the creamy cultures of *Candida* and the membranous types of *Geotrichum*.

VI. The genus *Torulopsis* Berlese 1894 which should comprise the *Torula sensu* Turpin-Pasteur—Hansen *nec* Persoon.

VII. The genus *Klocheria* Janke 1923 (syn. *Pseudosaccharomyces* Klocher 1912 preocc.) comprising the apiculated and anascosporated yeasts.

VIII. The genus *Coccidioides* about which we cannot make further statements as we had no opportunity to work with it.

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The readers familiar with medico mycological literature will naturally be surprised to see here omitted some names so common in mycological publications and it will be necessary to explain the reason for such omissions.

(1) *Monilia* Gmelin 1791 belongs to fungi saprophytes or parasites of plants, and whose characters are totally different (group Gmelin—Woronin *sensu* Vuillemin) from levuriform organisms (group Bonorden *sensu* Vuillemin).

(2) *Criptococcus* created by Kutzing for numerous beer ferments, has been later on employed under so many acceptions and with so many modifications made by every author that either in medical mycology or in pure botany it is now impossible to characterise this genus, initiately ill founded.

(3) *Oidium* Link cannot be used in medical terminology as *O. monilioides* Link, a phytopathological specimen, is totally different from *O. lactis* Fres.

(4) *Torula* Persoon belongs to *Dematiæ* and cannot be employed in sensu Turpin—Pasteur—Hansen.

(5) The classification of De Beurman and Gougerot which had not the suffrage of mycologists has been neglected by its creators themselves.

(6) The classification of Ciferri and Redælli, of Langeron and Talice, and the new genus *Neogeotrichum* Magalhæs are based on many characters which are rather specific than generic. They constitute indeed, appreciable essays for a more rational systematisation, but cannot be accepted for the present in all their amplitude.

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After this discussion we will describe the frequency in tropics of the *levurosis* of human serial viæ. Such facts have already been reported by Castellani in tea plantations in Ceylon ; many

labourers begin to weaken with a chronic bronchitis and muco purulent expectoration. On clinical examination some ronchi and transient rales. The sputum does not show but many fungi, constituted by *Perisporiaceæ* and yeasts.

Our studies show :—

(1) In persons, often, quite normal, yeasts may live as pure saprophytes of respiratory viæ. The extension and frequency of such a parasitism seem to be in relation with the stage of atmospheric humidity.

26 salivæ of normal persons examined during the dry season—nihil.

24 idem during monsoon-21 positive, 3 negative.

(2) In some cases of cavitary tuberculosis we find an association of the Koch's bacillus with yeasts to the same extent as the association of Koch's bacillus with secondary bacteria. It cannot be definitely stated whether such association is a pure saprophytism or if it creates a new stage not devoid of pathogenicity.

The yeasts isolated belong all to the genus *Candida*.

(3) In 45 cases of bronchitis diagnosed by clinicians as common colds, asthmatic bronchitis or suspect of bacillosis, we isolated 3 times the *Endomyces Vuillemini*.

(4) The same association was once noticed in a case of pulmonary actinomycosis due to *Nocardia bovis* Harz.

(5) 10 cases of bronchitis or bronchopneumonias studied during monsoon and whose sputums were sent for the search of Koch's bacillus, did not show any tuberculosis, but numerous yeasts of the genus *Candida*.

(6) It is very common to find yests in the sputums of bronchiectasis.

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It is not possible in the actual stage of our knowledge to determine with precision the role of this parasitism by yeasts : what it seems to us more probable is that the yeasts behave in human organism in the same way as the bacteria, with the same degrees of saprophytism, parasitism and pathogenicity and that at the side of anatomo-pathological processes caused by bacteria, there is room for describing identical processes and syndromes due to yeasts and yeast-like or levuriform organisms.

Difficulties and Dangers in Tonsillectomy *

BY

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I SHALL confine my remarks to those difficulties and dangers of tonsillectomy that I have personally encountered during the last four years. Though my observations lack academic completeness, I hope they will be useful to the members for comparing and contrasting with their own experiences. I shall omit the problems of anæsthesia, as they form a vast subject by themselves.

I propose to group the difficulties and dangers under several headings, according to the successive stages of the operation of tonsillectomy by the dissection method.

I. **The Mouth-gag and its Application.**—1. *The insertion of the mouth-gag* :—I have often had reason to rue my haste in inserting the mouth-gag before the patient was completely under the anæsthetic. The wide opening of the jaw under such circumstances may act like a switch to stop the respiration and the only remedy is to take the mouth-gag off again.

2. *Regarding the type of Boyle-Davis mouth-gag* :—In hefty adults, it may be a job to open out the gag fully, and I prefer a gag which has the curved handle on the left, so that one can use the right hand for opening the gag. Also, I prefer fixed dental protectors to movable ones, as the latter are liable to slip or to make the gag wobble.

3. It is of the utmost importance to hold the stem of the tongue-blade well forwards towards the operator and I therefore detail one assistant especially to hold it in position, and he is forbidden to watch the operation lest his attention be diverted. The Negus's Jack does not seem to be popular with anæsthetists, and even if it is used, the stem of the tongue-blade has to be held forwards in many cases.

4. Opening the jaw too widely, or the clumsy removal of the gag, in a deeply anæsthetised patient may result in dislocation of the lower jaw. This happened in one of my cases, but the jaw was easily put in its proper place and there was no further trouble.

* A paper read at the meeting of the Association of Laryngology and Otology on 21-5-'38, and sent to 'The Antiseptic for publication.

I have found that the 'thumb-nail' depressions on the stem of the tongue-blade wear away rather quickly, and so I use ones with circular depressions and a horse-shoe shaped catch.

II. **The Type of Tonsils one has to deal with.**—I classify tonsils into five varieties as regards the difficulties they are likely to offer during tonsillectomy.

1. *The projecting tonsil* :—This is the hyperplastic type we meet with commonly in children, and its dissection is generally easy. I have reason to be afraid, however, of unusually large tonsils, for these patients often stop breathing during the operation without any obvious cause. I do not know whether these tonsils denote a 'status lymphaticus', if there is such a condition at all.

2. *The 'buried' tonsil* :—These are found in adults, and are the result of long-continued sepsis. In spite of their small size, they are troublesome to dissect out on account of the fibrous tissue which anchors them to the tonsil-bed and the risk of a smart hæmorrhage immediately after dissection has to be anticipated. I do not like to remove such tonsils under local anæsthesia.

3. *The friable tonsil* :—Sometimes the tonsils seem to crumble at touch of the vulsellum, and it is difficult not only to get a hold of them, but also to keep to the proper plane of dissection.

4. *The 'bilobed' tonsil* :—I have encountered three or four cases where the tonsils seemed to be divided into upper and lower lobes by a transverse cleft in their middle. I believe these are instances of the supratonsillar recess being in the substance of the tonsil instead of at the superior pole, and this occurrence is an argument to prove that the recess should really be termed intra-tonsillar recess, as it is entirely surrounded by tonsil tissue. It may be difficult to remove such tonsils in one piece, but the cleft rarely (if ever) extends right through the thickness of the tonsil.

5. *Tonsils with lingual prolongation* :—I have encountered this type in one case only, in which the tonsils and the lingual tonsil seemed to form one continuous horse-shoe shaped structure. I had to carry the dissection right down to the space between the inferior pole of the tonsil and the side of the tongue. I must have made a valvular opening in the bucco-pharyngeal fascia during this dissection, for immediately after the operation the

patient developed an alarming subcutaneous emphysema in the submaxillary region, extending upwards to the eyes. Fortunately, the emphysema went down spontaneously in about 48 hours.

III. **The Bed of the Tonsil.**—I suppose all of us, when we do a tonsillectomy, aim at leaving the tonsil-bed covered by its white fascial layer. Under these ideal conditions, not only is there a minimum of bleeding, but a minimum of post-operative pain. We all know that acute tonsillitis is really a painless condition and the pain which actually occurs is due to the accompanying myositis of the faucial pillars and tonsil-bed. That is why Quinsy is so agonisingly painful, and why a neat dissection of the tonsils in the proper plane of cleavage is followed by very little pain. The problem of hæmorrhage during tonsillectomy has largely to do with the bed of tonsil, for out of the five arteries which are said to supply the tonsil, only one (namely the tonsillar branch of the facial) really supplies it entering at the junction of the middle and lower thirds, while all the rest supply the bed of the tonsil. I have been on the look out for the paratonsillar vein of Denis Brown and have found it in a few cases, lying like a flat ribbon along the lateral aspect of the tonsil. It has nothing to do with the tonsil itself, and the importance of recognising it lies in avoiding injury to it, which can cause a troublesome hæmorrhage. To deal with the varying amount of oozing from the tonsil-bed during tonsillectomy, the measures I adopt are :—

(1) Administration of Calcium lactate, 20 gr. tds. for three days before operation. This is a controversial subject and I still have an open mind about it. I think the varying divergent opinions regarding its efficacy are due to three variable factors concerned namely :—

(*a*) The particular drug employed—the lactate is probably as good as any of the more expensive products; to facilitate its absorption, Vitamin D is necessary, and as our patients are usually ill-nourished and weakly children, I administer the lactate along with glucose—D.

(*b*) The dosage—our aim is to produce a rise in the blood-calcium, and there is no risk of over-dosage as any excess calcium will not be absorbed at all. I give 20 gr. tds. before food (as it acts best in an alkaline medium) for 2 or 3 days before operation,

(*c*) The duration of administration—the pharmacological effect of calcium which concerns us most is the lowering of capillary permeability. It has been found by several observers that, when we start giving calcium, the blood-calcium rises sharply to a level *above* the normal in 48 to 72 hours, and then falls to normal or perhaps below that level. We should aim at operating at this optimum time, and so one of the causes for pessimism regarding the value of calcium before tonsillectomy may be the administration of it for too long a period.

(2) It is unwise to operate a woman during or just before menstruation. If I have the choice of the time, I select the end of the first week after the menstrual period.

(3) During the actual operation, I depend largely on Digital pressure over gauze, to control ordinary bleeding which is only an oozing from the tonsil bed. A further help is gauze wrung out of H_2O_2. As regards ligaturing vessels, I had to do so only in four cases in the last four years; but this fact, as well as the fact of not having any deaths from hæmorrhage, I ascribe partly to my comparatively small series of a few hundred operations, and to good fortune.

(4) *Sequelæ* :—(*a*) Secondary hæmorrhage—I have had experience of only two cases of secondary hæmorrhage both due to early separation of the sloughs on the 4th or 5th day. One I controlled easily by holding a pledget of adrenalin in contact with the tonsil-bed for a few minutes, but in the other case, I had to suture the pillars over gauze and remove the gauze after 48 hours. I regard this early separation of sloughs as due to sepsis, on account of not keeping the throat clean after the operation.

I think we can reduce the risk of secondary hæmorrhage by not injuring the tonsil-bed and pillars, not leaving any tonsil stumps behind, and by the insistence on keeping the throat clean until healing has taken place. Swabbing the cavities with H_2O_2, however, may predispose to hæmorrhage and sepsis by removing healthy sloughs.

(*b*) Sepsis :—I have encountered only one case in which the temperature rose above 101°F, a few days after operation. The reason was a chronic maxillary sinusitis. Since then, I always make sure of the absence of infection in the nose or nasopharynx before doing a tonsillectomy.

(c) Lung complications, otitis media and other sequelae, I have not yet met with in my practice. But I believe that we can prevent post-operative lung infections to a large extent by carefully mopping out the pools of blood in the mouth and particularly in the naso-pharynx before we consider the operation finished.

I may close by quoting the final paragraph of a recent broadcast speech by H. G. Wells, which applies to us also. He said "My quarter of an hour is at an end. I haven't said half of what I would like to say. But, if I have made you a little discontented with what we are doing with this precious inheritance of ours, I shall not have used this bit of time in vain."

Discussion

Dr. Cherian :—Wished to know if the speaker found any special or extra benefit by way of checking the Hæmorrhage, in using mops soaked in $H_2 O_2$ and not Turpentine Swabs as used by him.

The speaker replied that he had not tried Turpentine mops.

During the course of his talk, Dr. Kamath said that he had only four occasions to tie and ligate a bleeding point.

Dr. Srinivasan :—Observed that his experience was to the contrary and more cases required a ligature.

Dr. Cherian :—Explained the above controversial observations that it was merely a question of time. Almost every bleeding point from the Tonsillar bed will stop if sufficient time and pressure is allowed. But in institutions where they have to do a number of cases in a day, time is a very important factor, and hence it is safer and quicker to tie the bleeding points then and there, instead of applying pressure and waiting.

Dr. Jacob :—Wanted to know if the speaker has ever noted that the right Bed bleeds more than the left, and if so can he give any explanation for the same, for which Dr. Kamath replied that he had not observed.

Dr. Srinivasan :—In agreeing with the observation of Dr. Jacob regarding more bleeding in the right Bed, gave his explanation that it was because some of the Surgeons remove the left Tonsils first, and pack the cavity, and then proceed to dissect the right. By the time the removal of the right Tonsil is finished, sufficient time and pressure has been allowed for all the bleeding points in the left bed, to stop bleeding, and hardly any time is allowed for the Right fossa and naturally we find that there are one or two bleeding points to be ligated. And conversely if we do the right Tonsils first, we may find comparatively more bleeding in the left fossa.

Dr. C. V. C. Rao :—Narrated his experience in a case of Tonsillectomy having very bad Secondary Hæmorrhage, which started on the 4th day, and which he was called upon to attend, as the Surgeon who had operated had left Madras. Every time, the bleeding stopped with the application of clamps but only to start bleeding again profusely after a day or two. He was not able to find any particular or definite bleeding point. The bleeding stopped of its own accord after a week. Dr. Rao said that he could n't explain this. He later learnt that the patient (a lady) was in her menstrual period during and after the operation. Later, the surgeon who had operated told him that it was a bad type of Adhesive tonsils, where he had to pull and cut sometimes.

Dr. Sanjiva Rao :—Spoke about the so-called "Border line" cases of Tonsils, where the question of Tonsillectomy is very difficult to decide. In some of those "Border-line" cases where you definitely advised Tonsillectomy, due to some reason or other the parents refused the operation for their child, and later they found that their child was none the worse for not having undergone the operation. Dr. Rao thought that in such cases it was better to try some conservative treatment like cod liver oil, proper nutrition, and throat-vaccines.

Dr. E. V. Srinivasan :—Wanted to know from the president, if in his hospital work, he had any cases sent to him for tonsillectomy by Ophthalmic Surgeons, and if so what were the eye complications that he usually found, which weighed with him in deciding on the operation? The President said he did get a number of cases from Eye Surgeons, but it was rather difficult now to say what eye troubles they had. Anyway, in deciding on an operation, what weighed with him mostly were the appearances of the Tonsils and the usual indications for Tonsillectomy.

Dr. Kamath:—Said that he removed Tonsils in a lady who used to have constant attacks of red eyes. The next day after the operation, she had severe type of conjunctivitis (which she never had before) and when it subsided in due course, she was rid of her red eyes completely, which was about 2 years now.

With a vote of thanks to the chair, the meeting terminated.

External Otitis

BY

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I HAVE chosen this subject for tonight's discussion, partly because it a common affection and partly as it is the disease of this season.

The external ear is fairly vascular, being supplied by branches of Post Auricular, Temporal and Internal Maxillary Arteries. Its nerve supply, derived from the auricular branch of the vagus and auriculo-temporal branch of the mandibular is responsible for several reflex pains about the ear. Lymph drains into the pre-auricular, retro-auricular and parotid glands, the last being situated both on the surface and substance of parotid gland; all these eventually drain into the superior deep cervical glands.

The chief peculiarity of this region is that there is no subcutaneous fat, and practically no subcutaneous tissue especially, in the deeper parts, the skin being closely adherent to the subjacent Perichondrium or Periosteum as the case may be—so that the slightest inflammatory exudate causes severe pain out of all proportion to the inflamed surface, and a thorough examination is often-times difficult and relief is urgently sought for.

Aetiology.—Classification is a bit difficult as there is considerable overlapping. I have attempted it as follows:—

I. **Predisposing.**—1. *Constitutional.*—Diabetes, anæmias, lowered vitality in general, focal infections. Hot months of the year, probably due to excessive activities of the skin. Prolonged internal administration of KBr is said to have a similar effect, in which case it ought to be commoner in the lunatic asylums, but I doubt if it is so.

2. *Local.*—Pruritus or Itching due to any cause, *e.g.* excessive wax, chronic middle ear suppuration, especially the scanty pus which dries up in the canal, instillation of oil into the ear, insects, keratosis, or due to fungus. Sometimes itching is due to a healing lesion. The importance of itching is in the scratching which produces the little trauma and breach of surface, not always remembered, necessary for entrance of the bacteria.

* A paper read at the meeting of the Association of Laryngology and Otology on 18-6-38 and sent to 'The Antiseptic' for publication.

II. **Exciting Causes.**—Bacterial or Parasitic: the former may be organisms from the skin middle-ear or B. coli. Parasitic Otitis is due to Asperigillus. Irritants poured into the ear to relieve some other condition *e.g.* oil and chilli seeds or oil and assafœtida.

Pathology of the lesion is simple enough. Inflammatory congestion and infiltration which may go on to suppuration and may be localised or diffused. When the lesion is a furuncle or crop of these, due to infection of the pilo-sebaceous glands, the lesion is situated in the outer cartilaginous portion, but a lesion due to trauma may be situated *anywhere* and may be of any severity and give rise to great difficulties in diagnosis. I have known a child literally tear out its drum with its untrimmed finger nail. The glands are involved very early, much earlier than in any other part of the body and it is quite a common experience for these glandular involvements to be more obvious than the original lesion itself. Neglected cases may go on to extensive caries of the underlying bone or cartilage or suppuration in the associated glands.

Parasitic Otitis is due to the growth of the mould Asperigillus. Three varieties, yellow, black and green have been described. I have never seen the third variety. The yellow and black varieties are quite common and their non-recognition is quite a frequent mistake, the patient returning within a few days with a complaint of the recurrence of the pain. In the earliest stages the two varieties have very distinctive naked eye features, appearing like light yellow turmeric powder (Asp-Flava) or charcoal powder (Asp-Nigra) respectively, strewn on the meatal surface, especially *towards the deeper parts*, (rather rare outside towards the pinna) presenting to the naked eye a tiny globular head and fine hairy root. This structure can be made out more clearly with a Siegel's speculum .Later, with the onset of inflammatory phenomena, and desquamation, naked eye distinction is difficult. It can always be made out under the microscope with the characteristic mycelium, hyphæ and spores. The Asp-Flava is translucent and Asp-Nigra is black in appearance.

Signs and Symptoms.—Pain of varying intensity is undoubtedly the most prominent symptom. Direct pain on the lesion itself, indirect pain due to movement of the inflamed part, as opening of the mouth or manipulation of the auricle, and pain over the associated lymphatic area. In the very early stages it may be impossible to easily locate the lesion, but pain and

tenderness can always be elicited either by carefully palpating the meatus or manipulating the auricle or by movements of the jaw or tragal pressure. Later, appearances vary with the severity of the lesion e.g., whether it is a single or crop of furuncles or diffuse external otitis etc. In the severest varieties, the patient suffers from the most intense throbbing pain and agony, with fever, brawny indurated swelling over the auricle, mastoid and parotid regions, even extending as far as the lower eyelid—meatus is reduced to a mere slit, and any movement about the face, or pressure or even a draught of wind is painful. He presents an immobile and purposely expressionless face. Suppuration may ensue and progress in any of these areas. Between these two extremes all varieties are met with.

Asperigillus infection is usually in the deeper parts of the meatus, at the Isthmus or beyond—and is invariably associated with severe pain, exfoliation of epidermis and thin watery discharge, though in quite a number of cases, there is a history of a brief period of intense itching and irritation. The patient in desire to alleviate the itching by scratching, hastens the early onset of the pain. In some instances, however, I have come across undoubted Asperigillus infection (early) with no pain or discomfort, whatsoever. Probably the irritation and pain start only after the Malpighian layer is penetrated by the fungus. This infection is quite common in George Town especially, among the people near the big grain and fruit markets and timber yards, and the habit of instilling oil into the ear probably helps to a great extent to collect the spores into the ear as they are wafted about by the wind.

DIAGNOSIS.—is easy enough in the large majority of cases. Difficulties in diagnosis arise usually either (1) in the very early and mild cases, where it may be difficult to say, whether it is a case of External otitis at all, or only a case of Reflex Otalgia or (2) in the severer cases with retro-auricular swelling and œdema, where we have to diagnose, whether it is External otitis or Mastoiditis or both, or (3) in some cases between Parotitis and External otitis, though this is often easy.

In the first instance, External otitis *vs.* Reflex otalgia, a typical difficult case would be—*e.g.* patient comes complaining of pain in the ear very early—one in which there is probably a small infected scratch in the deepest parts of the meatus especially towards the inner end at its antero-inferior angle-tragal pressure or mainpulations of the auricle are not yet painful and glands not affected. Severe pain may be complained of even at this stage and it may be difficult to say that it may not be a Reflex otalgia if any suspicious lesions are present in the

mouth or Pharynx. Reflex otalgia is usually due to (1) Lesions in the Nasopharynx especially near the Tubal orifice (2) Tonsillar affections (3) Teeth-caries, root abscess, impaction etc. (4) Lesions in the Pharynx (5) Extrinsic Cancer of Larynx.

If no obvious cause is found for reflex Otalgia and inspection of meatus is indefinite, and yet the patient complains of earache (as mentioned above due to some deep-seated and inaccessible early lesion,) diagnosis may become really difficult, though not of serious import, if we have *to commit ourselves to a definite opinion straightaway*. In these cases, I always place reliance on a therapeutic test. External otitis can always be relieved by warmth and heat. If a few warmed drops, say, of carbolised glycerine with fomentation from a radiant carbon lamp relieve the pain though temporarily, it is External otitis—otherwise reflex otalgia.

The points of differential diagnosis between acute External otitis and acute Mastoiditis have been well emphasised in text-books; so I shall only briefly mention them. To begin with, in all these cases pointing to poor local defence,—and these are often the cases that give us difficulty in diagnosis and treatment,—I examine the urine, and then do a general systemic examination if necessary to ascertain the cause.

The actual points of differential diagnosis briefly are:

EXTERNAL OTITIS.	ACUTE MASTOIDITIS.
1. *Pain.*—Continuous, increased by movements of the jaw or auricle, tenderness over the lymph glands.	Onset of pain after a period of acute ear-discharge—pain stabbing and intermittent and deep seated.
2. *Swelling.*—Pain and swelling in the cartilaginous portions in furunculosis.	Sagging of posterio-superior meatal wall. Tragal tenderness never present.
3. *Drum.*—Normal.	Acutely inflamed and red or perforated with pulsating discharge.
4. *Tenderness.*—Superficial.	Deep-seated over antrum or mastoid tip or posterior mastoid border.
5. *Discharge.*—Thick, scanty and blood stained.	Muco-purulent and copious.
6. *Hearing.*—Normal or very slightly affected.	Considerably affected.
7. *Retro-auricular groove.*—Absent.	Present.
This is due to the different planes of inflammation *i.e.*, subcutaneous and periosteal respectively.	
8. *Skiagram.*—Healthy Mastoid.	Cloudy contents or breaking down cell walls.

Notwithstanding all these points in differential diagnosis, occasionally we are confronted with great difficulty in estimating the actual lesion or combination of lesions present in a given case. Thus, there may be acute External otitis and acute Mastoiditis, or External otitis and Chronic Mastoiditis, or External otitis and middle ear suppuration, acute or chronic—and chronic for some other reason than Chronic Mastoiditis. External otitis with retro-auricular swelling and even imitating sagging of postero-superior meatus wall and redness of adjacent drum head may be present if it is due to trauma. The important point is to remember all possible combinations of pathology in this region during investigation of a doubtful case, and even examine under an anæsthetic if necessary for correct diagnosis. It is commonly stated "when in doubt as to whether it is a case of External otitis or acute Mastoid, treat for the more serious condition". But the doubt *must be really genuine*. I dont think it is wise or really safe to open *through a retro-auricular abscess* a mastoid cortex to find the antrum healthy, and thus run the risk of infecting these healthy cells with the ordinary pyogenic organisms. The drainage from some of the half opened cells may be incomplete, and the other alternative of having to exenterate all the cells is tedious enough.

TREATMENT—Is simple and quite efficacious. I never use the knife unless there is definite pus formation and even then, only go just deep enough to thoroughly drain the abscess without any curetting. If it is accessible through the meatus it can be tackled by a longitudinal incision by that route, or if it is pointing outside in the retro-auricular or tragal regions it can be opened there. I never syringe the ear in these severer cases.

The routine treatment is conservative and consists in inserting a wick gauze or cotton dipped in warmed "Iodex with Methyl salicylas" (Menley and James), into the meatus, very gently and as far as possible. The tender areas—auricle, retro and pre-auricular regions are thickly painted with Iodex, the part is fomented with radiant heat from a carbon filament lamp or any powerful Electric Bulb which radiates sufficient heat, for about 10 minutes. Then the whole area is covered with cotton wool and bandaged. In every case there is instantaneous relief. A purgative if bowels are not free and liquid food, if munching solids is difficult. The dressing and fomentation may be repeated 2 or 3 times a day, with a Veramon Tablet if necessary for the night. If the patient is not relieved within 24 hours to an appreciable

extent, then there is either sugar in the urine or pus formation both of which require supplementary treatment. To prevent recurrence, general health must be attended to and all local causes, such as asperigillosis, wax collections etc., must be remedied. For aspergillosis of the ear, instillation of 2% Salicylic acid alcohol after cleaning the meatus, for a period of 3 weeks at least is the one recomended. This instillation should not be used in the first instance after cleaning, as the skin is usually ulcerated and the smarting is intense. Dusting with Boric powder for a few days after cleaning and then instillation of the above mentioned drops as directed is the most efficient way of dealing with aspergillosis; no oily solution should be used at all.

Eczematous External otitis responds very well if treated with inunctions of white precipitate ointment into the affected parts with of course attention to the middle ear discharge which often accompanies it.

Vaccines are very useful in preventing recurrence, but this year, for children I have used Urea Sulphazide Tablets (Union Drug Co.) with good results. My experience of Collosal Manganese has not been very encouraging.

Discussion

Dr. V. R. Kamath:—I wish merely to make a few remarks on one or two aspects of the subject which have interested or impressed me particularly in the course of my practice.

I view the differential diagnosis from two angles; namely those conditions which are mistaken to be external otitis, and those cases of external otitis which are liable to be diagnosed as something else.

1. In the first category, the commonest pitfall is otomycosis. When I began working in Royapuram Hospital three years ago, I used to verify my diagnosis by microscopic examination of the stuff syringed out from the ear; (adding a drop of 10% NaOH to the material on a glass slide, covering with a cover-slip edged with vaseline, leaving to stand for some hours in order to dissolve epithelial debris, and examining under the low power). One soon learns, however, to recognize by the naked eye, the blotting-paper appearance of the sheets of desquamated epithelium with the 'pollen-grain stippling' consisting of the black, yellow, brown or gray mycelial heads. The use of glycerine ear-drops in these cases merely makes matters worse, since glycerine is an excellent medium for the growth of fungus. I use Salicylic acid in alcohol (10 gr to one ounce) for ear-drops for two weeks, in such cases, as all the spores may not be filled in a shorter time and the patient may return with a fresh colony of Aspergillus.

The other conditions which may be mistaken for external otitis include Erysipelas and Herpes, but I shall not dilate on them.

2. In the second category, the most frequent mistake made, in cases of acute diffuse external otitis, is undoubtedly mastoiditis.

Recently, I was summoned to hospital by telephone, on a Sunday morning, for a mastoid operation and found the patient shaved and the theatre ready. The patient was in great pain, the swelling around the ear resembled that occurring in a 'zygomatic mastoiditis' and there was a profuse purulent discharge from the ear. On examining him, however, I found that the tenderness over the mastoid region was only superficial (that is to say, he did not mind a deep continued pressure on the bone), and on wiping out the discharge, the drum was intact and normal. He was put on Ichthyol dressings, staphylococcal vaccine, and Prontosil, and was discharged without any signs or symptoms in four days. I have myself made a similar mistaken diagnosis in another case, the wife of a medical man, but as I was slightly in doubt, I referred her to our President who corrected my error, and so she escaped an unnecessary operation and a prolonged convalescence. When there is a middle-ear suppuration combined with an external otitis, as in the second of the cases I have quoted, one may be sore put to it as to whether the mastoid should be opened. The presence of only superficial tenderness, an anterior perforation, and no pulsating discharge through the perforation are, in my experience, reliable points against the diagnosis of mastoiditis.

As regards the treatment, I have only to say a few words. In every case of bilateral or recurrent external otitis in patients over 40 years of age, I examined the urine for sugar: in two such cases the glycosuria was never suspected by the patient until I happened to discover it on account of his ear-condition, but more commonly one impresses the patient favourably by popping the question to him, as to whether he is diabetic, and he exclaims "How ever did you guess?". In the case of children with recurrent boils in the ear (and elsewhere, I suppose) it is well to enquire into the daily consumption of carbohydrates. Cutting out chocolates may bring about an immediate improvement.

The local treatment has been well described by the reader of the paper and I only wish to say that I have obtained very good results with the use of antivirus. In cases of recurrent furunculosis of the meatus, or in the chronic eczematous conditions, I pack the meatus with cotton-wool, soaked in mixed streptococcal and staphylococcal antivirus (after cleansing the meatus of discharge and previously used antiseptics), and instruct the patient to keep the pack continuously moist with the antivirus for 24 to 48 hours. I have been surprised to find cases of intractable eczematous external otitis with a history of many months' duration and many modes of treatment clearing up within two or three days by antivirus therapy. In every case of furunculosis I give a course of Bayer's Staphar, intramuscularly, which is not only curative but prevents recurrence.

Dr. Cherian's remarks:—Referring to the points of differential diagnosis between External Otitis and acute Mastoiditis—if the examination of the pus in the meatus shows only staphylococci, then it is only a case of External otitis, because in acute Mastoiditis, strepto and pneumo-cocci are invariably present.

Referring to treatment, he remarked that Icthyol glycerine dressings were quite satisfactory, but recently he had used Otalgan, for External otitis with very good results.

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CASES AND COMMENTS

Typhoid Case

BY

Dr. D. G. Chourikar,

Medical Practitioner, Wun (Berar).

A FEMALE patient, aged 20, living in a village, started her complaints with sudden rise of temparature with severe abdominal pain and headache on the 5th day of her menses. First day, the pain was about the uterine area but soon travelled to epigastric region and was localised there till the last. On the 3rd day of the illness (on 9-8-1937), the pain being unbearable I was called for. When I examined her, I found her temperature 102°, tongue deeply coated, bowels constipated, no tenderness over uterine area. She complained of unbearable excruciating pain of intermittent character in the epigastric region. I gave her a soap-water enema, and prescribed Bismuth Salicylas with salol one powder every 4th hour, and a dose of Paraffin at bed time. Next day (on 11-8-37), at about 9 in the morning, a man was urgently sent to me saying that her condition became worse. I reached there in the evening and found her in the following state:—Temperature 102.8°, Bladder distended due to retention of urine, semi-conscious. No motion during 24 hours. One c.c. pituitrin given and antiphlogistine over bladder applied. A dose of alkaline mixture was given every 3rd hour. Two hours after injection, she passed about 15 ozs. of urine. Digitalin and Strychnine were given for heart. Epigastric pain continued and she was restless throughout the whole night. At 4 A. M. Santonin and calomel was tried. No change in pain; temperature rose up to 104°, urine was drawn at 4 P.M., by catheter. No change in condition throughout the day. At midnight, Glycerine enema was given when six round worms with green blackish stools were passed. But this also did not improve her state. I then thought that the case may take a turn to Typhoid and advised her relatives to take her to my place where better help was available. She was brought to my place (under hyoscine hydrobromide).

On arrival here on 13-8-37, I kept her on the following treatment:—

℞ (i) Pot Acetas ... gr. xv
Pot. Citras ... gr. x
Liq. Ammon Acetas ... ʒ i
Spt. Ammon Arom ... ♏ xv
Adrenaline chlor ... ♏ v
Tr. Calumba ... ʒ ½
Syrup aurentii ... ʒ ½
Aqua ... ℥ i
Mft. ℥ i every 4th hour.

(ii) Acid Sodi Phosph ... gr. xv
Urotropine ... gr. v
Ft. one to be given every 4th hour—Alternately with above mixture.

(iii) Glucose Saline by Rectum.

(iv) Urine to be drawn by catheter every evening.

The *Pathological examination* gave the following results :—

(1) *Blood report* :—No. M. P. found ; Poly 46% ; Lympho 49% ; L. Mono 1% ; Eoseno 4% ; W.B.C. 4000 per c.m.m.

(2) *Stools* :—Ova of Ascaris L. present in fair numbers. No R.B.C. colour blackish, no blood.

(3) *Urine* :—Colour—turbid, brown; Sp. Gr.—1020; Reaction—Acid ; Albumin—Present trace ; Sugar—Nil; Deposits—Pus-cells present ; Casts—nil ;R.B.C.—nil ; Urates— present.

With the above line of treatment, she was kept also on barley-water, Glucose D., and Mossambi juice. To discover the cause of pain, another physician from district place was also called in consultation. He thought that the pain might be due to appendicitis. His reasonings were that she had first complained of pain in that region and also that he felt a mass near about appendix. He advised me to keep an eye on it and get it X-Rayed after this acute attack passed away. I, however,did not agree with this as the above pathological report was more in favour of Typhoid ; and the following reference supports it :-"The absence of Leucocytosis is of value in distinguishing typhoid fever from various septic fevers and acute inflammatory process occurs in Typhoid, the Leucocytes show increase in Polynuclear forms and this may be of diagnostic moment" (Osler, pp. 18) ". However, my friend agreed to my line of treatment but I became suspicious of my diagnosis.

On the 9th day of illness, the typhoid eruptions all over the abdomen and chest were seen ; the temperature continued between 100° to 101°. Though slight nervous symptoms were marked on the 10th day, they required no special treatment. The retention of urine still continuing, bladder was given Boric lotion wash daily from the 10th day. With this, the temperature came down to 96.6° on the 14th day. This day, she passed urine of her own accord, but the atony of bladder was still marked, as she had to exert force while urinating. This state also passed away gradually and on the 19th day, she could pass urine easily. The epigastric pain gradually subsided from the 14th day.

My apology in sending this for publication is that during my practice of 12 years, I have not come across a Typhoid case with these typical symptoms *viz.* (1) site and severity of pain with no tenderness in right illiac fossa and (2) retention of urine. There was absolute constipation. The doubt of appendix was removed by X-Ray after a month of illness. The appendix is clear and free, no other abnormality was found in abdominal cavity.

I request my fellow brothers to throw some light on this.

Eruption of Canine Under the Chin

BY

Dr. S. K. Gupta, B.D. SC., B.O.,

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THIS exceedingly rare condition was recently met with by me in a small village of Sialkot district in the Punjab.

The patient, a Boluchi, aged about 25 years, was unfortunately unfamiliar with English, Urdu or Hindi and consequently was unable to give a clear and concise history of himself. He made it clear, however, that when a small boy, he received a kick on the face from a cow and the eruption of the tooth under his chin had taken place not more than 12 months previously ; *i.e.*, when he was 24 years of age.

Examination of the dentition in the upper and lower jaw showed the former to be complete and normal in every respect,

and the lower dentition to lack the first incisor teeth on the right and left sides and to exhibit on the left side a retained deciduous canine. X-Ray examination showed the permanent canine implanted in the lower border of the mandible, and it was evident that the greater part of the root of the tooth had not been formed or had been absorbed. The tooth was extracted without difficulty and the diagnosis of absence of the root confirmed.

In the literature available to me, I have been able to find only two similar cases. In 1925, Whittles recorded an almost identical case in a girl aged 10 years. In that case there was a history of injury at six years of age followed by periodontitis in the region of the lower right temporary incisors and canine. The treatment given by a medical practitioner resulted in the formation of a sinus and later on the extraction of five temporary teeth. Six months afterwards "a sequestra came away through the external sinus, which now healed, leaving a depressed scar through which the inferior canine erupted." Extraction of the tooth showed "the loss of three-twentieths of an inch in continuity of the root with the crown", and this Whittles explains as being due to the tooth sac turning a somersault forwards and strangulating the dentine papilla. In the present case, I think it probable that the absence of a root was due to absorption after formation.

The second case was recorded as follows :—The patient was a little girl, aged six, and had a left lower permanent canine erupted below the chin. The history of the case was that three or four years ago she had very bad diphtheria. When she was convalescent, about a fortnight after, the lower jaw began to swell uniformly and an abscess formed discharging a good deal of pus. Soon after, two teeth were extracted liberating a quantity of pus and a sequestra separated when matters seemed to quieten down. Subsequently, however, four sequestra appeared in the chin; these burst, leaving sinuses from which necrosed bone came away. Three of these healed while from the fourth, the left lower canine appeared.

Ectopia Vesicæ and its Treatment

BY

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THE condition of Ectopia Vesicæ is congenital and is due to a developmental defect which results in the absence of the anterior wall of the bladder and non-development of the lower portion of the anterior abdominal wall. In these cases, even skeletal defects are found. The symphysis pubis is absent and the horizontal ramii end in the inguinal region on either side. The innominate bones are usually rotated upwards and sacrum is convex anteriorly. The navel is absent. The condition is due to impaired development of the anterior wall of the allantois and the lower segment of the abdominal parietes.

The condition causes great discomfort to the patient owing to the urine constantly dribbling on the surface and wetting the surrounding parts. The urinous smell and irritation and eczema set up under such conditions from birth are a source of great worry both to the patient and his parents. The condition is easy to diagnose as in such patients there is a red patch of mucous membrane in the middle at the lower end of the abdomen. This represents the posterior wall of the urinary bladder which has been pushed forward by the abdominal contents. On the margins of this red area laterally, the openings of the ureter can be easily recognised owing to jets of urine coming out of the openings from time to time. At the lower end of the red area can be seen the rudiments of a cleft penis in a condition of complete epispadias. Other developmental defects accompany this condition, *viz.*, undescended rudimentary testes, lying in the inguinal canal. If the testes have descended there are usually congenital hernias accompanying them.

A case of Ectopia Vesicæ was admitted to my wards on 26-1-37. He was a boy of 11, Razak by name. He had rudimentary penis and testes and no sign of navel could be detected.

In the treatment of this case, three courses were open to me. Firstly, to provide him with a suitable urinal which will collect

the urine and drain away the collected urine in a suitable receptacle. This kind of treatment is suitable for rich patients but for a village boy, it was out of question.

Then secondly, I had to consider the question of implantation of the ureters into the sigmoid, one above the other, one implantation being done at a time and allowing an interval of a few months between the implantations. Thirdly, there was the option of doing Meydle's operation by dissecting out the bladder with the ureters and anastomosing it with the sigmoid colon.

Taking all the *pros and cons* into consideration, I decided on performing Meydle's operation.

On 12-2-37, the operation was performed. After dissecting out the bladder and trimming it, the peritoneal cavity was opened, when a pouch of peritoneum was discovered pointing to the position of the navel. A portion of the pelvic colon was clamped and a longitudinal incision made on its anterior aspect. The bladder wall was stitched on to the incision in the pelvic colon so that mucous membrane of the bladder became continuous with the mucous membrane of the intestine and the mouths of the ureters opened into the intestines. After this anastomosis, the peritoneum was closed but the abdominal wall could not be completely closed. The outer wound became slightly septic and healed by granulation but the anastomosis did not cause any trouble. After a period, the boy began to get temperature in the afternoon with rigor and it was discovered that he was suffering from ascaris infection and one of the worms had made a small hole in the bladder wall. This healed up gradually and the temperature became normal. The patient was able to retain urine 3 or 4 hours at a time and did not soil his clothes.

He left the hospital when the wound had become small and superficial and from reports received, I have come to know, that the outer wound healed up completely a few days after his discharge from the hospital.

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EDITORIAL

The Stanley Medical College, Royapuram

THE inauguration of "The Stanley Medical College", Royapuram, was celebrated on the morning of Saturday the 2nd July '38 with great pomp and enthusiasm and in the presence of a large and representative gathering. The Hon'ble Dr. T. S. S. Rajan, Minister of Public Health, in declaring the College open, delivered an able and well-thought-out address which, from beginning to end, was a clear enunciation and unassailable defence of the Government's medical policy and programme. The Stanley Medical College was merely the conversion of the old Stanley Medical School into a College and it was a tragic coincidence that on the eve of its opening, news was received that Lt.-Col. The Rt. Hon'ble Sir George Frederick Stanley, an ex-Governor of Madras, whose name was associated with the School had breathed his last. The Stanley Medical School is also dead and there arose out of its ashes, "The Stanley Medical College", to train young men and women in the healing art and send them out *fully equipped* to treat the sick and the suffering and deliver them from pangs and ailments which human flesh is heir to. Long live the Stanley Medical College!

The abolition of the L. M. P. was the first, big, bold stroke of the Health Minister, and in its train, came a series of other

reforms which were more or less inter-related. Briefly put, in the words of the Superintendent, Lt.-Col. S. C. Alagappan, I.M.S., in his introductory speech, they were, 'the inauguration of the Stanley Medical College, the abolition of the recruitment for the L. M. P. classes, the closure of the Lady Willingdon Medical School, the absorption of the remaining classes of the L. M. P., standards into the Stanley Medical College, the introduction of co-education in the remaining L.M.P. classes, and the opening of the Lady Student's hostel in the vicinity for the lady students of the M.B., & L.M.P. classes of the Stanley Medical College.' The abolition of the L.M.P., was a reform long over-due and we had been dinning into the ears of the Government, to give effect to it for over a quarter of a century, to no purpose. In the Silver Jubilee issue of our Antiseptic, April 1929, we observed: "In the Antiseptic of October 1927, we have suggested for the last time, the abolition of the L.M.P. course on three grounds *viz.*, firstly, the L.M.Ps. are not wanted for service anywhere and in private practice too they are nowhere as better qualified medical graduates are available at a much less cost now and competition is also keener. Secondly, their abolition will do away altogether with the present invidious 'caste system' in the Medical Profession which was deeply deplored by successive Surgeon-Generals with the Government of Madras. Thirdly, the Indigenous School of Medicine recently opened by the Government will produce a much cheaper agency for service in rural parts and the L.M.P. may henceforth conveniently exit. But the Provincial Governments appear to be unyielding and adamant on the question of the abolition of the L.M.P. course. The future of the L.M.Ps. is thus in the laps of Gods." Our prayer was not in vain. Even the Gods appeared to have abided their time. The Dyarchic Ministry which were functioning at the time were helpless and even if otherwise, were unventuresome and were simply marking time. It was left to the Congress Ministry now and above all a Medical Minister of Dr. Rajan's type, inspired by the Gods above, to perform this miracle overnight. In fact, Lt.-Col. Shortt, Acting Surgeon-General with the Government of Madras in his thanksgiving speech, at the conclusion of the ceremony made an unequivocal statement when he said: "Those who had thought of making a comparison of medical education in India with other countries must have been struck with the anomaly existing in the fact that in India there were grades of medical teaching producing grades of medical men. They must admit that that was all wrong. They must also say that it needed courage and a wide outlook of Dr. Rajan to cut the knot and unify at least medical education in India. The Stanley Medical College which had been just inaugurated would be a visible symbol of that courage. To those of them who were servants of the Government, one of the most extraordinary things about the conversion (conversion of the Stanley Medical School to that of a College) had been the rapidity with which it had been carried through. Those of them who were accustomed to the leisurely pace of Government procedure considered it almost a miracle so much so he had been constrained to go into the question how this had happened and he believed that he had got very near the truth. Dr. Rajan was apparently blind whenever difficulties arose!"

With the abolition of the L.M.P. and consequent extinction of the caste system among medical men, it was expected that calm would prevail and there would be no more room for grievance. It was, however, not to be so. The existing L.M.Ps. now clamour that some ways and means should be devised to equalise their qualifications with those of the graduates and that some suffix other than the L.M.P., should be allowed to be added to their names. No doubt some years ago, some means were found by which the existing L.M.Ps. were permitted to appear for the M.B.B.S., degree of the Madras University, under certain conditions and a few L.M.Ps. who had the indomitable will and a tenacity of purpose with a big purse at their command did appear for the M.B.B.S. Examination and succeeded. But this number is, after all, a microscopic minority, only 28 having qualified themselves for M.B.B.S. from all parts of India during the past seven years. Recently, obstacles seemed to have been thrown in their way by the Madras University, evidently at the bidding of the Indian Medical Council or rather, as we would call it, 'The British Medical Council in India.' The Madras University have refused to recognize the Cambridge Senior as equivalent to the Intermediate and have laid down that all L.M.Ps. who want to study in the Medical College for two years should pass the Intermediate examination. This is really a hard task for the poor L.M.Ps. Dr. U. L. Narayana Rau of Madras, in his admirable Presidential address at the 4th Madras Provincial Conference held at Vellore on 18th June '38, published in extenso elsewhere in this Number, suggests an alternative course for the earnest consideration of the Government and that is:—

"Institute a diploma of L.M.S. to replace the present L.M.P.

The same Board of Examiners who are now in charge of L.M.P. examinations may be continued and empowered to examine candidates for L.M.S.,

The L.M.Ps. with Matriculation and four years' medical course may be allowed to undergo one year extra course of studies with a suitable syllabus.

The L.M.Ps. with a five year's course may be allowed to appear for the L.M.S. Examination without any extra course;

Those who held this L.M.S. diploma may be treated on a par with medical graduates so far as this province is concerned.

It is not the desire of the Licentiates that the Government of Madras should take steps to influence this Council (The Indian Medical Council) to give recognition (which will be refused.) They will be satisfied if the Government declare that this new L.M.S. and the M.B,B.S., are equally entitled for entry into paid or Honorary Medical Service without the handicaps imposed on the present L.M.Ps."

This suggestion we think, is merely a revival of the old L.M.S: degree which the University had since abolished and which the Government are now asked to institute as a Government Diploma equivalent to the M.B.B.S. degree. We fail to see how this new L.M.S. diploma can at all be said to be equivalent to the M.B.B.S. degree, admittedly when the general educational qualifications of the Licentiates are not equal to those of the graduates, when their medical schooling is not of the type obtained in the Medical College and the clinical and other instructions given to them are inadequate. We beg to suggest, however, that in order to placate the existing licentiates, the Government may recognise such licentiates as have put in more than 15 years of private practice as equivalent to L.M.S. or any diploma which the Government may deem fit to confer. Such Licentiates may be called Honorary Assistant Surgeons. But after all, what is in a name?

Let us now go back to the critics of the Medical Reforms. The Andhra University graduates have become apprehensive that as the Stanley Medical College grows in strength and importance, the popularity of the Vizagapatam College would diminish and on account of diminution in strength the Government may scrap the institution. On this point, the Hon'ble the Health Minister observed: "Such fears have been proved to be untenable in view of the admissions this year. With the abolition of the Medical Schools, it has become the duty of the Government to provide enough facilities for all our young men, who want to

prosecute medical education as a career. This is obvious from the fact that, in spite of having opened an additional College with only 66 seats, the total number who applied for admission into the three Colleges this year has been 307 and of this only 214 could be admitted and as many as 93 (all Brahmins) could not be admitted for want of accommodation." This explanation must certainly give satisfaction to our Andhra brethren.

The question of recognition of the Andhra Medical Degrees by the Indian Medical Council is now looming large in their minds. The Hon. Dr. Rajan has told us what all the Govt. have done in the matter and added, "The only source of irrtation and complaint on behalf of the Medical Council has been that of the out-patient Dept. of the King George Hospital, Vizagapatam. Although we have earmarked a sum of Rs. 3½ lakhs for the purpose, the Public Works Dept. felt that they could not spend more than Rs. 1,20,000 during the current year and the Govt. have issued orders to get through the work as early as possible, and when once the buildings come up, the one grievance of the All-India Medical Council will have been done with and I really don't see any reason why recognition could ever be withheld". If recognition was withheld on the score of want of more brick and mortar, the Ministry cannot help it. They can only provide the necessary fund for it and they have provided it, but it must be remembered, at the same time, that "Rome was not built in a day".

The next attack has come from Ayurvedic doctors. They think that too much is being done for the Allopathic institutions and that the indigenous systems have been left in the lurch. The Hon. the Minister has refuted this charge and said: "I have tried my level best to look after the Ayurvedic Institutions with as much care and attention as I have been devoting to the Allopathic Institutions. I have gone further and have now before me proposals to give better type of instruction in Midwifery and Gynæcology for those girl students who are under training in the Indian Medical School." The one thing which Ayurvedic practitioners are most deficient in is in Midwifery and Gynæcology and the present move on the part of the Ministry to impart proper instruction in Midwifery to lady students will prove a real boon to the indigent masses who form the bulk of the coteries of the indigenous systems of Medicine.

Some of the Press and the public also criticised the Govt. about large sums of money being spent on this College, about the unwisdom of the abolition of the Lady Willingdon Medical School,

and the introduction of co-education. The cost of conversion of the Stanley Medical School into a College is in the neighbourhood of Rs. 5 lakhs, mostly for improvements and additions to the present building. The abolition of the Lady Willingdon Medical School has given the Govt. a large saving which will be utilized for the improvement of this College. As no more L.M.Ps are recruited, the need for a school for the sake of a few Lady L.M.Ps no longer exists. As for the present incumbents who have still their courses to finish, arrangements have been made to transfer them to the Missionary School at Vellore, if co-education at the Royapuram Medical School is objected to by the parents and students. But this objection has not gone beyond the surface, as all the lady students have whole-heartedly joined the Royapuram School in preference to the Vellore School.

It was suggested in a Madras daily recently, that the parents counted the cost more than the risk of co-education and therefore reluctantly sent their daughters to Royapuram School. We do not think that Vellore is costlier than Madras. Nor is Vellore too far away from the Metropolis and parents and guardians of students desirous of seeing them may conveniently go to Vellore and return within a few hours. So, the question of cost or even of distance did not matter. The bogey of co-education raised in some interested quarters has thus vanished. It is gratifying to note that the Govt. have provided special hostel accommodation for these lady students and have promised to meet all their wants. The advantages accruing to the lady students by joining the Royapuram School have been expressed by Dr. Rajan in a striking manner thus :

> "I believe the lady students stand to gain by coming over to the Royapuram School in more ways than one. For once they will be alongside with men and allowed to find their level, secondly, the facilities for education and instruction are much more ample here than were available at the Lady Willingdon Medical School and they have not got to run from one place to the other, so that they might learn their subjects at different and distant places".

We take this opportunity of congratulating the Hon. Dr. T.S.S. Rajan, for the thoroughness with which he has launched this long-pending reform in such a short time. The Medical Profession in this Presidency owe a deep debt of gratitude to Lt. Col. V. Mahadevan, I.M.S., the erstwhile Superintendent of the Medical School for the earnest and enthusiastic support he had given to this scheme and the devoted attention he had paid

in bringing it to fruition. We congratulate also Rao Bahadur Dr. T. S. Tirumurthi, who has been appointed as the first Principal of the Stanley Medical College. Dr. Tirumurthi is the right man in the right place. As an able and experienced medical man, a tried and learned educationist and a good and trustworthy administrator, he has no peer and his choice is the happiest one can think of. We wish him **Good Luck** and **God-Speed.**

GLEANINGS FROM MEDICAL PRESS

Medicine and Therapeutics

The Treatment of Addison's Disease.—K. W. Taber (*Western Journal of Surgery, 45:511 September, 1937*) reports a case of Addison's disease in a woman forty-six years of age, in which treatment was begun by transfusion of citrated blood. When the blood pressure fell to a low level after the transfusion, adrenal cortex hormone was administered which was combined with anterior lobe pituitary extract, 15 gm. sodium chloride daily, and a high caloric diet with extra glucose at frequent intervals; the diet was high in salt and low in potassium. The patient improved on this treatment. An emotional upset was followed by recurrence of severe vomiting and other symptoms, which resulted in death; autopsy showed "fairly complete endocrine exhaustion;" the adrenals were much reduced in size. In a review of the modern treatment of Addison's disease, the author states that the evidence indicates that there is a pituitary deficiency, as well as a deficiency of the entire adrenal gland; and that administration of excess sodium chloride can be avoided by the use of anterior lobe pituitary extract. Thus, unless there is a specific indication for some exception to this rule, Addison's disease should be treated by the administration of the entire adrenal gland with anterior pituitary extract, a low potassium diet and a normal salt intake; this may be supplemented by surgical transplantation of adrenal cortex; if the thymus is demonstrable, it should be treated with the Roentgen rays.—*Medical Times.*

The Treatment of Hematemesis and Melena by a Continuous Aluminum Hydroxide Drip.—E. E. Woldman (*American Journal of Medical Sciences, 194:333, September, 1937*) notes that

in hematemesis or melena, whatever the primary cause of the hemorrhage, the immediate aim of treatment is to stop the bleeding. Immediate operation is not indicated. Treatment should aim to hasten the production of the fibrin clot in the bleeding vessel and to protect the bleeding area from the corrosive action of the hydrochloric acid of the gastric secretion, and prevent dislodgement of the clot. Since satisfactory results have been obtained in the treatment of uncomplicated cases of peptic ulcer by continuous administration of colloidal aluminum hydroxide through an indwelling nasal tube, this method was also used in the treatment of hematemesis. Colloidal aluminum hydroxide is an effective neutralizer of hydrochloric acid, without causing alkalosis: it is mildly astringent and non-irritating. It also protects the ulcer by "coating it with a jellylike mass." Experiments have shown that it also prevents digestion of the fibrin clot. A clot of blood in a test tube filled with fresh aspirated gastric juice kept at 37° C. shows evidence of digestion in one to two hours. When colloidal aluminum hydroxide is added to the gastric juice, no digestion of the clot occurs in twenty-four hours. The author has treated 21 cases of acute gastric hemorrhage with colloidal aluminum hydroxide solution administered through the nasal tube by the continuous drop method. A 5 to 6 per cent. solution of the aluminum hydroxide with 0.6 per cent. sodium chloride was employed. The patients treated were all emergency cases, with hematemesis as the leading symptom, often with tarry stools, and secondary anemia. The tube was passed to the cardiac end of the stomach, and the aluminum hydroxide solution allowed to flow into the stomach at the rate of 10 drops a minute: this treatment was continued for ten days. During the first twenty-four hours 2 ounces of milk and cream were given every two hours: after that, cooked cereals, gelatine, custards, and cream soups were also added to the diet. All the 21 patients recovered, leaving the hospital in good condition. Of 38 patients with acute gastric hemorrhage treated in three and a half years before the use of colloidal aluminum hydroxide, 11 died.—*Medical Times.*

Surgery

Chin Retraction: New Sign in Anæsthesia.—Human observed the occurrence of chin retraction about 18 months ago in more than 50 per cent, of the 600 patients he has anæsthetised to the third stage of anæsthesia. The sign consists of a downward movement of the larynx and chin with each inspiration. In cases in which the chin does not actually move, the tightening of the chin depressor muscles can always be either seen or felt with the fingers just below the chin. Usually the chin moves visibly. When eyeball activity ceases, the corneal reflex disappears and the pupil begins to dilate, chin retraction begins and, as the anæsthetist always holds the mask with one or two fingers under the chin, he can feel the rhythmic tightening of the muscles under his fingers without looking at the patient and thus determine the degree of anæsthesia. This sign remains active and obvious throughout the further deepening of anæsthesia and in ascending anæsthesia it stops abruptly at the upper level of the second plane. The most reasonable explanation of chin retraction would be that the muscles, which by their tone hold the larynx in position, relax at the bottom of the first plane so that with each downward movement of the diaphragm the lungs are drawn downward bodily for about 1 cm. carrying the trachea and larynx with their attachments downward with them. It occurs whether ether, chloroform or nitrous oxide is being given. Chin retraction is always more marked when a closed system of anæsthesia with rebreathing is employed—*British Journal of Anæsthesia, Jan. 1938, p. 66.—Thro' Medical World.*

Indications and Contraindications for Tonsillectomy and Adenoidectomy.—T. M. Goodwin, West Virgina M. J. 33 : 250 (June) 1937.

The indications that justify tonsillectomy and adenoidectomy are :—

1. Repeated attacks of acute tonsillitis or peritonsillar abscess.
2. Continuous head colds.
3. Obstructive nasal breathing (adenoids).
4. Cervical adenitis if due to tonsillar infection.
5. Hypertrophy of tonsils if this is sufficient to impede respiration and the swallowing of food.
6. History of acute catarrhal or suppurative otitis media.
7. Mouth breathing.
8. Repeated attacks of pharyngitis, laryngitis or bronchitis.
9. History of rheumatism, endocarditis, chorea or nephritis.
10. Tonsils proved to be carriers of diphtheria.
11. Tuberculous infection of the tonsils—with great care in the selection of cases.

12. Continuous discharge from the nose in absence of sinusitis.

13. "Buried" tonsils with definite evidence of disease.

The contraindications are:—

1. Acute tonsillitis within a period of two weeks.
2. Convalescence from serious illness.
3. Hemophilia or other blood dyscrasia.
4. Active syphilis or tuberculosis.
5. Menstruation occurring just before or during period of operation.
6. Chronic arthritis with joint changes.
7. Anomalous arteries in or near the tonsils.
8. Hypotension of 200 or more.
9. Cardiac involvement—calls for choice of time and anesthetic and a consultation.
10. Exposure to infectious disease—calls for delay.
11. Lesion in the mouth.
12. Sinus or nasal disease must be cleared up.
13. Loose teeth—must be extracted before operation.
14. Marked anemia or delayed clotting time.
15. Persistent thymus or acidosis.—*Thro' A.J.D.C.*

The Diagnosis of Cancer of the Cervix, by A. Hamant and P. Chalmot. Rev. franc. de gynec. et d'obst. 32: 169, 1937.

The authors recommend systematic periodic examination of women beyond a certain age, particularly of those predisposed to cancer of the uterus because of many deliveries or previous lesions of the cervix.

The very earliest stages can be recognized only microscopically. At a somewhat later stage there is no palpable tumor and the cancer remains localized at its point of origin. Small tumors a few millimeters in diameter are no longer early but have probably existed for some time.

The suspicious early signs are any irregular hemorrhage, especially a slight red discharge in women before the menopause, an atypical discharge at the time of the menopause, or a discharge resembling beef juice after the menopause has begun. Vaginal examination in such cases may show a roughened cervix, slight erosions, or friable tissue which bleeds easily, on a hard, rigid background. Speculum examination confirms these findings. Franque says that many cases can be detected before symptoms begin by the appearance of an abnormal form of the cervix and a special hardness of the tissue.

Hinselmann's special colposcope for examining the cervix by electric light enlarges the image 10½ diameters. If the enlargement is greater than that it decreases the size of the field of vision. Because of the intense light and the enlargement, the slightest lesions of the cervical mucous membrane can be examined carefully, such as irregularities of the surface, erosions or ulcers, papillary prominences, hyperkeratoses, and hyperemia or spots where changes in the epithelium have occurred. One of the most important findings is that of leucoplakia, much more frequent than is generally believed and a very frequent precursor of cancer. However, it is not specifically cancerous and may be caused by inflammation or spyhilis, and specimens should be taken and examined histologically. If the woman is young and capable of child bearing, and the lesions are apparently benign, the case can be followed up and examinations made every six months; on the slightest sign of cancerous degeneration the cervix should be amputated.

The Lahm-Schiller test is made with iodine. The normal cervical mucous membrane contains glycogen and on the application of Lugol's solution turns dark brown. Glycogen is lacking in cancerous epithelium, especially when it is young and the tissue remains white or pink. Ulcerations and erosions do not take the stain because they have no epithelial covering. They remain red. However, even non-cancerous corneal degeneration of the mucous membrane, whether inflammatory, syphilitic, or even simply irritative, gives a positive test, and the results must be completed by biopsy. In making the test care must be taken not to injure the mucous membrane and remove the cells containing glycogen, as this would give misleading results. The hysteroscope may be used in the diagnosis of intracervical cancers. Its chief object is to obtain a biopsy specimen under the control of vision.

Hysteromucography is a recent method of examination. A special diagnothorine, which is a 25 per cent colloidal suspension of thorium, flocculates on the mucous membrane and leaves a thin layer of thorium oxide which is opaque to the Rœntgen rays. The solution is introduced through a double return flow catheter, as the object is to get a circulation of the fluid which will leave a deposit on the mucous membrane. A flow of from 4 to 5 c.cm. of the fluid is enough, after which the roentgenogram is taken.

The final diagnosis must be based on biopsy. The danger of infection or dissemination that was once feared is completely eliminated if the proper technique is used and the specimen is taken by a gynecologist or pathologic anatomist. A positive diagnosis is certain, but a negative finding does not prove that the patient has no cancer.—*Jour. P.I.M.A.*

PROCEEDINGS OF CONFERENCES, SOCIETIES, ETC.

The 4th Madras Provincial Conference of the All-India Medical Licentiates' Association.

Address delivered at the 4th Madras Provincial Conference of the All-India Medical Licentiates' Association, held at Vellore, on 18th June, 1938. By Dr. C. L. Narayana Rau, Madras, President.

FRIENDS,

It is not in the language of mere convention I confess to you that I am not worthy of the honour which you have conferred on me by electing me to preside over this 4th Madras Provincial Conference of the All-India Medical Licentiates' Association. I really do not know why this choice has fallen on me. I have not taken any active part in the working of our Association. I believe that your choice has not been made on the criterion of my worthiness and of service rendered, because, I know there are people worthier than I who have made great sacrifices and rendered life-long service to our Association, and who, therefore, deserve this position much better. And if I am here to-day as the President of this Conference it is solely on account of your choice which I have found difficult to resist, and of my desire to tell you that I am with you in your efforts to redress your legitimate grievances and to find out ways and means for an extensive and efficient medical relief to the people of our Province.

The New Political Dispensation

Since the advent of the Government of India Act 1935, the administration of the Provinces has mostly passed into the hands of the elected leaders of the people. We are particularly fortunate in Madras that the Cabinet of Ministers is composed of persons noted for their ability, character, and responsiveness to public opinion. So far as the Medical and Public Health policies are concerned they are entirely in the hands of the Public Health Minister, and not in the hands of the department as before. Notwithstanding this inevitable change, I shall not be truly voicing your feelings and opinions if I do not avail myself of this occasion to state publicly that the medical licentiates of this Province, as in other parts of our country, owe much to the officers of the Indian Medical Service whose sympathetic help has made them what they are to-day—self-respecting and self-confident, ambitious and aspiring, united and presistent in their resolve to establish a recognised standard of medical

education in the medical schools of this country. It was Col. Bryson who so improved the Rayapuram Government Hospital that it is now found fit and suitable to be converted into a College-hospital. His great hope and vision have now been fulfilled, and the Hon'ble Dr. T. S. S. Rajan, our Public Health Minister and one of the alumni of this school-hospital, has converted the old school into a new college which is expected to begin its first session this year. It was Col. Bryson who wrote in 1916 :*

> "Efficiency, patience, loyalty, devotion to duty and a dozen other attributes belong beyond question to the S. A. S. The great mistake of mistakes is that he is underrated and undervalued."

The other names that easily come to my mind are Col. Bannerman, Col. Giffard and Col. King whose solicitude for the welfare and progress of our class had been practical, genuine and sincere.

The times have now changed, and the effect of this change, so far as we are concerned, is that we now look forward to the elected Public Health Minister for help and guidance in the realisation of our ideals and for the achievement of the objects of our Association. The political significance lies in the fact that the Public Health Minister is in direct contact with public opinion, and has got the necessary constitutional powers to shape his policy in the light of this opinion. Our immediate duty, therefore, is to intensify this public opinion in our favour, convince the Minister of the reality and the legitimacy of our grievances and demands, and continue to serve the popular Government and the public with increasing zeal and devotion.

Abolition of Medical Schools

The first fruit of this political change has been the abolition of the medical schools in this province. The honour and pride of having done it goes to a medical licentiate who now happens to be the Public Health Minister—I mean the Hon'ble Dr. T. S. S. Rajan—of this province. It is an act of supreme statesmanship and none but Dr. Rajan, of all the Public Health Ministers in India, would have been so bold to conceive and bolder enough to execute it immediately. I assure him on behalf of the licentiates of this Province that there is not one amongst them who has failed to appreciate this reform. When I say this, I am not unaware of the opinion of some of our Branches and colleagues in Northern India who believe that this change is detrimental to the interests of the medical licentiates. The one great argument they

* *Indian Medical Gazette*, Aug. 1936 ; Likewise and Contrary-wise.

advance is that this change may bring about the extinction of the class for whose welfare we have all been working for the last 40 years. They adduce the British model and say that a medical diploma and a medical degree may co-exist on equal terms and with equal opportunities for State and public service. The second argument is that if this change be permitted or tolerated, the position of the existing licentiates would become intolerably miserable. The third argument is that if our Association welcomes this change it would but mean going against the very objects with which it was started.

I do not for a moment question the seriousness of the motives behind this opposition. But on ultimate analysis you will find that abolition of the medical schools is the inevitable and natural culmination of the aspiration and work of our class and our Association.

What is meant by the dubious words: "the extinction of our class"? The *Dressers* of the East India Company became extinct when the *Hospital Assistant* was created. Then the class of *Hospital Assistant* became extinct when the *Sub-Assistant Surgeon* was ushered. He in turn became partially extinct when the diploma of *Licensed Medical Practioner* was introduced. And along with these changes in designation, the institutions which trained them also underwent corresponding changes. "Extinction" therefore is not, in my opinion, the proper term to be used in this connection. On the other hand, it really denotes progress and reform. We have now reached a stage when the *Licensed Medical Practitioner* has to be designated in such a manner as would be appropriate to the raising of the course of studies in medical schools to five years and to the raising of the general educational qualification to the Intermediate in Science of an Indian University which we have been asking for during the last 15 years.

This leads me directly to answer the main issue: Whether to have a medical diploma equivalent in all respects to a medical degree but separate from the latter, or to have only one university minimum medical degree, namely, the M.B., B.S. If these two designations mean one and the same thing, as they are intended to be, and if the rules for admission and the courses of study in a medical school and a medical college are to be on the same basis of Intermediate in Science and five years' course, as they have to be under the regulations of the Indian Medical Council, I fail to understand the significance, the importance or the necessity for two separate, but equivalent, minima with

different appellations. The British model cited in this connection is, it seems to me, entirely out of point. In the United Kingdom all the diploma granting Bodies are private Bodies following the regulations of the General Medical Council, whereas in India almost all the medical schools are owned and conducted by the Government and follow the regulations of the Provincial State Medical Faculties or the Board of Examiners which are not recognised by the Indian Medical Council. In the United Kingdom healthy conventions have grown with regard to the current diplomas and degrees, whereas in India the Government, ever since the beginnings of modern medical education, have imposed and perpetuated a differential status, value and treatment to the diplomas of the medical schools and the degrees of the University Medical Colleges. It is also useful and important to note that in every other civilised country, except in Great Britain, medical diplomas do not exist, and M. D. alone is laid down as the minimum medical qualification for legal registration. I therefore urge my friends in Northern India to choose the continental model. That, I believe, would pave the way for orderly medical progress and efficient medical and public health service to the people of our country. That alone would result in homogeneity in the profession. That alone would put an end to the existing class differences among registered medical practitioners.

The next point of contention is that, if such a change is permitted, it will go against the interests of the existing licentiates. This is no doubt true to an extent, but I contend this is inevitable. Even if a new diploma registrable by the Indian Medical Council is inaugurated with corresponding changes in the curricula of studies in the medical schools, it would still leave the existing licentiates unrecognised by the Indian Medical Council. That is a problem which I would deal with presently, and which, I hope, would form a chief item in your deliberations. What I want to point out to you now is that whether the medical school is reformed in such a way as would gain the recognition of the Indian Medical Council, or whether it is abolished and converted into a college under the University, the status of the existing licentiates cannot materially be altered, because in either case they would not be recognised by the Indian Medical Council. Nor is it within the power of the Provincial Governments to compel the Indian Medical Council to recognise their persent qualification. Some of our friends may say that since the earlier Hospital Assistants and the Sub-Assistant Surgeons were allowed to use the designation of L. M. P., when it was introduced by the

Government of India on the 6th November 1911, they may be similarly treated now and that they should ask for similar treatment. This is an impossible claim at present, because the control of recognised medical education is now entirely and statutorily vested in the Indian Medical Council, and it is not at all likely that this Council would go back upon its own standards to satisfy our claims and demands. We must understand this constitutional position clearly and adjust our demands accordingly. And in doing so, we should take care not to jeopardise the integrity, the efficiency and the consolidation of medical education and medical profession of the future in our country. Our zeal should not overrun our discretion.

The last argument against abolition is that it will contravene the objects of our Association. I submit this is an incorrect and incomplete appreciation of the chief objects of our Association which are, as stated in the Rules and Regulations of our Association, "to work for the abolition of the present compartmentalism in medical education, medical service and registration in this country", and "to urge for and obtain statutory equality of status for the medical licentiates in respect of entry into State Service and higher appointments therein". I admit that these two objects can be attained either by reorganising medical school education in such a manner as it would be recognised by the Indian Medical Council, or by converting the medical schools into University Medical Colleges. But I have already discussed the manifold advantages of having only one kind of minimum medical education and one type of minimum medical degree, *viz.*, the M.B., B.S. I need not, therefore, repeat the same arguments but urge my North Indian friends to give a close thought to the subject, discuss it without passion and self-interest, and evolve a solution favourable to the future consolidation of medical education and medical profession in this country. And I have no doubt in my mind that they would come to the inevitable conclusion, *viz.*, that to abolish the medical schools and to have only one standard of medical education under the control of the Provincial Universities is more profitable ultimately than to have two minimum standards with the intrinsic and extrinsic possibility of class differences and preferences in the profession. So fas as Madras is concerned, we are glad that we have done away with the medical school for good.

The Problem of the Existing Licentiates

There are about 5900 registered medical practitioners in this

Province (1937). Out of these, about 4260 are medical licentiates. They are approximately distributed as follows:—

In Subordinate Medical Service	...	493
,, Municipal, Railway and other services	...	200
,, Subsidised Rural Medical service ...	...	390
,, Private Practice	...	3077

The only existing facility for higher medical education of the licentiates is the one that is offered by the Madras University which, according to its latest decision, requires Intermediate in Science with pre-registration subjects as general qualification, and 2 years' course in the Madras Medical College. These conditions are indeed too hard to be easily taken advantage of by a large number of medical licentiates, and there is also no provision at present for the admission of more than ten such candidates per year, even if the licentiates possess the necessary preliminary qualification needed. In fact the Principal of the Madras Medical College, while speaking on the occasion of its centenary celebration, brought out this point clearly when he said:*

> "Although preference was given to Madras L.M.Ps in the matter of admission, the course was not confined to Madrasis but was thrown open to all who held the necessary preliminary qualification for admission as required by the Rules. As only very few seats were allotted by Government for L.M.Ps., numerous applicants with good qualifications not only from Madras but from all over India, had had to be refused admission."

After all, under the present arrangements only 28 licentiates were able to acquire the University degree during the last 7 years. At such a rate it will take more than 25 years to have at least 100 L. M. P. graduates. I would therefore appeal to the Ministry of Health, Madras, to provide for at least 15 seats in the Madras Medical College and another 15 seats in the contemplated new medical college at Rayapuram.

This, I am afraid, by no means fully meets the needs of the licentiates for a higher medical qualification. The present Minister of Health may not be unaware that there is a widespread and insistent desire among them to acquire such a qualification. I, therefore, appeal to him to consider ways and means of attaining this end, and myself take the liberty to suggest the following plan which he may adopt with suitable modifications, if necessary:

Institute a diploma of L.M.S. to replace the present L.M.P.

The same Board of Examiners who are now in charge of L. M. P. examinations may be continued and empowered to examine candidates for L.M.S.

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* *Madras Medical College Magazine*, Jan. 1936, p. 141.

The L.M.Ps with matriculation and 4 years' medical course may be allowed to undergo one year extra course of studies with a suitable syllabus.

The L.M.Ps with a five years' course may be allowed to appear for the L.M.S. examination without any extra course.

Those who hold this L.M.S. diploma may be treated on a par with medical graduates so far as this Province is concerned.

It may be argued that this suggested new diploma is not of any value or usefulness, because such a qualification will not be recognised by the Indian Medical Council. But it is not the desire of the licentiates that the Government of Madras should take steps to influence this Council to give recognition. They will be satisfied if the Government declare that this new "L.M.S." and the M.B., B.S., are equally entitled for entry into paid or honorary medical service without the handicaps imposed on the present L.M.Ps. I may say that since the medical school and the subordinate medical service are abolished and abolished rightly—it is but just and necessary that the Government should thus come to the rescue of the existing licentiates and help them in all reasonable ways to gain public status and recognition equal to those of the University graduates. It is only a temporary arrangement which the Government should not grudge or be parsimonious about, in view of the acknowledged merits of the class and the services it has rendered so far to the Government and the public of this Province. I appeal to the Minister for Public Health to recognise the discontent of the medical licentiates of this Province in this respect and to remove this discontent on the lines I have suggested, or by any other means which he may adopt in our interests.

The Existing Members of the Subordinate Medical Service.

I may be permitted to thank publicly, on your behalf, our present Minister of Health for having promoted a good number of Sub-Assistant Surgeons with higher medical qualifications to the Provincial Medical Service, and for having reinstated in the Subordinate Medical Service some of the Sub-Assistant Surgeons retrenched by the Orissa Government as a result of re-alignment of provinces. And in this connection I would be failing in my duty if I do not thank also Dr. D. V. Venkappa, our Provincial Secretary, who made these things possible by frequent representations to and interviews with the Minister, and I would not be wrong or exaggerating if I say that it was he who was mostly responsible for convincing the authorities of the expediency and the justness of these measures, subsequently sanctioned by them.

The next objective of our Association is to see that the present members of the Subordinate Medical Service are absorbed into the Provincial Medical Service, not necessarily on the pay of the Assistant Surgeon, but with the designation and other privileges of the Provincial Medical Service. This, I believe, is not an unreasonable demand since out of the total of 493 S. A. Surgeons, over 418 have put in more than 15 years of service and are drawing the scale of pay between Rs. 155 and Rs. 200 per month. This question may naturally form part of your deliberations, and I hope that you would arrive at a resolution agreeable to you and acceptable by the Government.

Honorary Medical Service

It would serve no useful purpose at this juncture to discuss the merits and demerits of the system of Honorary Medical Service as in vogue in this country, particularly in Madras, as opposed to socialized medicine which aims to employ every doctor available and to give efficient and timely medical relief to all the citizens of the State. I agree entirely with the observations of Dr. M. R. Guruswami Mudaliar whose long experience in the medical profession entitles his remarks to close attention and thorough consideration. He said recently :

"I wish you all to look forward to a condition wherein every medical man would be paid by the State and every person would have a claim on the State for his or her ailment being treated without payment. The State collected taxes and provided for the necessities of life. Similarly the State should also provide free medical aid. But meanwhile, on that account, no medical man should be asked to render service free and go without employment."

But the policy of the Government seems to be, as expressed in their communique on this subject dated 23rd December 1937, to replace gradually the stipendiary by the honorary service. Whether this would ultimately benefit our profession and our people I do not know, and for the present we have no other alternative than to agree to this scheme of the Government and help, as far as it lies in our power, to work it out successfully.

Apart from this general view, the original scheme was thoroughly distasteful to the medical licentiates from another point of view also. It deliberately excluded them from seeking honorary appointments even as Assistant Medical Officers and limited them to the field of House Surgeons only. This was followed by an unfortunate statement by the Hon'ble Minister of Health at the Stanley Medical School that "no Government order can ever make a licentiate equivalent to M.B.,B.S., and create opportunities equivalent to all of them." These events created a great stir among the licentiates in this province at that time. The Madras Branch sent a strongly worded memorandum against this

attitude of the Minister, and other Branches followed suit. Dr. D. V. Venkappa, Provincial Secretary, had an infructuous interview with the Minister. He toured round the province and created a favourable public opinion on this subject. And the result is that the Government have removed some of the objectionable features of the honorary scheme. The medical licentiates are now, under this amended scheme, ordinarily eligible for appointment as honorary assistant medical officers. I hope that what the Minister acceded to them in principle will not be whittled down in practical application. I may assure him that the licentiates will prove worthy of the trust he has reposed in them.

Amendments to the Madras Medical Registration Act of 1914

You are all aware that our good friend, Dr. P. S. Srinivasan, M.L.A., had been kind enough to give notice of moving in the Madras Legislative Assembly an amending bill drafted by the Madras Branch of the All-India Medical Licentiates' Association with the consent of other Branches, and that the Hon'ble Minister for Public Health has approved of the same with some necessary alterations. The main provisions as finally agreed upon by the Government are :—

The Medical Council shall consist of 16 members constituted as follows :—

(*a*) the Academic Council of the two Universities shall return each one candidate by election amongst themselves,

(*b*) each medical college staff will return by election one member, that is, the staff of the Medical College, Madras, and the Medical College at Vizagapatam shall, by election, return one member each,

(*c*) The staff of the three medical schools, viz., the Stanley Medical School, the Lady Willingdon Medical School and the Medical School for Women at Vellore, shall return one member

(*d*) the Government will nominate three members just to make up the absence of representation particularly, with regard to women, missionary bodies and such other groups of practitioners who may not be returned by the general electorate,

(*e*) the general electorate shall return seven members,

(*f*) the President shall be nominated by Government for the first four years after which he may be elected by the Council itself, and

(*g*) the Vice-President shall be elected by the Council.

We are further thankful to the Government for taking up the responsibility of introducing the Bill themselves which shows the sincerity and the responsiveness of the Public Health Minister to public medical opinion in this matter, and we do hope that he will have it piloted successfully in the next session of our legislature. With the passing of this Bill we will have, for the first time in our country, a Provincial Medical Council really worth its name and worthy of our Province, and made

efficient and popular to discharge its duties and functions in the best interest of the profession.

The only objectionable feature in these proposals is the nomination of the President. I do not know why the Congress Government should fight shy of an elected President. The Madras Medical Council is not a new one of its kind and has been in existence for the last 23 years with nominated President, and there is no justification for repeating this procedure. I sincerely hope that the Minister gives a more favourable consideration and suitably alters the Amending Bill in this respect.

Post-Graduate Courses

It is sad to note that our Province cannot boast of any great facilities for post-graduate studies and diploma in various special subjects. Consequently our men have to proceed to foreign countries for such a purpose. This means an avoidable drain of money from our country. With such first class general and special hospitals in our city and with teachers of great experience and ability in our midst, it is not at all difficult for the Government to organise suitable post-graduate courses for both specialists and general practitioners, and these can be made even self-maintaining by levy of fees on the post-graduates who will willingly pay for such facilities. Post-graduate training is the greatest need of the profession today in view of the growing advances in medical science, and without such a periodical training medical relief will naturally suffer from lack of completeness and efficiency. It may be argued that this is the essential function of the medical associations and the Universities in this country, as indeed they are in other civilised countries in the West, and not of the Government. But the Government seem to ignore the fact that in the United Kingdom almost all the hospitals are under private management and the trustees of this management make arrangement for post-graduate courses, whereas, here all the big hospitals are entirely under the Government. As such, it should be their primary duty to open post-graduate courses and thus help the profession in the efficient discharge of its duties. Nor need this cost much to the Government, if cost is their consideration, because it can be made self-supporting by charging fees—even high fess if necessary—from the candidates. I appeal to the Government to consider this question early.

Public Health Act

I may assure the Minister of Health, on behalf of our Association, that it will heartily co-operate with the Government in

successfully working this Act which he intends to introduce in this province. It is needless for me to add that this Act is a great desideratum and that it will, in course of time, materially improve the state of public health in this Province.

Rural Medical Relief

It is gratifying to note that the Government of Madras have a genuine desire to extend rural medical relief, and consistent with their budget limitation, they have set apart a reasonable sum for further extension during the year 1938-39. It is also equally gratifying to note that the Public Health Minister is spmpathetic towards the grievances and demands of the Subsidised Rural Medical Practitioners as set forth by their Association in a recent deputation to the Minister under the leadership of our able friend and colleague, Dr. V. Rama Kamath. Many of their grievances are easily remediable and will cost the Government neither money nor loss of prestige. That they are smarting under barbed-wire restrictions is beyond question. The meagre provision for sick leave, the insecurity of tenure, absence of provisions for study leave, too many masters to serve and too many duties to perform are some of their sore grievances. It was far from the original intention of the scheme that these practitioners should behave and conduct themselves as full-fledged Government servants. In practice, however, it has degenerated into a form of enlightened slavery. The restrictions imposed on them have become increasingly severe, worse than in actual Government Service, and their independence has become a mere myth. Many a willing recruit has, to my knowledge, been scared away by these restrictions.

Already the Minister for Public Health has shown some signs of generous attitude towards them and may I hope that he will pursue a policy which will make this Service happy, contented and efficient ?

It may be noted in passing that there are at present 400 subsidized practitioners in this Province, out of whom nearly 394 are medical licentiates. If only the Government take such steps as would make rural medical practice comfortable, decent and worth under-taking, the problem of the personnel of rural Medical relief and its further extension may be easily solved in the near future.

Admission of the Licentiates to the University Medical College, Madras

Thanks to the efforts of Dr. M. R. Guruswami Mudaliar and Dr. A. Lakshmanaswamy Mudaliar on our behalf, the University

of Madras decided in 1931 to admit the licentiates to a course of 2 years at the Madras Medical College provided they possessed the general qualification of the intermediate in Arts of any Indian University or a Cambridge Senior Certificate with three distinctions. The licentiates have been complaining against this needless restriction about the general qualification, not merely because it is unnecessary but also because such a restriction disables an appreciable number of them to qualify for the M.B., B.S., degree. That this is true is proved by the fact that only 28 L.M.Ps were able to obtain the University degree during the last 7 years. As if this restriction is not sufficiently hard, the University is now considering, at the suggestion of the Indian Medical Council, to modify the existing regulations in such a manner as would virtually prevent the licentiates from acquiring the M.B., B.S. degree. I understand that in the last meeting of the Syndicate held in April, 1938 it was decided to accept only Intermediate in Science of an Indian University with pre-registration subjects as a minimum necessary general qualification to entitle the licentiates for admission. The suggestion is awaiting the ratification of the Senate. Meanwhile, the licentiate candidates who have applied for recognition on the basis of previous regulations have been asked to wait for the final decision. There seems to my mind no real necessity for tightening the regulations further, because such regulations will be a negation of the original purpose for which this concession to the licentiates was shown, namely, to help them to acquire University medical degree on reasonable and practicable conditions. If these new regulations come into force, it would virtually mean closing up of all avenues for higher medical education to the licentiates in the country. Besides,they are untimely, coming as they do at a time when the medical schools and subordinate medical service in this province are abolished. I fervently appeal to the University of Madras not to stiffen the regulations further which will deprive all reasonable chances to the licentiates to acquire the M.B., B.S. degree, and thus stifle their legitimate ambitions. It is the function of an University to offer a full scope for higher education without any arbitrary exercise of authority or domination of vested interests. As Mr. Syama Prasad Mukherji, Vice-Chancellor of the Calcutta University, said :*

> "The University ideal is to provide extensive facilities for education from the lowest grade to the highest, to mould our system in such a way as to unify our educational purpose and to draw out the best qualities that lie hidden in our youths and to train them intellectually, physically and morally, for devoted service in all spheres of national activity in villages, in towns and in cities."

I hope that our University will consider our appeal, encourage the licentiates to have higher medical education on reasonable conditions, and refuse to submit to an arbitrary authority like

* *Indian Medical Journal*, Vol. 34, p. 450.

the Indian Medical Council, particularly when its directions are contrary to the policy of a liberal higher medical education, and ultimately prejudicial to the interests of efficient medical relief in this province.

Indian Medical Council

I think it is the General Secretary of our Association, Dr. U. B. Narayan Rao, who said that the Indian Medical Council Act was worse than the Rowlatt Act, and therefore characterised the former as the BLACK ACT. And he is right. Rowlatt Act stifled the civil liberties of the people. The Indian Medical Council Act has stifled the rights and privileges of 30,000 medical men who are statutorily recognised by all the Provincial Medical Councils. Rowlatt Act was still-born and therefore harmless. But the Indian Medical Council Act still lives, but lives as a hand-maid of the General Medical Council of Great Britain and as a tool to carry out its imperialistic designs. It is needless to go into the history of events which culminated in the enactment of the Medical Council for India, since all of you are familiar with them. You may also be familiar with the fact that long before the passing of this Act, Dr. Lohokare proposed a similar Bill in the Imperial Legislature in June 1925, and my revered uncle the Hon'ble Dr. U. Rama Rao in the Council of State in February 1926. This Bill, unlike the one sponsored by the Government of India in 1933, received the universal support of the profession and the public in this country, and even the *Indian Medical Gazette*—the organ of the officers of the Indian Medical Service—welcomed it as one eminently suitable and satisfactory. But, the Bill had to be dropped, because the Hon'ble Dr. Lohokare died in December 1926 and the Hon'ble Dr. U. Rama Rao resigned, in the same year, from the Council of State on the mandate of the Swaraj Party of which he was a distinguished member. Compared to this Bill, the Indian Medical Council Act of 1933 is a mere parody. Every one of its provisions reveals the hidden hand of the General Medical Council of Great Britain and the betrayal of Indian interests. The meagre representation of the independent medical profession, the packed up official majority, the partial terms of reciprocity and the exclusion of the medical licentiates, who form the bulk of the medical profession in this country and who are recognised as duly qualified medical men by Statutory Acts of Provincial Medical Registration, from within its purview, are features which no self-respecting medical man will ever accept and which no Government except a foreign Government as that of India would have dared to enact. The Government conceded only one thing at that time—the abandonment of the Indian Medical Register. It was conceded because even the bureaucratic Government of India could offer no plausible excuse for the exclusion of the licentiates from such a register, of whom a large number were employed under its own service.

Five years have now elapsed since the passing of this Act and we are yet to experience any benefit accruing out of it. "Efficiency at home and honour abroad" was the slogan with which the Government of India ushered it in 1933. It has now been proved to be a slogan without substance or sincerity. The Indian Medical Council has not, till now, made any serious attempt to improve the alleged low standard of medical school education in this country, and its excuse has been that it is beyond the preamble of the Act. Thus, it may be said to have failed to make the 28 medical schools of India, which supply the bulk of the medical personnel for medical relief in this country, efficient according to its standards. As for honour abroad, less said the better. Italy, Germany, France, and other countries have refused to recognise the Indian Medical Council unless endorsed by the G.M.C. of Great Britain. Sir Cuthbert Sprawson, in his review of the working of the Indian Medical Council, addressing the members of the Council at its 7th Session on 12th Feb. 1937, narrated the mournful story that:

> "As regards reciprocity with countries other than those in the British Empire the opinion so far received indicated that only those of our Indian Degree that have received the recognition of the G. M. C. would be recognised."

It will not be far from the truth, therefore, when I say that the present Indian Medical Council has created neither efficiency at home, nor honour abroad. The results cannot be otherwise, because the Indian Medical Council is neither Indian in intention nor medical in its purpose. It is in reality a political gift by the Government of India to the General Medical Council, and this is obvious from the fact that between the years 1933-38 this so-called Medical Council for India was faithfully and obediently carrying out the orders and wishes of the G.M.C., proving thereby its real origin and its real purpose. Dr. T. S. Tirumurthy resigned his membership of the Council last year as a protest against the non-recognition of the Vizag. Medical College, in spite of its own Inspectors' report that its standard of teaching and equipment was efficient and satisfactory, because the Council counted the bricks and not the brains which composed the college. "Two types of mentality" said Dr. Tirumurthy, "prevail in the Indian Medical Council, one the official red-tape mentality, and the other the mentality governed by a subconscious fear of what the G.M.C. may say in regard to any matter."*

Not only in the matter of recognition of the Vizag. Medical College, but also in the matter of admission of the licentiates into the Madras Medical College, has this Council been exerting its influence in the wrong way. I have referred elsewhere to the fact that at the initiative of this Council, the Madras University intends to modify its regulations regarding such admission in a

* *The Hindu* dated 31st Aug. 1937.

manner which will strangle once for all the desire and the right of the licentiates for higher University medical education. I may inform you that the Indian Medical Council has passed a resolution directing the Madras University to revise the rules of admission of the licentiates so as to conform to the standards set up by this Council. It is on the insistent demand by this Council that the Madras University is now compelled to restrict the present concessions, and probably it has no other alternative but to obey these instructions. This, again, is an instance of its unwanted and unnecessary interference, particularly at a time when the medical schools in Madras are abolished, and when the Government of India have called for a conference of representatives to discuss the future of medical school education this December, about which I will be speaking to you presently.

The question, therefore, arises: how to change the scope and the provisions of the existing Act? Already our Association and the Indian Medical Association are considering how to effect this change. But the political conditions at present are unsettled. There is no prospect of an amending Bill getting through the present Central Legislature. In fact, an Amending Bill drafted by our able and versatile editor of the *Indian Medical Journal*, Dr. A. Viswanathan and approved by our Association was sent to some members of the Central legislature with a request to move the same in one of its early sessions. It was twice balloted successfully, but the Government, not being very anxious about it, have relegated it to the limbo of neglected bills. We have therefore to await our chances in the coming Federal Assembly, if it ever comes, and I hope that our leaders will spare no pains to amend this Act suitably at the earliest favourable moment. *Unless this Act is amended properly, the profession in India will have neither peace nor safety under the regime of the present Indian Medical Council.*

'A Bill to Regulate the import of Drugs and Medicine into British India"

A bill with the above caption has been accepted by the Central Legislative Assembly during last year and it is now referred to the Select Committee for final consideration. This Bill is intended to control only the imports, and leaves out completely the question of controlling the standards of local manufactures, and adulteration of food-stuffs. The excuse is that these are within the jurisdiction of the Provincial Governments and that the Central Government is not justified in encroaching on their powers by a central legislation. I do not think the Provincial Governments will refuse to submit to central legislation if a comprehensive Bill is enacted to control the standards of all drugs and foods on a rational basis. In fact, it is my considered opinion that such a bill should have an all-India application and usefulness in order to avoid piece-meal provincial legislation and

provincial conflicts. The recent communique by Dr. B. C. Roy, President of the Indian Medical Association, brings out the intrinsic dangers of the Bill under contemplation, for, as he rightly points out, the certification of imported drugs and foods will act as a stimulus to foreign trade in the absence of similarly certified drugs and foods of local manufacture. The Bill, as it is, will be a death-blow to Indian manufacturers, and I cannot imagine any valid reason to split drugs into *imported* and *local* when what we want is a proper control of all drugs, Indian and foreign, so that only standardised drugs and foods may be in circulation in the Indian market, and so that the public may have the benefit of pure drugs and foods. Chopra's Drug Enquiry Committee published its recommendations in 1930, and this report revealed the deplorable state of adulteration of drugs and food-stuffs, both foreign and Indian, current in the Indian market, and the disastrous consequences on the health of the nation. The Government of India had accepted this report and I think it is their duty to act upon it fully. Though the present Bill is obviously based on Chopra's report, it is yet incomplete and narrow in its provisions and will not really help to remedy the hopeless conditions of drug adulteration even as reported by its own Committee. May I draw the attention of our Government to the narrow provisions of this contemplated Bill and request them to advise the Central Government to make it more comprehensive, to frame it on an all-India basis, and to include under its purview all drugs and food-stuffs—Indian or foreign?

Friends, I have almost finished and I hope I have touched upon all the important subjects that affect the licentiates and the profession in general. Still there are matters which I have left out, not because they are unimportant but because you are already too familiar with them.

Reorganisation of the Indian Medical Service

One of them is the recent reorganisation of the Indian Medical Service by the Government of India. The three important effects of this reorganisation are: (1) the reduction of the Indian personnel of the I.M.S. in the general total strength and in military and civil appointments; (2) the reservation of civil appointments to British I.M.S. officers only; and (3) apparent reduction in the emoluments of the Service being made up by an increase in the overseas allowance. There has been a country-wide protest against this action of the Government of India. For my part, not only do I protest against this one-sided justice of the Government of India, but I also do question the necessity for continuing the Indian Medical Service at all, and, if continued, the necessity of imposing this Service on Civil Medical Administration. I consider that the time has now come for the medical department to be wholly Indian in composition, Indian in

character, and Indian in outlook. This should be our objective in future.

Allopathy and Indigenous Systems of Medicine

Another subject of topical interest is the so-called conflict between allopathy and indigenous systems of medicine. You may be aware that the new Provincial Governments are attempting to consolidate and recognise the various systems of Indian Medicine. The votaries of Indian Medicine are now brought into a separate register by the Government of Madras. In Bombay there is a pending Bill in its legislature for the registration of indigenous medical practitioners. In the United Provinces, the Hon'ble Mrs. Vijaya Lakshmi Pandit, Minister for Public Health, is said to have a scheme which will replace small allopathic dispensaries by ayurvedic and unani dispensaries. What this movement will ultimately result in it is difficult to foresee. Probably, when the political conditions of India become normal, what is best in these systems of medicine will be absorbed into one scientific system. Medical science is neither Eastern nor Western—it can only be interpreted in terms of usefulness and truth. Patriotism, prudence and the demands of true science require that the votaries of various systems of medicine should shed off their prejudices which, I believe, are more based on sentiments than on facts. Our leaders should see that the science and art of medicine is not divided into compartments of past and present or into systems working against one another. There should be no quarrel in doing a good thing like saving human life and in mitigating the sufferings of disease. What is wanted is really a scientific system of medicine to prevent and cure the ills to which the flesh is heir and not to indulge in controversies which are futile and meaningless. At the same time, I would appeal to our popular Government to reorganise the indigenous systems of medicine on a scientific basis. One of the best means of doing this will be to create a Chair for Indian Medicine in our University and make it an essential part of University medical studies. I entirely agree with Lt. Col. Pandalai when he said:*

> "The modern medical student should also be told about Ancient Medicine, otherwise he will develop into a man without a national background"

This is too true to be ignored.

The Conference of Representatives to discuss the Future of Medical School Education

Probably you may be aware of the proposal of the Government of India to hold a conference, at the end of this year at Delhi, of representatives of Provincial Governments, Medical Councils and Examining Bodies to discuss about the future of medical education in the medical schools of this country. I am

* At the 11th Indian Medical Conference, Dec. 1937, as Chairman of the Reception Committee.

glad that the Government of India are showing some anxiety to arrive at some solution with regard to the vexed, and hitherto much-neglected, problem of medical school education. It is difficult, even hazardous, to foresee the probable results of this Conference. I can only hope that its deliberations may find a way out for the unification of medical standards and for the consolidation of medical profession in this country. Meanwhile, I am surprised to note that while the Government of India have called for representatives of the Provincial Governments, the State Medical Faculties and the Provincial Medical Councils, they have not cared to call for similar representation from the All-India Medical Licentiates' Association which is directly as much interested in the future education of medical licentiates as any other Bodies, Government or private, in this country. This is a mistake which ought to be rectified early—and there is time enough to make good this omission. I believe such a representation is indispensable if the recommendations of this proposed Conference are to be acceptable to the medical licentiates. There is no use of deciding things without consulting them, because they are the persons who will be involved in the effects of any decision, favourable or unfavourable. I say deliberately that, because the licentiates have been given poor representation in the Provincial Medical Councils, State Medical Faculties and other Examining Bodies, because they have never been actually and seriously consulted by the Government in matters touching their interests as if they had no voice in their own education, and because their voice of caution and advice, of progress and probity was drowned in the din of vested interests, and brushed aside as too contemptible to be heard, the medical school education is what it is to day—ill-defined, ill-adjusted and incomplete. The Government, as any body else, know that our Association has been demanding from the very first year of its inception to affiliate all the medical schools to the respective Provincial Universities, so that there may be one medical standard and one medical degree. But the Government consigned these resolutions to the waste-paper basket. Then, as an alternative, the Association suggested to raise the course to five years and to fix Intermediate in Science as the minimum general educational qualification for admission into the medical schools. This again was not heeded to. Thus the standards of the medical schools were kept deliberately low, ostensibly on financial grounds but really to please certain vested interests and to propitiate the superiority complex of the so-called "superior grades" of medical officers. What more proofs do the Government of India want than these verifiable facts that the licentiates have been made the scape-goats of expediency and selfish interests? The tragic irony of the situation is that while the medical licentiates are condemned as possessing inferior medical qualification, the system which produces such men are connived at and condoned,

I, therefore, say on behalf of the licentiates that they ought to be heard at least this time, and that no plans should be foisted on them which would injure their status and dignity in the profession. May I hope that Col. Wilson, our popular Surgeon-General, who is going to Delhi as the Director-General of Indian Medical Service will set right this serious omission and thus do justice to the licentiates' claim of representation in a Conference which is intended to discuss their future medical education?

Our Association, our Work and our Duty

Our Association, to-day 32 years old, has been growing from strength to strength, and has now attained a position which for strength of members, for a wide ramification of its Branches throughout this country, for spontaneous and ready offers of men, money and service during times of famine, earthquakes and wars, and for conducting a first-class medical journal with a leading circulation in India and abroad, has no parallel among the medical associations in this country. First, our Association began with Service people, because, then, there were practically no private practitioners. They served as members of the Subordinate Medical Service, a service which has come down from the days of the East India Company, which has served the successive governments with rare loyalty and devotion and with a rare sense of self-sacrifice and patience, and which has stood the test of time, the test of work and the test of sacrifice. During the last 20 years private medical practice has grown to large dimensions in India, and even here the medical licentiates have taken the field and form the main bulwark in medical relief through private practice. These licentiate private medical practitioners have been joining the Association in yearly increasing numbers and enthusiastically helping their service brethren in the redress of their grievances. That is a singular feature of our Association, almost unique and without a parallel in this country. I, therefore, appeal to all the licentiates of this Province who have not joined the Association to do so, because it will continue to serve them with its characteristic zeal, efficiency and throughness. I hope that my appeal may not go in vain.

The Hon'ble Dr. T. S. S. Rajan while opening the recent Conference of the Indian Medical Association gave expression to the opinion that, since the medical school and the subordinate service are to be abolished,

> "the Association may not increase in numbers; on the contrary their membership would come to a standstill and in course of time, will gradually dwindle."

Now that the abolition of medical schools and subordinate medical service has become a *fait accompli*, as envisaged by the Hon'ble Minister for Public Health, it may be presumed by you, as he did, that the membership would decline and that there is no necessity for joining this Association. On the other hand, I

may inform you that since the Minister spoke on this matter there has been an actual increase of 150 members from this Province alone and that the membership is increasing, on an average, by 10 per month. This shows that the licentiates realise the utility in joining this Association. I will reiterate that the object of looking to the needs of the subordinate medical service has never been its only object, though at times it was put in the fore-front of its activities. Its other important object has been to safeguard and promote the interests of the private practitioners of whom the medical licentiates form the greatest number in this Province, as elsewhere. You may take it for granted that this Association which has been adjusting itself since its inception to the changing times will like-wise adjust itself in future and appear in a new garb to suit the coming times and circumstances. There is no danger of its dissolution even were the licentiates cease to be as such. now or in near future. The duty of the licentiates is, therefore, clear: they should join the Association in greater numbers, work out their ideals under its auspices, and make it useful to themselves, to the public and to the Government.

It may be that subordinate service is abolished. It may be that you are not allowed generous entry into the new fangled honorary medical service. About these you need not get disheartened. But none can prevent you from engaging in private practice. That is a field in which academical preferences play a very insignificant part, and in which your own ability, honesty and integrity are the sponsors of your prosperity. I therefore appeal to all the licentiates of this Province to take to private practice, intensify and augment it by devotion to duty, by service to the suffering public, and by discharging their obligations to the country and her people in all possible ways open to them and to the extent of their full capacity. Let a few of you in each city start co-operative clinics which will enable you to equip these clinics satisfactorily and thus render efficient and perfect medical service without unnecessary mutual competition between individual members of the profession. It is but right that practice should be shared by all practitioners and thus avoid unhealthy competition and actual starvation. The present position is that a few get on well, some are on the border line of subsistence, and most are pining away for want of sufficient practice to enable them to live at least with minimum comforts. We should not allow this state of affairs to continue any longer and thus deprive the large mass of practitioners of the means to live honestly and to share the duty of medical relief to the sick. In this way only lies the progress and prosperity of the large mass of private medical practitioners in this Province. By this way only they will be able to equip their clinics and extend their services to the public in an efficient and satisfactory manner.

By this way only unhealthy competition can be avoided. In America particularly, such co-operative clinics are common and popular. Col. Mirajkar, Professor of Surgery, Lahore University, is sanguine that the system of co-operative private clinics would thrive well in India as the Indian doctors are neither lacking in talent nor in efficiency. He believes that this would be one of the efficient means of rendering medical help to the people as well as relieving the medical practitioners from the embarrassments of continuous unemployment.* What is immediately required of us is team-spirit. To live in personal selfishness is no glory or credit to the one who has taken up this noble profession. I would therefore urge on you all to cultivate this team-spirit in an ever increasing degree, and utilise it in forming co-operative private clinics, and thus help yourselves and the suffering public. This is a subject which is worth a detailed discussion in this Conference, and I hope you will do it and arrive at such plans and programmes as would make the starting of co-operative private clinics possible in at least a few centres in our Province.

I shall now close my address with an appeal for unity. It will be a bad day for this Province if we the members of the medical profession think in terms of medical licentiates and medical graduates. Our primary duty is to think in terms of service to the people of our Province. A large majority of them are without any kind of medical relief and before this stupendous work, every other thing looks small and silly, personal and profitless. Let us evolve a plan of medical relief which would save our people from premature death and avoidable suffering. let us ask the Government to take the initiative in this matter and let us help them in their undertaking. By all means work for the consolidation of the profession which is only a means to an end. By all means fight for and acquire your rights and privileges, but this again is only a means to an end. And the ultimate end is efficient and satisfactory medical service to the people. As the Hon'ble Premier of the Central Provinces, Dr. N. B. Khare, said while addressing the 4th Provincial Conference of the Licentiates of that Province, *these castes and compartments in the profession are a part of the imperialistic design which are bound to disappear when India attains her freedom to manage her own affairs.*† Let us all, licentiates and graduates, band together and work in the cause of relief of human suffering.

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* *Indian Medical Journal* Vol. 31, No. 9, p. 426.
† 1st May, 1938.

The VIII Madras Provincial Subsidised Rural Medical Practitioners' Conference.

Speech of the Hon'ble Dr. T. S. S. Rajan, Minister for Public Health, Government of Madras, on the occasion of the opening of the VIII Provincial Subsidised Rural Medical Practitioners' Conference, at Manchanallur (Trichinopoly District), on Sunday the 28th June 1938 at 2 p.m.

For the first time in our country, our province has taken up this venture of rural medical relief by qualified medical men. Medical education costly and urban in its nature has instilled into our minds the idea of city life and it is impossible for most of us trained under such auspices to think of eking our livelihood in far off villages. The fact that the villagers are very poor and that the idea of paying for a medical man is more or less foreign to our people particularly in the villages, have frightened away qualified medical men from settling down in villages, with the result that there has been a certain amount of over-crowding in the cities. It is the idea of the Government to attract and encourage qualified practitioners to go and settle down in the villages to afford good medical relief for our people and with that view the subsidy was proposed and this contribution was meant to be only a sort of help and nothing more.

It was in the year 1924, the Government issued an order asking the local boards to take steps to give effect to the scheme of rural medical practice directing them to put this scheme into execution not later than 1st June 1925. The merit of inauguration of this scheme goes to the late Rajah Saheb of Panagal, the then Chief Minister and to Major General T. H. Symons, I.M.S., the then Surgeon General with the Government of Madras. It was intended to bring medical relief within the easy reach of the rural population in the province. After a good deal of discussion, the present scheme was inaugurated. Some time later, after the introduction of the scheme, it was amplified by the inclusion of qualified practitioners of Indian Medicine and subsequently an additional provision of midwife has been made. The total number of rural subsidised dispensaries at the end of 1937 was 571. Of this, more than half is now manned by the practitioners of the Indian systems of medicine. You will thus note that the scheme is developing rapidly and has assumed proportions big enough to constitute by itself a separate department requiring control and direction.

Status of the Rural Medical Practitioners.

I have to remind you, even though the fact has been stated a number of times that you are independent medical practitioners. I want you to bear this in mind for more reasons than one. There is a tendency amongst the rural medical practitioners to consider themselves more or less as service men. This tendency has

developed because of the difficulties and the environments under which they are asked to work. I am personally aware of the very many difficulties under which you have got to labour. But after having said that I do still believe that it is degrading to a medical man's sense of freedom that he should try to rope himself under service protections or conditions.

It is very difficult at this stage for me to assess the remuneration or the actual income of the Rural Medical Practitioners. I dare say some of you should have done very well; perhaps there are a host of others that are still trying to eke out a livelihood on the poor subsidy that they get. However, I find this cadre of Rural Medical Practitioners has come to stay and what is more that people with university qualifications have begun to apply for places in the villages under this rural medical scheme. That the subsidy is a great incentive for people to settle in the villages cannot be denied. I for one would not hesitate to continue the support from the Government till such time that it can be said with certainty that the help would be superfluous. The Government have already enlarged this rural medical development and propose to do so annually according to the nature of the finances at their disposal.

Dual Control.

As at present constituted, the local bodies are asked to contribute a moiety of the expenditure incurred on these rural dispensaries. Moreover, the villages are so far apart and away from the headquarters, it is very difficult for any Governmental agency to control and supervise them effectively. Besides there is this fact that it is a professional service and lay people may not be able to judge exactly the very many difficulties of the professional men. Under such circumstances, a dual control has become necessary. While the District Board is asked to have its control to a certain extent, in the choice of the place and also in the choice of the doctor for a particular locality, the District Medical Officer in the case of allopathic dispensaries and the Principal, Government Indian Medical School, in the case of Indian systems of medicine, have been asked to control the professional side of the medical men's work. There is thus the control of the Government exercised through their medical officers and there is also the control of the Presidents of the District Boards who are lay men and who are interested in providing efficient rural medical relief in the villages in their charge. Thus a dual control of what is apparently an independent medical profession has become necessary. The Government do not expect that this state of things would continue in perpetuity, for the moment a practitioner becomes self reliant and could free himself from the restrictions of a subsidy and its attendant consequences, he is expected to do so, releasing the Government

of its financial obligations so that the Government may direct the funds for provision of medical help in places that are not being served to-day. It is not as if the Government is going to consider this as a separate department which should be developed year after year without any regard even to financial exigencies but it is only in the nature of a little encouragement and initial help for medical men that the scheme has been devised. If you have followed what I have said carefully you would realise that this service should not be considered in terms of a perpetual permanent establishment and charge on the revenues of the Government but as that of mere subsidy for some time to come in the case of those that have not had the encouragement to go and settle down in the villages. That is why I am rather averse to providing you more and more safeguards against the interference of local bodies and the Government in matters relating to your medical work and practice. The minimum of interference from the local bodies and the Government seems to be the only correct procedure in the terms of the interpretation I have given of the rural medical practice.

Triple Control.

There is another possibility in the future evolution of preventive medicine in this province in which Rural Medical Practitioners may be called upon to play a very great part. I believe that they perhaps will be the pioneers of knowledge with regard to rural sanitation and preventive medicine. They shall have to be good samaritans and preachers of scientific truths to the vast millions of men and women who form the population of the country living mostly in villages. Provision of protected water supply, correct and well-balanced diet, preventive methods of protection against epidemics; all these items will have to form the major portion of health work in our province. For this work I do not think a better fitted class of people could be conceived of than the Rural Medical Practitioners. There is no doubt that the Health Department is providing a number of trained Health Inspectors but they suffer from the handicap of not being medical men. It stands to reason, therefore, that with a certain amount of sanitary knowledge the Rural Medical Practitioner is in a position of vantage not only with regard to medical work but also with regard to sanitation. It is fair that the rural medical man should to a large extent control and direct the activities of the sanitray staff under the direction of the District Health Officer. If this service is added on to the Rural Medical Practitioner, you will find there will be three masters to serve, the Health Department being a third master. The Government are now trying this experiment of employing Rural Medical Practitioners for sanitary work in selected villages and after a little time we will be in a position to state how exactly

the scheme has worked and on the rusults thereof a new sanitary policy shall be developed for working this system.

It does not matter whether a medical man is in Government service or an independent practitioner but the obligation on him to do work for preventing epidemics for the general well-being of our people and for imparting knowledge to them on health subjects is a duty imposed on all by the very fact of our having had a medical education which is not accessible or available to the majority of our people. Viewed in that light, you will find the obligation lies more heavily on those who happen to get some sort of help from the Government. It is not so much the money that you can count as much as the principle underlying the whole scheme that we should bear in mind.

Grievances.

Your grievances are many and at least some of them have been brought to the notice of the Government. Knowing the important position you hold in the medical economy of the country and the very important work you are asked to do, I can assure you on behalf of the Government that such grievances as you have suffered from or are suffering shall certainly be looked into with the sympathy and care which the matter deserves. It will be easy for the Government to pass an order, as had been done, that you shall not take part in public activities, misnamed politics, but really questions on which every man and woman of this vast country has got a right to have their say and also avail themselves of the opportunities which are placed before us as a matter of fundamental right. It is not my desire to reduce the independent medical practitioner to the position of a Government servant whose time is entirely booked for carrying out the orders of the Government. You are not in that position. I feel you have every right to take part in the public administration of the country in whatever capacity it may be open to you to do. In rural panchayats and the local board areas, your advice, your suggestions and your knowledge shall be of use to these bodies and the fear of party politics coming into the bargain should not shut you out from such benevolent activities. There is no doubt that some unpleasantness has been caused to the rural medical practitioners by party politics but if you are clever and if you have a sense of devotion to your duty and have a sense of patriotism above party factions, probably you may not get caught in the whirlpool, for, whatever you may be, you cannot become full timed politicians unless and until you give up medical work. In countries like Great Britain where party politics form the key stone of administrative machinery, the medical man has managed to trim his sails avoiding the storm. You need not feel small on the score of not being able to loom big in local politics but you may rest assured that your advice, your suggestions and your peculiar position in society will be sought after by all those

who want to figure in public life and if you anchor yourself to a principle which will be above reproach and personal ambitions, you will find that your reputation as an entity in rural politics will be to your credit. But unfortunately all rural medical practitioners, I must confess, are not made of the same calibre. Some people in some places have been the victims of indiscretion, sometimes even of vindictive persecution and there are a great many others who have managed to get on cleverly and well according to the nature of the wind that blew and have come to retain their important position in villages. It is very difficult for the Government to dictate to you in the form of rules and regulations all those details of human conduct which should guide you in the peculiar circumstances on which you are placed. The Government have also got enough trust in the commonsense of the Rural Medical Practitioners and are not afraid that you will allow yourself to be victimised.

Sometime ago a deputation of the Managing Committee of the Rural Medical Practitioners' Association submitted a memorandum to the Surgeon-General and later on led a deputation to the Government. A number of points for discussion were raised and tentative conclusions were reached. Amendments to the form of agreement prescribed for Rural Medical Practitioners have been found necessary in view of those discussions. A number of amendments to various sections have been proposed and these are now in the hands of the legal advisers of the Government. A new consolidated order regarding all these points shall be issued by the Government very early and I may once again assure you that the Government have done all that they could under the existing conditions to meet the reasonable demands made by your Association.

The Government are also aware that in your contentment and prosperity lie the progress of rural medical relief and therefore while they ask you to be efficient, sympathetic and humane in your dealings with the poor people, they shall also see that your difficulties are met and your work made as smooth as possible. But any amount of rules and regulations will not be able to level down individual temperaments and character. Therefore, it is up to you to so shape your work amongst the people in such a way as not to raise a wall of opposition to your endeavours. The best way at all times for people who are engaged in this type of social service work must be one of choosing a path of least resistance and it is that which I would advise you to follow and persevere.

Your Association.

I welcome the formation of your organisation. After seven years of existence, I find that not all the Rural Medical Practitioners have yet joined the Association. I know personally the

late Dr. Ramasubbu whose keen interest in the organisation of your group was so abundant that he even risked his professional work in his desire to give you a collective security. I am so glad to know that you have associated my very active and energetic friend Dr. Rama Kamath in your Association and I may assure you, you have not made a bad choice. Having said this, I must also remind you that your organisation is still weak and that mere cataloguing of grievances alone will not make you a coherent strong body for it is not every one of you that have got a grievance of a nature that could not be got rid of without the help of an organisation like this. Therefore, I want you to extend the scope of your activities; for you have before you a rich field of unexplored territory populated with men and women who are more or less ignorant of the things of the world. Your experiences are quite different from that of a city practitioner. The peculiar mentality of the people, their faiths, their beliefs and the vagaries of quacks, the good services of practitioners of other systems of medicines, all these give you a different type of experience and such knowledge should be collected and garnered and made available to the profession as a whole.

Secondly, you have an opportunity of developing your skill in facing difficulties of emergency practice in the villages. Resourcefulness is perhaps one of the great assets in a Rural Medical Practitioner. While a city man may rush to a specialist or to a big hospital or a nursing home for immediate relief or advice when he is in difficulties, you cannot in the very nature of the place in which you have got to work command the same facilities as are open to the rest. Therefore by your own ingenuity and resourcefulness you will have to evolve new suitable methods to give such help to the afflicted people in a way that other practitioners in the cities cannot do. That experience also should be recorded and made useful.

Thirdly, there is the question of employing cheap effective indigenous remedies that are in vogue in the villages. It may be that many of them are useless but there are certain things which certainly deserve your attention. Allopathic practitioners have got to wait for their indents and for their drugs from miles away from where they live. If you are interested and if you have got the leisure and the knowledge, it will be a useful task for each one of you to take up for investigation the use of very many indigenous leaves and herbs that are in use by the village folk as well as by unqualified practitioners. A critical investigation of such an important matter will be a useful addition to the armamentaria of therapeutic medicine.

Fourthly, you have your duty as sanitarians. Your Association should develop this particular side of medical knowledge and it will be no mean contribution to the general knowledge

with regard to diseases if you sit together and work it up. I learn that the "Practitioner" has been more or less made your official organ and that will be to your advantage. Such of you that take up this suggestion should find some time to record your findings in the Journal and also make them available for the city practitioners by your joining the District Medical Associations in large numbers and give them the benefit of your experience for their information. By this way you will find that you are really filling up a much needed gap in our ranks.

Radio.

Now that the Government have developed a fully equipped Radio Station in Madras and another will be ready at Trichinopoly in the next few months, you would find that radio talks to the villagers on matters of scientific as well as medical interest will become part of the work of radio stations. The Government shall endeavour as far as possible to make these radio installations as effective and educative as possible. A small investment is necessary and it will be impossible for the Government to reach all the villages if Government alone is expected to share the responsibility. As influential men in the villages and as medical men it must also be part of your duty to give the benefit of this broadcast talk through the radio to the illiterate villagers. If you have got some money to spare or if your Association would contribute some money and help in getting Receiver sets in the villages, you would find your popularity as a medical man increases and at the same time serves the people to become more intelligent and aware of world conditions and events. It will also be a very good propaganda for scientific information and of knowledge about epidemic diseases. This is a new addition which I suggest to your activities which while helping the general public and the villager will indirectly benefit you also.

The Inauguration of the Stanley Medical College, Royapuram.

Speech of the Hon'ble Dr. T. S. S. Rajan, Minister for Public Health on the occasion of the inauguration of the Stanley Medical College on the 2nd July 1938.

Before I begin to address you it has become a painful duty for me to announce that Lt. Col. Rt. Hon'ble Sir George Frederik Stanley, Ex-Governor and Ag. Viceroy, whose name is associated with this institution is no more. It seems to be a tragedy that

on the eve of the opening of this College with which his name is associated that he should leave his mortal coils and be called to eternal rest. But I am sure the association of his name with this institution is certainly a good augury for the perpetuation of this institution for the soul of Sir George shall live in this institution as long as his name is associated with it. May God bless his soul.

It was in the year 1903, just a quarter of a century ago, that I, as a student of the Hospital Assistant Class, was in one of the very first batches of students who were transferred from the Madras Medical College to the Royapuram Medical School. It was the old bullet factory which was improvised into a school. It still continues to be to-day, the main accommodation for lecture classes. The medical portion of my studies was done in the school and it is impossible to conceive that it would have been possible that in the course of these 25 years the small institution then started could have developed into an institution that it is going to be from this day onwards. Medical education has made tremendous strides during the past few years and the school has to its credit thousands of students who have passed through its portals in South India. The old premises of the hospital, which was then called "Monegar Choultry Hospital" has entirely disappeared and new buildings have grown instead. The only vestige of its past history is in the remnants of the choultry that still accommodates chronic invalids who are preserved and kept, though perhaps with little benefit to themselves, for the immense advantage to the medical student who for once has to learn and be reminded as to how little he knows or has mastered the secrets of the healing art. The Hospital has developed in proportion to the development of the northern part of the city of Madras and has come to occupy a position next perhaps only to the premier hospital, viz., the General Hospital, Madras. I consider myself lucky that I had been spared long enough to associate myself with the evolution of the school of which I was one of the earliest students, into a College in the opening of which I should take part.

No one who has not been an L.M.P. can understand or realise the sense of galling inferiority, which has become more or less a permanent obsession of those, that had the misfortune of being subordinate medical men. It is useless to go into the ethics or even into the fairness of this feeling. It was developed in a way even from the student days and it was accentuated later in life. It has become the chronic complaint at almost

every annual meeting of the All-India Sub Asst. Surgeons' Association and even in the school gatherings this particular inferiority complex was given expression to. This consciousness has become more accentuated ever since the period of training and curriculum was extended to five years. Apparently, the syllabus and the teaching nearly approximate to that of the University standards. But, for some reason or other, the Government in the past could not find their way to give equal chances to the two types of medical men produced from these two institutions. There was a time when there were as many as four medical schools in the various parts of our province. The Government found it necessary to turn out a large number of cheap medical practitioners but later on found they could not employ every one of them. As a consequence the schools at Tanjore and at Madura were abolished and with the creation of the Vizagapatam Medical College, the need for another medical school in the Andhra Desa disappeared. With the starting of the Lady Willingdon Medical School in Madras, there were only three institutions for L.M.Ps. Men who have passed the Intermediate Examination began to join the L.M.P. classes also and were prepared to get through the five year curriculum. In spite of the strain of the examination and the financial implications of the course they got a qualification which was considered inferior to the university standard.

Two alternative proposals have been mentioned. One was to create an examining board and constitute a College of Physicians and Surgeons, who like similar bodies in England and elsewhere would confer diplomas, which would in a way get over this inferiority complex. The other was that facilities should be provided by the University authorities to encourage L.M.Ps. to appear for the University degrees. With regard to the former, whatever may be the character or the nomenclature of the diploma given, the feeling is that it will not remove to any substantial extent the difference both in the public mind as well as in the profession with regard to the essential nature of the qualification. In fact it exists even to-day in England and other places and university diplomas are considered certainly as something more valuable than the qualifying diplomas of the examining bodies of the Royal College of Surgeons and Physicians.

With regard to the second proposal, the Madras University has provided facilities to enable industrious and capable L.M.Ps. to qualify themselves for university degrees but their regulations require a pass in the Intermediate Examination or an equivalent

examination of Cambridge Senior. This year they have refused to recognise the Cambridge Senior as equivalent to the Intermediate and therefore have laid down that all L.M.Ps. who want to study in the Medical College for two years, should pass the Intermediate Examination. The strain of having gone through an L.M.P. training for five years and subsequently another additional training of two further years in a hospital with an ordeal of the Intermediate University Examination is indeed a very hard task. But the feeling amongst the L.M.Ps. has been so great that even to-day they apply in more numbers than the seats provided for them in the Medical College for a university degree. Therefore it has been amply borne out by existing facts that the L.M.P. diploma has not only ceased to attract people but has become really a stigma in the medical profession at large The only alternative open to Government was to take a step which will be in conformity with the existing conditions and once for all do away with the L.M.P. Examination altogether. I doubt very much whether L.M.Ps. themselves had ever envisaged a position wherein their examinations will be abolished outright. But, as one who has been in the line, I had absolutely no hesitation in taking that attitude and the Government have found it possible to abolish the L.M.P. course and have stopped further recruitment. This indeed is the genesis of this new institution.

With regard to the starting of this College, there has been a certain amount of controversy. A certain number of the students in the Vizagapatam College have shown great amount of apprehension over this matter. The Vizagapatam College has been in existence for over twelve years and all these twelve years the question of recognition by the All-India Medical Council has for some reason or other been attempted and shelved. One of the very first things which I did as soon as I assumed office was to make all efforts possible to get the All-India Medical Council to sanction the recognition of the College. We have even in our strained financial conditions not hesitated to set apart Rs. 3½ lakhs to fulfil a building programme which was found necessary and advised by the All-India Medical Council as the minimum requirement for the King George Hospital at Vizagpatam. All the recommendations made by the Council have been fulfilled. Qualified professors and lecturers have been appointed; museums have been enlarged; instruction in anatomy and other subjects have been brought up-to-date and in no sense could any Medical Board say that the education imparted in the Vizagapatam College is in any way inferior to that given

not only in Madras Medical College but anywhere else in India. With regard to training in midwifery and gynæcology, we have accommodated them in the Madras Government Women and Children Hospital for undergoing training and therefore in that particular regard Vizagapatam students could not have any complaint. With the large clinical material available for instruction in the City of Madras, it has been possible to train not only students of the Vizagapatam Medical College but also students from other provinces as well. The only source of irritation and complaint on behalf of the Medical Council has been that of the out-patient department of King George Hospital Vizagapatam. Although we have earmarked a sum of Rs. 3½ lakhs for the purpose, the Public Works Department felt that they could not spend more than Rs. 1,20,000 during the current year, and the Government have issued orders to get through the work as early as possible and when once the buildings come up, the one grievance of the All-India Medical Council shall have been done away with and I really don't see any reason why recognition could ever be with-held. The Government are in communication with the All-India Medical Council and have also directed the Andhra University to apply to the Council for recognition.

Moreover, after we have assumed responsibility for administration, I have been in communication with the rest of the provinces and I have got replies from them to the effect that one and all of them have recognised the Vizagapatam Medical College degrees. Bombay, which was the only province which did not recognise, had also accepted the position that the Andhra University Medical Degrees could be recognised by them. So in fact the whole of India has accepted as sound and worthy of recognition, the instruction and the degree given by the Andhra University with regard to their medical curriculum. I don't believe under such circumstances the students of Vizagapatam need feel nervous about their college and their degrees not being recognised by the All-India Medical Council. Their fear has been that with the starting of a third College in the province, the popularity of the Vizagapatam College would diminish and on account of the dimunition in strength, the Government may scrap the institution. Such fears have been proved to be untenable in view of the admissions this year. With the abolition of the Medical Schools, it has become the duty of the Government to provide enough facilities for all our young men, who want to prosecute medical education as a

professional career. This is obvious from the fact that in spite of having opened an additional college with 66 seats, the total number who applied for admission into the three colleges this year has been 307 and of this only 214 could be admitted and as many as 93 (all Brahmins) could not be admitted for want of accommodation. The rigidity of the communal G. O. has been such that it has operated favourably and advantageously to all communities except the Brahmins. While every one who belonged to other communities, irrespective of their individual merit in the Intermediate Examination has found it possible to get in, it has been the unfortunate lot of only one community, that is the Brahmin community, of whom 93 were rejected. It is a great solace to know that all the women, over 34 of them, have been admitted and all Muslims, scheduled caste people and all Non-Brahmins, who applied for admission, have gained admission. It is therefore idle to contend that an additional college is either superfluous or unnecessary.

There has been of late a small agitation amongst the practitioners of the Indian systems of medicine to the effect that this third college should not be an allopathic institution but should have been kept at the disposal of the indigenous systems of medicine. But they forget that there is already one educational institution with a Hospital attached to it wherein a particular curriculum is followed for the benefit of those students, who want to study such systems of medicine. The Stanley Medical School was fitted up as an allopathic medical school and it is not possible to convert it into any other College except an allopathic medical college. I have been accused by ayurvedic men that I am indifferent and unkind to the system of medicine which they practise. That is, to say the least, an uncharitable and unfounded charge. In fact, ever since I assumed this office, I have tried my level best to look after the ayurvedic institutions with as much care and attention as I have been devoting to the allopathic institutions. I have gone further and have now before me proposals to give better type of instruction in midwifery and gynaecology for those girl students who are under training in the Indian Medical School. I have received more than one deputation of ayurvedic practitioners and it was not possible for me to meet all their demands. It is not on account of any unwillingness on may part but to the fact, that under the present financial conditions of our province, it has not been possible to expend money on their proposals. Therefore it has

not been possible for the Government to convert this College into an Ayurvedic College.

The abolition of the Lady Willingdon Medical School has almost become imperative for the reason that, when once the L.M.P. Course is abolished, it is not just to keep a school running for the remnants of the institution, who will have to continue study for three or four years as the case may be, particularly when better facilities for training are available in the Royapuram School. Besides, it is the intention of the Government not to incur any extra expenditure, if possible, by converting the present school into a College. Fabulous reports have been published in the Press about enormous amounts of money being spent for the conversion of this school into a College. These are mere garbled versions of frightened and interested people to prejudice the public mind against the inauguration of this College. The abolition of the Lady willingdon Medical School has given us a saving which is intended to be devoted for the development of the College, while at the same time the lady students, it must be said to their credit, have whole-heartedly preferred to join the Royapuram School in preference to the Missionary Medical School at Vellore. It is therefore unnecessary on the face of it to keep an institution, when the pupils themselves do not desire to be educated in isolation from the boys. Whatever may be the fact in other parts of India, in Madras, the majority of our population do not observe purdah and for such of those that do observe, there are institutions conducted by women to which admission is easy and it is not as if facilities are not available for such people and it is no use asking the Government to run costly and a very expensive institution for the sake of one or two stray individuals. Since the arrangement had to be rushed through on account of the very little time at the disposal of the Government, temporary arrangements have been made to accommodate the girl students in the hostel and in course of time further amenities, as may be necessary, will be provided for them and they may rest assured that all their wants shall be carefully attended to. I believe the lady students stand to gain by coming over to the Royapuram School in more ways than one. For once they will be alongside with men and allowed to find their level; Secondly, the facilities for education and instruction are much more ample here than were available at the Lady Willingdon Medical School and they have not got to run from one place to the other, so that they might learn their subjects at different and distant

places. It is on these grounds, I think, the abolition of the Willingdon Medical School has been much more to the advantage of our girls, because they have the best that could be given in one institution, instead of having an ill-equipped school with clinical material dispersed over two or three distant areas.

With regard to the L.M.Ps. and such L.M.Ps. as are now desirous of higher education, it is not as if the Government do not propose to lead them out of this drift but the Government shall certainly consider proposals which, if on examination, are found suitable of practical application, and will not hesitate to take such measures. They had no time to examine or even think of such conditions at present, since all the energy and the attention had to be devoted to the development of the new proposals and there have been barely eight months before them for completing the task that they undertook.

The University Inspectors who came to recommend recognition of the College by the Madras University have been very generous and have taken into account the initial difficulties that beset us in opening this institution and raising it to the status of a college. They have satisfied themselves that the material available in the shape of equipment, buildings etc. is sufficient for three years to come and have suggested before the end of that period some other additions in the way of buildings, so that, when the present college enters upon training in clinical medicine and surgery, the equipment of the whole hospital and college would have attained its full development. The Government are trying their level best to see how this can be met and granting financial solvency, the Government hope to do all in their power to make this institution satisfy the demands made by the University Inspectors. We are also grateful to the University of Madras for their readiness in meeting our requirements and allowing us to push through the scheme as early as possible.

It was only some months ago that I inspected this school and the hospital with a view to see whether the school could easily be converted into a College without much difficulty. The enthusiasm displayed by Lt. Col. Mahadevan, in this scheme is a thing of which the Government have every reason to congratulate him and themselves. He has given his whole-hearted devoted attention to the scheme and he has been mainly responsible for giving it the impetus which has made the realisation of the College an accomplished fact to-day. Equally also along with Lt. Col. Mahadevan, Major General N. M. Wilson, the Surgeon-General, whose unavoidable absence is to be regretted

has given also his unstinted support for the proposal. But for the co-operation and the willing effort of these two officers I do not think the Government would have ever found it possible to announce the inauguration of the College to-day.

The admission of 66 students into this College has been done on an absolutely fair and equitable basis. The boys have been admitted according to their qualifications and on communal basis and seats have been allotted according to the determination arrived at by drawing lots and you will find that as between the Madras Medical College and the Stanley Medical College there has been more or less an even distribution of the students apart from their actual number. Andhra students have been sent to the Vizagapatam Medical College and that College has been entirely occupied by the students of the Andhra Desa. With a confident outlook for early recognition, the one grievance of the Vizagapatam College would have been removed and I hope that all the three Colleges of our province would compete with each other in producing the best type of medical men, who would be an honour to the institutions concerned and shall also be the pride of our profession and our nation.

I have very great pleasure in delcaring the Stanley Medical College open.

BOOK REVIEWS

Physiology of the Central Nervous System and Special Senses *By N. J. Vazifdar*, 1938, Seventh edition, pp. 307. Revised and enlarged with forty-nine illustrations. Popular Book Depot, Bombay. 7. Price: 10 *s.* 6 *d.*

This very popular book is in its seventh edition and needs little by way of introduction to the practitioner and students in particular. The general character and scope of the book have been kept up and only such useful materials to students have been added to make it up-to-date in the present edition. This is a detailed yet concise book on the study of the Central Nervous System and doubtless it would continue to keep up its popularity among medical students like its predecessors.

Fevers for Nurses—*By Gerald E. Breen*, M.D., Ch.B., etc., 1938, pp. 199. Edinburgh: E. & S. Livingstone. Indian Publishers: Messrs. Butterworth & Co., Ltd., Avenue House, Calcutta. Price: Rs. 3/12/-.

This book is based on lectures delivered to Nurses in the London County Council's Infectious Hospital Service during the

past few years. It conforms to the syllabus laid down by the General Nursing Council for the certificate in fever nursing, and follows that syllabus closely both in matter and in arrangement. The book contains a good deal of information regarding the nursing of patients but we are afraid that some portions of the text, notably bacteriological, are a bit too much for those to whom it is intended. The book is otherwise practical and should prove useful.

Medicine for Nurses—*By C. Bruce Perry*, M.D., F.R.C.P., 1938, pp. 211. Edinburgh: E. & S. Livingstone. Indian Publishers: Messrs Butterworth & Co., Ltd., Avenue House, Calcutta. Price: Rs. 3/12/-

This little book should be very useful for the pupil nurses appearing for their examination. All information regarding diseases that a nurse ought to know has been well written and details have been omitted. There are some useful charts illustrating the text that would help the reader to grasp the idea contained in the section better. The syllabus in medicine approved by the General Nursing Council has been followed closely in preparing this book. This is sure to be a good and a reliable companion for nurses going up for the final examination.

High Blood Pressure and its Common Sequelæ—*By Hugh O. Gunewardene*, M.B., B.S., (LOND.), D.M.R.E., 1935, pp. 172. London: Bailliere. Tindal and Cox. Price: Rs. 5.

Essential hypertension when diagnosed early enough is curable, while much can be done to avert a catastrophe when diagnosed late. It is every one's experience that most of the patients suffering from this malady seek institutional treatment pretty late when cerebral complication has set in thus rendering a correct and early diagnosis difficult between cardiac, renal and cerebral affections. Much of the early symptoms in consequence of this disorder, like sensory disturbances and various transient attacks, have received little attention owing to the scarcity of their appearance in the hospital practice. Dr. Gunawardene gives in this book his experiences on 250 cases closely studied during the last seven years coupled with his close contact on a larger number of cases seen at the National Hospital for Diseases of the Heart, London.

We are sure this book would stimulate the further study of a subject that needs better and more careful attention of a practising physician. We confidently recommend this to all our readers.

Glaister's Medical Jurisprudence and Toxicology—*Edited by John Glaister*, M.D., D.Sc., Bar-at-Law. 1938, 6th edition, Revised, pp. 747 with 107 illustrations and eight plates. Edinburgh: E. & S. Livingstone. Indian Publishers: Butterworth & Co., Ltd., Avenue House, Calcutta. Price: 17/-

This is in its sixth edition. Considerable changes have been made in this edition to stress more important points for the students, and much new matter added to make it up-to-date. Among the inclusions may be mentioned the section on dermal prints, palmar prints, the identification of maggots, the Ruxton Case, with special relation to identification of mutilated and dismembered remains, blood grouping, the grouping of seminal fluid, the identification of fibres, the technique for sectioning hairs, the use of filtered ultra-violet light, the Pharmacy and Poison Act, and war gases. The section on Toxicology contains some fifty new illustrations two of them being coloured plates showing poisonous berries and seeds. The printing and get up is good. We hope our readers and senior students appearing for their final examination would give this book a hearty support.

External Diseases of the Eye.—*By Donald T. Atkinson*, M.D., F.A.C.S., 1937 2nd Edition pp. 718, with 494 Illustrations Lea and Febiger: Philadelphia. Price: $ 8.00.

This is in its second edition: The author has dealt with in this book all eye diseases that could be diagnosed and treated without the use of an ophthalmoscope and in which are included the diseases of the Iris, ciliary body and crystalline lens. There are fifteen chapters in the book. Chapter I. gives a retrospect of ophthalmology relating to external eye diseases. The book opens with a chapter consisting of about 34 pages giving a resume of the growth of ophthalmology from the earliest Egyptian history dating as far back as 7000 years up to the present time.

Diseases of the Eyelids, the Lachrymal apparatus, Diseases of the orbit, Diseases of the Conjunctiva, Diseases of the Cornea, Diseases of the Sclera, Diseases of the Iris, Diseases of the Ciliary Body, Glaucoma, Diseases of the Crystalline lens, Diseases of the

External Muscles of the Eye, Hygiene of the Eyes, History taking and case Records and Remedies used in the Treatment of External Diseases of the Eye are treated exhaustively in the rest of the book.

The book is copiously and aptly illustrated. We recommend it to all practitioners and students of Ophthalmology.

Radium lost and found.—*By Robert B. Taft*, M.D., B.Sc., etc. with an introduction by George E. Pfahler M.D., Sc.D., D.M.R.E.

The writer lost 75 mgm. of radium several years ago, and through timely aid of the 'Radium Hound' he was able to locate and recover the lost Radium. This experience was soon responsible for several similar finds. A careful record of these happenings through years and correspondence with other Physicians and Radiologists regarding similar Radium lost and found enabled him to collect a good deal of real stories which he read before the American Roentgen Ray Society.

The present book is only an elaborate account of that paper told in story form which is sure to prove of much interest and usefulness to all those who have something to do with this rare and useful element. We wish it all success.

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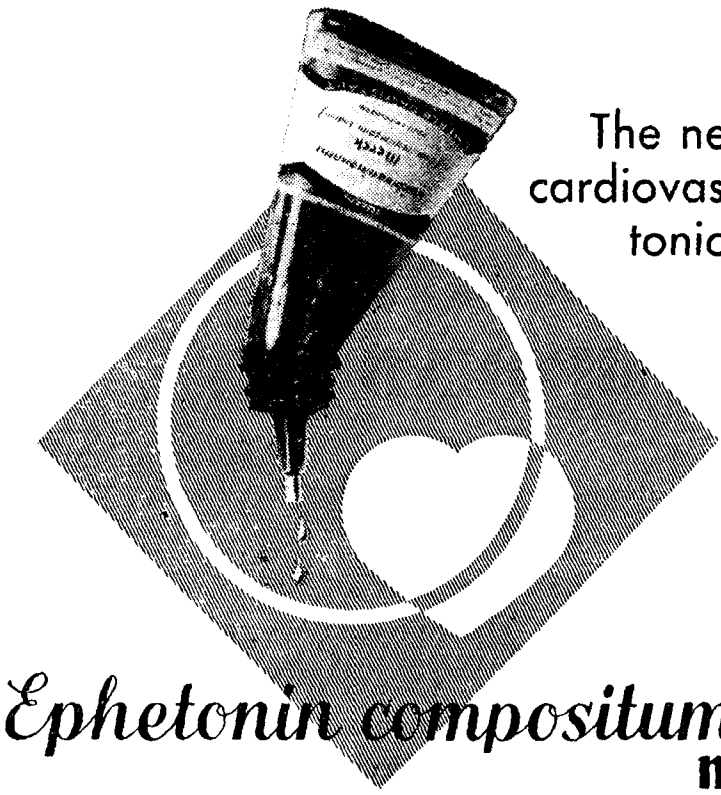

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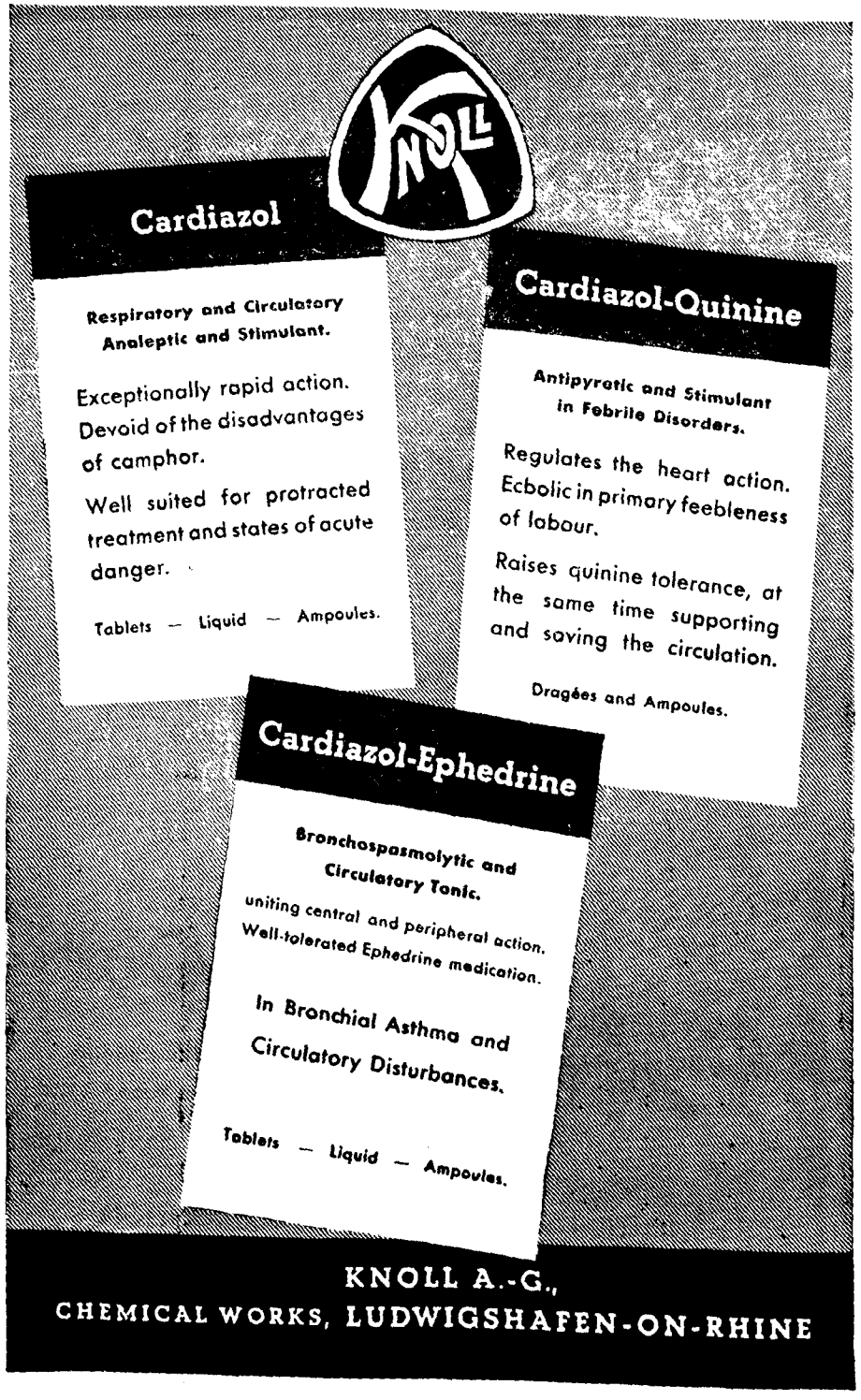

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ORIGINAL ARTICLES

Drugs and Diets in Cholera*

BY

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A. Primary Remedies.—Treatment of Cholera by means of drugs alone is still very unsatisfactory and may, inspite of the rapid advance in the science of medicine be even now regarded as in the stage of infancy and is likely to remain so until a specific antidote is discovered to combat the ravages of the malady. It is true that numerous drugs have, from time to time, been advocated by various persons, each and every one of which has been extolled as very efficacious or almost infallible by its sponsor; but none so far has, on sufficient trial, yielded satisfactory results from every point of view or under all circumstances. A drug to be an ideal one must have both antiseptic and antitoxic properties; for, the poison of cholera being mainly endotoxins, the destruction and disintegration of the comma bacilli in the lumen of the gut by such antiseptic drugs as are not antitoxic at the same time will set more toxins free therein. Hence the administration of these drugs fails, for want of antitoxic property in them, to destroy or neutralize the toxins which

* Specially contributed to "The Antiseptic"

as a result continue to accumulate in the lumen of the gut and are freely absorbed therefrom causing aggravation rather than alleviation of the signs and symptoms of the disease for the cure or relief of which they are employed.

The remedies so far used for the treatment of Cholera may, for the sake of convenience, be divided into the following classes :—

I. Astringents :—
   1. *Non-opiates—such as Bismuth, Kino, Catechu, etc.*
   2. *Opiates—such as opium and drugs containing it including chlorodyne.*
   3. *Acids* : (*a*) *Inorganic or Mineral* ; (*b*) *Organic.*

II. Antiseptics :—*e. g.* 1. *Essentialoils.* 2. *Pot. Permanganas.*

III. Cholagogues :- *e. g.* 1. *Calomel.*

IV. Adsorbents :—*e. g.* 1. *Kaolin.* 2. *Charcoal.*

V. Serum and Vaccine Therapy.

VI. Hedaurin.

VII. Bacteriophage.

I. Astringents.—1. *Non-opiates, such as Bismuth, Kino, Catechu etc.* are practically useless in the treatment of a true case of Cholera ; for, not only they fail very often to check the diarrhoea and so serve any useful purpose but, even if successful, they may do more harm than good to the patient by preventing the elimination of toxins owing to the stoppage of all evacuations. Therefore, even if it be possible to do so, no attempt should, under any circumstances, be made in cholera to check, by astringents or other drugs, vomiting and purging which are, in fact, the nature's efforts to cure the disease by getting rid of the toxins from the blood and bacilli from the alimentary canal, accumulation of which will almost invariably lead to fatal end either by vasomotor paralysis or uræmia (toxæmia), even if death from collapse can be successfully averted. Hence these drugs should always be discarded, especially in the early stage of the disease.

2. *Opiates—Opium and the drugs containing it or its active principles, such as chlorodyne* are probably worse than useless for, besides the drawbacks and disadvantages of non-opiate astringents mentioned above, their administration in cholera has been found to increase the number of deaths from uraemia especially if given during the collapsed stage. Hence no attempt

should ever be made to arrest diarrhœa by opium or any drug containing it onee the disease is diagnosed as cholera.

3. *Acids* :—(*a*) *Inorganic or Mineral Acids* :—The result of their administration was found to be unsatisfactory owing to the increase in the number of uraemic cases among the patients treated by them. The uraemic complications in these patients are attributed by Sir Leonard Rogers to acidosis produced by prolonged administrations of these acids in large amounts though in dilute forms. These symptoms may, however, be explained also by the increased toxaemia from the absorption of a large amount of toxins already set free in the alimentary canal as a result of destruction and disintegration of the bacilli by these acids which have no antitoxic properties to neutralize the poison. Whatever may the cause of uræmia (toxæmia) be, the inorganic acids must on no account be given to patients during the active stages of the disease.

(*b*) *Organic acids*—such as lactic, tartaric and citric, though less objectionable as they are supposed to increase the alkalinity of blood, have been given in large quantities especially the lactic, as it is advocated by Metchnikoff in various intestinal disorders, without much encouraging result at least in cholera. Hence they have practically been given up now-a-days as a curative measure in the treatment of the disease.

II. Antiseptics.—As already stated the administration of an antiseptic is likely to cause increased toxaemia as a result of the absorption of a large amount of toxins set free in the alimentary canal owing to destruction and disintegration of the germs therein unless the drug has, at the same time, antitoxic property to enable it to neutralize or destroy the toxins liberated. Hence all antiseptics which are not antitoxic should, as far as possible, be scrupulously avoided in the treatment of Cholera.

1. *Essential oil mixture* :

Oil Cloves ...	}	
Oil Gajputi ...	}	āā ♏ v.
Oil Juniper ...	}	
Acid sulph aromat ...		♏ xv.
Spt. aether ad ...		ʒ iv.

The essential oils according to the formula given above have been reintroduced in the treatment of cholera by Dr. J. Walker Tomb of the Asansol Mines Board (Bengal) with,according to him, a fairly successful result among the coolies working in the coal mines, especially when given early in the stage of evacuation,

reducing the death rate to about 50 %. He recommended half a drachm of the above mixture in an ounce of water to be administered every quarter of an hour for two or three hours.

It is, however, rather difficult to understand the underlying principles for the administration of essential oils in big doses in cholera. If not absorbed, they undoubtedly help to increase toxæmia by destroying the cholera germs and liberating, like all other antiseptics, a large amount of toxins which they cannot neutralize for the lack of antitoxic property; but if absorbed they are likely to irritate the already inflamed kidney-cells during the course of elimination and thus may lead to the development of uræmia (toxæmia) or vasomotor paralysis by total suppression of urine.

2. *Potassi Permanganas*:—Of all the medicines used for the treatment of cholera, Calomel and Pot. Permanganas are probably the most favourite drugs with most of the practitioners. Pot. Permanganate is undoubtedly the better of the two as it is both antiseptic and antitoxic. Unfortunately, this drug has to be given in very big doses and in such a form as will not dissolve in the stomach. It is a well-known fact that Pot. Permanganate loses its efficacy as soon as it comes in contact with organic substances, of which there is no dearth in the stomach. Hence, unless administered in a suitable form it becomes almost inert by the time it reaches the intestine which is the actual seat of the disease and where the bacilli grow and multiply; for this reason it is administered by mouth in the form of pills coated either with salol or keratin to prevent solution in the stomach. Even as such these pills have their drawbacks; for unless freshly prepared they may be passed out with the stools undissolved and so without producing any beneficial effect in the intestine. Fresh pills again, if not properly made, may get dissolved in the stomach and become inert in contact with organic matter therein. Besides, they aggravate the nausea and vomiting and cause severe epigastric pain on account of their irritant action on the gastric mucous membrane.

Mode of Administration.—Two pills (2 grs. each) are to be given every 15 minutes till 20 and then every half an hour till colour of the stool changes either to greenish or yellowish. At the same time the patient should be given calcium permanganate drink (gr. vi to oi) ad. lib. Besides the disadvantages already mentioned, the patients may get soreness of the mouth and tongue owing to chewing the pills instead of swallowing them. Calcium permanganate lotion is also not a very pleasant drink and is invariably disliked by the patient as it also aggravates the nausea and vomiting. In spite of all the drawbacks, neither the pills nor the drinks should be discontinued until the colour of the stool changes. A fresh course should be started again if the rice-watery stools reappear.

III. Cholagogue.—1. *Calomel* with camphor is preferred by many medical men though personally I do not think that it has any superiority over Potassium Permanganate in respect of efficacy. It is given in small divided doses (Calomel gr. $\frac{1}{8}$; camphor gr. $\frac{1}{2}$ and sodium bicarbonate gr. v) at frequent intervals, *viz.*, every quarter or half an hour till the stools become bile-coloured. Though it has not the disadvantage of producing nausea and vomiting like Pot. Permanganate, the large quantity sometimes administered results very often in subsequent stomatitis. As it has no antitoxic property, Calomel cannot be regarded as an ideal drug for the treatment of cholera.

IV. Adsorbents.—1. *Kaolin*:—Under the caption, "Bolus Albus" this drug is administered by mouth at short intervals in very large doses *viz.*, about 100 grammes (1,500 grains) in 250 c.c. of cold water and given every hour or half an hour in glassfuls, not usually exceeding about 200 grammes during the first 12 hours of the disease. As it is supposed to surround the vibrios and also adsorb their toxins, it is even now a favourite remedy with some physicians, who are reported to have obtained favourable result by the use of this drug which, according to them, stops vomiting, produces sleep and brings about a general improvement in the condition of the patient. But in order to be effective the drug must always be administered in the early stage of the disease, for, it is said to be of no use once the collapse has set in as a result of the absorption of a large amount of toxins; for whatever may its power of absorption of toxins be, the huge quantity of Kaolin administered is likely to form a coating on the internal surface of the alimentary canal and may thereby prevent the elimination of toxins already absorbed into the blood through the bowels. The whole burden would, therefore, fall on the more or less inflamed kidneys which are, as a result, likely, to become still more acutely inflamed. Thus the total suppression of urine with consequent development of uraemia or vasomotor paralysis may follow as a natural sequence.

It may also be used in the form of mixture as is done in the Campbell Hospital, Calcutta, only in case of haemorrhagic type

alkalinity of the blood is more or less diminished in cholera, on the degree of which the prognosis of a case also depends at least to some extent, the administration of a mixture which contains such drugs as will. if absorbed, increase not only the alkalinity of the blood but are likely to establish diuresis and diaphoresis and help thereby to eliminate the toxins from the blood is considered as essential for the treatment of the disease.

The drugs should be selected and prescribed in doses according to the condition and requirement of the individual at the discretion of the attending physician who should always avoid any drug which is likely to irritate the kidneys and set up inflammation of the organs as this may lead to total suppression of urine resulting in the development of uraemia or vasomotor paralysis.

The following mixtures were, as a routine measure used to be given to all cholera patients admitted into the Isolation Ward of the Medical College Hospital under the instruction and direct supervision of Sir Leonard Rogers.

(1) ℞ Pot. Citras ... grs. xl. (40).
Liq Ammon Acetate ... ʒ iv.
Aqua ad ... ʒ ii.

Mft. Mist dose one. One dose to be given every 4 hours.

(2) ℞ Liq. Strychnine Hydrochlor ... ♏ v.
Spt. Chloroform ... ♏ xv.
Tinc. Digitalis ... ♏ x.
Aqua ad ... ʒ i.

Mft. Mist. dose one. One dose to be given thrice daily,

It is not necessary that one should confine oneself to the above mixtures. With some additions and alterations both the above prescriptions can easily be combined into one. It is enough as long as some medicines which increase the alkalinity of the blood and help the elimination of toxins from the system are given with some cardiac stimulant if possible.

II. **Rectal Saline.**—Isotonic saline in 6 to 10 ounces with or without the addition of 5 per cent of Glucose should, whenever possible, be given per rectum every 2 hours and later on, when the stools are less frequent, every 4 hours in all cases. If retained subsequent intravenous injections of a saline may not be necessary. It should always be given tepid-warm except in cases of hyperpyrexia when cold or even iced saline in large quantity (say about a pint or more) may be required to bring the temperature down.

III. **Atropine.**— On the analogy of its administration as antagonistic to muscarine poisoning which shows signs and symptoms similar to those of cholera, Lauder Brunton was the first to use this drug in 1894 with benefit in cholera. Sir Leonard Rogers, who in 1915 used this drug by injecting 1/100 grain morning and evening in a series of cases in his ward found the patients under atropine to have been showing better results than those who were not under it and kept as controls. In fact the blood pressure remained higher, respiratory rate—lower, and the number of saline injections lesser than in those with atropine. There was undoubtedly increased secretion of urine and lesser number of deaths in these cases from collapse, uraemia, and complications of the respiratory tracts especially oedema of lungs and pneumonia.

IV. **Vaso-constrictors and cardiac stimulants.**—1. *Adrenalin* :— Solution of adrenalin chloride (1 in 1,000) is sometimes injected in ½ to 1 c. c. doses every 4 to 6 hours by some physicians in cholera as a cardiac stimulant with a view to raise the blood pressure and produce diuresis. But the sudden high rise of pressure due to general vaso-constriction (except coronary, pulmonary and cerebral arteries) and stimulation of the cardio-accelerator mechanism, may be detrimental to the cardiac embarrassment caused by it, especially in elderly person with arteriosclerosis. Its advantages are, however, not commensurate with its disadvantages as the rise of the blood pressure is only of short duration and the diuresis, which is due entirely to the filtration process on account of the increased pressure in the glomerular capillaries, is not profuse owing to the constricted renal vessels allowing only a small amount of blood to pass through the kidneys. So, adrenalin does not seem to be a suitable drug for administration in cholera.

2. *Pituitrin:*—Injections of pituitrin or better still pitressin in ½ to 1 c. c. doses injected every 8 hours or at least twice daily (morning and evening) have been found to give satisfactory results in the disease both as cardiac stimulant and diuretic. It stimulates the heart and constricts all vessels other than those of the kidneys which are invariably dilated and thus allows a large volume of blood to pass through them causing pronounced diuresis. It is also proved to have a direct effect on the kidney-cells which are stimulated to secrete more urine. Hence the diuresis produced by pituitrin is profuse and more marked. Besides,the rise of blood pressure after due administration of pituitrin

is more prolonged than that produced by adrenalin. Pituitrin, therefore is unquestionably the better and the more efficacious drug than adrenalin in the treatment of cholera and should as a rule be given either with the intravenous saline or separately by injections as directed above until the pulse becomes strong and steady and the urine becomes free and profuse.

3. *Caffeine sodio-salicylas or benzoas*:—Along with the alkaline mixture caffeine sodium salicylate or benzoate may be given thrice daily in 5 grain doses with benefit as it is very efficacious both as cardiac stimulant and diuretic in cholera patients.

V. Emetine.—Though extolled by Renault, injection of emetine in cholera does not seem to have any influence on the course of the disease. It can neither avert or abort an attack of the disease nor it can alter or diminish the virulence of the comma bacilli. It may, however, reduce or completely stop the bleeding, at least in some cases, of the haemorrhagic type of the disease and is therefore worthwhile to try it in such cases in addition to calcium salts along with the ordinary treatment for cholera. Emetine hydrochloride gr. 1 should be injected once daily till all traces of blood disappear from the stools. In bad cases injections may even be given twice daily with benefit.

VI. Dry cupping.—This is occasionally found to be beneficial even when all other means fail to establish the free secretion of urine in cases of threatened uraemia. It relieves the congestion of the kidney and restores the normal function of the organ. To be effective it is advisable to apply at least three small or one or two bigger cups on each loin twice daily for about half an hour each time until the urine becomes free and fairly copious.

VII. Cataplasmata.—Hot poultices sufficiently big to cover both loins when applied on the back over the kidney regions on both sides, especially after dry cupping, undoubtedly help the secretion of urine to some extent. Linseed poultice serves the purpose best and is always preferable as it retains heat longer than other kinds of cataplasmata. It is made by boiling linseed meal in water to the consistency of a paste which can easily be spread by a spatula on one half of a piece of linen in a layer not less than half an inch in thickness and covered over by folding back the other half on it. The poultice thus made should be applied over the loins and the back over the site of cupping as hot as the patient can comfortably bear. This may, on becoming cold, be changed as many times as desired.

VIII. Calcium permanganate.—A solution of this salt may, in addition to potassium permanganate pills, be given for drinking *ad libitum* to cholera patients in the strength of 1 to 6 grs to a pint of water. It is always better to begin with a solution of lower strength and gradually increase the strength as the patient gets used to the unpleasant astringent taste of the drug which, if given in large quantities in concentrated form at the very outset may aggravate nausea and vomiting. The patients are usually found to drink even this unpalatable fluid with great avidity to quench the intense thirst especially during the stages of collapse and evacuation. It would be a good plan to give smaller quantities, say about 2 to 3 ounces at a time and to repeat it as often as the patient can be induced to swallow it. If given frequently even in small quantities, some of this solution is sure to reach the upper part of the small intestine in potent condition to neutralize or destroy the toxins liberated therein and thus may act as a curative agent.

IX. Glucose.—Though most medical men place it under the category of diet, I prefer to include glucose among the accessory remedies especially in cholera. As it is readily absorbed by the mucous membrane of the gastro-intestinal tract, it is very often administered usually in 1 in 20 solution by mouth as drink and per rectum as nutrient enemata on account of its very high nutritive value to combat shock, asthenia and cardio-vascular weakness resulting in more or less collapse. It is also given by intravenous subcutaneous injections either alone or with normal (isotonic) saline in 5 per cent solution in threatened or fully developed uræmia (toxæmia) with great benefit to the patient. Intravenous injection of a pint or so of 5 per cent glucose in isotonic saline repeated as many times as required according to the discretion of the physician very often prevents or cuts short an attack of uræmia even when fully developed by setting in diuresis. The kidney cells are as a rule stimulated to secrete urine usually in large quantities, eliminating along with it the toxins accumulated in the system and thus getting rid of the toxæmia.

In conclusion, it will not be out of place to mention as I find in my own experience during the course of the last 25 years in the treatment of Cholera, that a patient may as a matter of fact be cured without any drug whatsoever where death from collapse could successfully be averted by timely injections of adequate amount of suitable saline alone. In fact a cholera

patient, if he can be made to live for a week without developing any untoward complications such as vasomotor paralysis, uræmia etc. is almost sure to get well irrespective of treatment or no treatment by drugs mentioned above.

Diets.—In an acute disease like cholera which used to terminate within a very short time of the onset at least in a very large proportion of cases, the question of supplying proper and suitable diets and drinks was not regarded as of any very special importance in the past. But since the introduction of the recent and up-to-date methods of treatment, which not only save but prolong the lives of numerous patients by preventing the death from collapse, this question has now-a-days come to the fore-front; for, much depends on the efficient and suitable diets and drinks. Any indiscretion on the part of either the patient or his attendants in this respect may lead to a disastrous consequence by bringing about a relapse or recrudescence of the disease even during the period of convalescence. Hence it is the duty of the attending physician to enjoin strictly upon the nurses or attendants not to deviate in the least from the path chalked out by him in respect of diets and drinks. Those foods, which are likely to cause irritation to the mucous membrane of the gastro-intestinal tract or help the growth and development of the comma bacilli in the lumen of the gut should always be strictly forbidden especially during the active stage of the disease. The diets and drinks permissible during the disease are given below:—

1. *Water*:—Plenty of it should unhesitatingly be given *ad libitum* to the patient who invariably suffers from intense and insatiable thirst as a result of the sudden, rapid and excessive loss of fluid from the system. But unfortunately it is a hobby with many persons not to allow the patient to drink water or, as a matter of fact, any fluid with a view to stop vomiting and purging which are rightly or wrongly supposed to be aggravated by it. It must, however, be always borne in mind that withholding of water is not only inhuman but it is the most unscientific treatment and is therefore, detrimental to the best interest of the patient. Water in Cholera acts more like a medicine than a simple drink or diet: for, it alleviates more or less the suffering of the patient by quenching the intense thirst to some extent and replenishes, when retained, the lost fluid at least partly, if not wholly, by allowing the de-hydrated tissues to recoup their loss as far as possible. But if, on the other hand, rejected as a result of vomiting and purging it undoubtedly eliminates the toxins and gets rid of the bacilli from the alimentary canal along with it. Hence water should be given freely and no restriction should, on any account, be made in respect of the amount of fluid during the disease.

2. *Barley-water*:—Three or four pints of thin barley-water with lemon juice and sugar or common salt according to the patient's liking may be given daily with benefit either in addition to or as a substitute for water. It has the advantage that it serves the purpose of both diets and drinks and being a non-irritant bland farinaceous food it allays thirst and vomiting by acting as a sedative to the mucous membrane of the stomach. It is also supposed to produce more or less diuresis if taken in fairly large quantity. As diet the barley water is perhaps an ideal food in cholera and suits best during the early stages of the disease, namely the stages of evacuation and collapse though it should, if possible, be continued throughout the course of the disease in addition to other varieties of diets prescribed with changes in the condition of the patient. If so desired thin arrowroot or corn-flour may be given as a substitute or in addition to barley water at the discretion of the medical attendant.

3. *Green cocoanut-water*:—It is undoubtedly a pleasant and soothing drink and may, therefore, be allowed to some extent if it agrees with the patient. It should not, however, be given to patients who complain of acidity after this. On account of the sedative action on the gastric mucous membrane it is sometimes found to allay thirst and vomiting. The most important use of this, however, is its power to check the troublesome and distressing complication of hiccup which though not permanently cured is very often found to stop at least temporarily to the great relief of the patient even when all other means fail.

4. *Alcohol*:—It is not at all necessary to prescribe alcohol in any form either as a food or as a stimulant in cholera especially in early stages of the disease in which it is positively contra-indicated; for, it is not the want of food but lack of fluid that is mainly responsible for deaths from collapse in this disease. Hence administration of a little alcohol is of no avail to a patient who drifts into this condition not from cardiac weakness but from the excessive loss of fluid from the circulation. However undesirable it may be especially in these stages there is no denying the fact that, if administered, alcohol draws more

fluid towards the periphery by dilating the peripheral vessels and thus makes it difficult, if not impossible, for the heart, though stimulated by it, to carry on the circulation with too inadequate amount of too much concentrated blood. Thus instead of doing good it is likely to do positive harm to the patient and should, therefore, be carefully avoided in all cases especially in the early stages.

If, however, the physician so desires, alcohol may sometimes be given with caution in small doses well diluted with water or food to elderly persons, who were habituated to it, in the later stages of the disease especially when the reaction has already set in occasionally with more or less benefit though total abstinence even in these cases is not likely to do any harm to the patients.

5. *Whey*:—It is usually prepared by breaking the boiling milk with fresh lime juice or a few crystals of citric acid if the former is unobtainable and carefully straining off the curd (casein) by a close-meshed strainer or a piece of clean linen. When properly made the greenish translucent fluid thus obtained may safely be given to the patient when the colour of the stools is found to have changed to greenish or yellowish even though the consistency may still remain watery. Improperly made whey containing more or less casein in it as indicated by the whitish colour of the fluid must, on no account, be given to the patient in the early stages; for, by helping the growth of the germs, it may bring about a relapse, on the slightest indication of which the patient must be made to revert to the original diet of farinaceous foods such as thin arrowroot, corn flour or barley water.

6. *Sherry-whey* :—In spite of the less nutritive value, lime whey or that made with citric acid is always preferable to sherry-whey (prepared by adding sherry to boiling milk) as the presence of citric acid like any other acid in the former may be beneficial to the patient, on account of its inhibitory action on the growth of the comma bacilli in the alimentary canal. Besides, when absorbed the citric acid increases the alkalinity of the blood and is likely to set in diuresis to some extent. Whereas the presence of alcohol in the sherry whey—though in small quantities—may be detrimental to the patient for the same reasons as described under alcohol and is, therefore contra-indicated.

7. *Fruit juice* :—If it agrees with him fruit-juice, such as

the juice of pomegranates or better still that of oranges, may be permitted to the patient throughout the course of the disease as an accessory diet almost from the very beginning. Leaving out the question of vitamin in it, the presence of sugar and organic acids—mainly the citric—is undoubtedly beneficial to the patient for the same reason as described under whey. However insignificant it may be, the nutritive value of fruit-juice is also a matter for consideration of the patient and his medical attendant. The addition of sugar and orange juice in sufficient quantities unquestionably improves the flavour of barley-water and makes it more palatable so that even an unwilling patient may sometimes be induced to drink it in fairly large quantities to his benefit.

8. *Milk* :—Though an ideal food with high nutritive value for the sick and invalid, milk is not a suitable diet at any rate for a cholera patient especially in the early stages of the disease, for, it serves as a very good medium for the growth and development of the Comma bacilli in the alimentary canal. Besides, the big curds formed in the stomach may aggravate to some extent the vomiting and purging by acting as irritant to the mucous membrane of the gastro-intestinal tract.

As has already been stated above, lime-whey instead of the whole milk is at first given to the patient as soon as the colour of the stools changes to yellowish or greenish tint. If the patient is found to tolerate it without any untoward sign or symptom, milk mixed with barley-water in proportion of 1 to 4 may, to begin with, be permitted with the general improvement in the character of the stools. The proportion of milk to barley-water may, however, be gradually and cautiously increased until the undiluted milk is given to the patient when the stools become loose yellow or formed. It is always better in the beginning to citrate the milk by adding 2 grains of sodium citrate to each ounce of warm milk for 10 to 15 minutes before ingestion. This process of citration is likely to help the digestion of milk by preventing the formation of big and hard lumps of curd in the stomach already weakened as a result of the disease. On the slightest indication of relapse, milk should, unhesitatingly, be stopped at once and the patient must be made to revert to the original farinaceous diet such as barley water, arrowroot water etc.

9. *Solid Foods* :—A little care and caution may at first be necessary in prescribing and selecting the solid foods as diet

for a cholera patient. As a rule when the milk is found to be well-borne and the general condition of the patient much improved with normal healthy motions or, as is very often the case, constipation of the bowels following as a natural sequence to the previous diarrhœa, the patient may safely be permitted to have a little solid food in the form of "Typhoid bread and milk" made by soaking or steeping the crumbs of a loaf of bread tied in a piece of clean linen into boiling water for about 10 minutes and then mixing this with milk after squeezing out the water carefully and completely therefrom. If the patient so desires well-bolied soft rice and milk or fresh fish-soup according to the patient's liking may as well be substituted for the above, care being taken to see that the rice given is at least 2 or 3 years old if not more; for, the raw rice is always hard to digest especially by a sick person with weak digestive power.

If the convalescence is uninterrupted which is usual in most of the cases, the patient may cautiously be allowed to revert to his normal diet little by little under the instruction and strict guidance of his medical attendant.

10. *Concluding Remarks*:—In conclusion, it will not be out of place to mention here that since the introduction of the recent and the most up-to-date method of treatment, the once dreaded disease, namely, Cholera, has undoubtedly lost its stings and has, in most cases, become amenable to treatment with a very large percentage of recovery. Inspite of its meteoric origin, rapid course and disastrous consequence in the past, the disease has now-a-days been brought under control and the convalescence has usually become equally quick and uneventful under proper and judicious treatment. Complete recovery does not as a rule take more than a week even in a pretty severe uncomplicated case especially when it comes under the treatment of a trained and experienced physician before it becomes too late.

The old asthenic persons and those developing one or more of the complications or sequelae in the course of the disease or during the period of convalescence are, no doubt, the patients who may usually have, inspite of the best medical aid, a prolonged and protracted course of suffering which may sometimes lead even to fatal termination in the end. But the physician must, on no account, give up all hopes for his patient's life and allow himself to relax his efforts in the least even up to the last moment as it is not uncommon to find even the worst and almost hopeless case to come round as a result of the proper, persistent and judicious treatment with careful nursing almost from the very brink of death. *

* "Saline Treatment of Cholera" has been fairly exhaustively dealt with in an article written by me and published in the Special Number of Tropical Diseases in 'The Antiseptic' of February 1937.

Anti-Tuberculosis Methods and Their Adaptability to Indian Conditions*

BY

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VARIOUS anti-tuberculosis measures both for prevention and treatment have been adopted for many years in western countries. Some of these have been tried in India also. It is the purpose of this article to examine and compare the merits of some of these methods. The tuberculosis problem in India varies greatly from that in western countries both in its character and magnitude. Therefore, the various anti-tuberculosis measures are examined with special reference to their adaptability to Indian conditions. It is hoped that this line of thought would be of interest at this time on account of the new interest and activity created in this country by Her Excellency Lady Linlithgow's appeal on behalf of the King-Emperor's Anti-Tuberculosis Fund.

Some of the anti-tuberculosis forces in the west have been:—advance in general civilization, state initiative and control including legislation, national and provincial associations, dispensaries, sanatoria and village settlements, post-sanatorium industrial colonies, suburban camps, preventoria and open air schools, anti-tuberculosis vaccination, health and invalidity insurance etc. In a short article it is not possible to discuss all these and therefore, only the first five in the above list are considered and that too, in a brief and partial manner.

Before proceeding on to consider the anti-tuberculosis methods, a few of the ways in which the tuberculosis problem in India differs from that in the west may be mentioned.

(1) When the adoption in India of methods used in countries like Great Britain or Germany is considered, it has to be borne in mind that India is a continent when compared with those countries. For example, one of the countries which has produced the best results in anti-tuberculosis work and whose statistics are often quoted, is Denmark. It has to be remembered, however, that the total population of

* Specially contributed to "The Antiseptic"

Denmark is much less than the tuberculous population in India!

(2) Secondly, while the anti-tuberculosis organisations in many of the western countries, judged by the results already achieved, may be looked upon as past middle age, organised prevention of tuberculosis in India is in its infancy. Proportionate to the population, for every bed available for tuberculosis in India, Italy has 148. And for every dispensary, Italy has 106. For the same number of tuberculous patients* Germany has 162 times the number of beds and 440 times the number of dispensaries as there are in India. The tuberculosis mortality rate in most of the western countries is on the decline; whereas there is hardly any doubt that the mortality and morbidity due to tuberculosis in India are rapidly increasing. When compared with western countries, the number of medical men in India, who have special training in tuberculosis is deplorably low.

(3) Thirdly, between Indian and western patients there is much difference in the degree of body resistance to the disease. Anybody who has worked both in Indian and European Sanatoria will agree that the European has much more resistance to tuberculosis than the average Indian. In Europe, the disease takes a chronic fibrotic course, whereas in India the majority of cases are acute exudative rapidly advancing types. This is partly due to the difference in the degree of tuberculisation and immunity, and partly due to the difference in nutrition and climate. Although tuberculosis has been known in India from ancient times, there is no doubt that large groups of population are yet virgin soil for the disease.

Advance in general civilization.†—This cannot be described as an anti-tuberculosis method; but it is a force which has a great influence on the trend of tuberculosis. Epidemiological studies,§

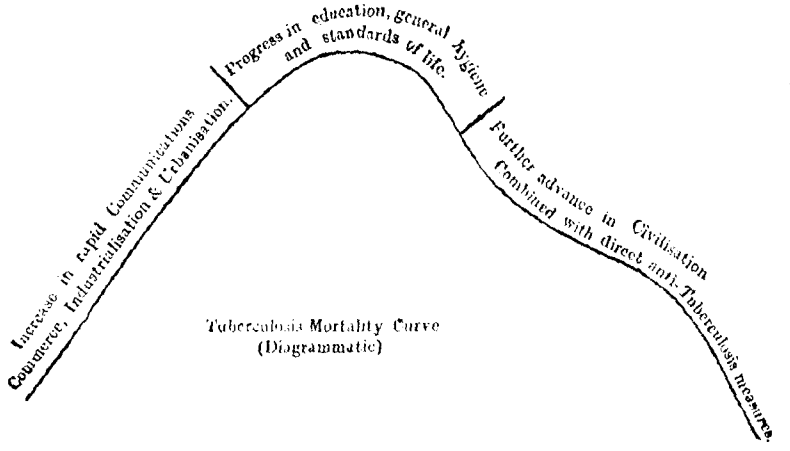
* The number of Tuberculous patients in India is roughly taken as 5 millions.

† By Civilization is here meant not cultural civilization but western Civilization marked by the advent of modern science bringing with it railways, buses and other means of long range rapid communication and commerce, industrialisation and urbanisation.

§ Flatzeck-Hopbouer—Kommen und Gehen der Tuberculose—Leipzig 1931. Quoted by Burnet.

have shown that with the increase of communications, commerce, industrialisation and urbanisation, tuberculosis also increases. But with further progress in civilization bringing with it education and enlightenment, general hygiene and cleanliness, better housing and higher standards of life, tuberculosis mortality comes to a standstill and begins to decline.

This decline continues till it reaches a certain level called by epidemiologists the basic, residual or endemic rate (about 8 per 10,000). With further advance in general civilization, tuberculosis incidence does not decline unless direct and organised anti-tuberculosis measures are adopted.



Tuberculosis Mortality Curve
(Diagrammatic)

According to Brownlee, phthisis was on the increase in Great Britain from the beginning of the eighteenth century to the beginning of the nineteenth and from that date onwards there was a steady decline. "England is approaching the end of a big epidemic wave of phthisis which has lasted for about 200 years, with the peak at about 1800. Between 1800 and 1840 the mortality dropped 50 per cent".* Tuberculosis has evolved like other epidemics—rise, peak, decline. The English curve declined first: Germany followed. The Japanese curve, less wide than that of European countries, is just beginning to decline. In many European countries tuberculosis mortality was already on the decline when direct anti-tuberculosis measures were started.

It is admitted by all that India is on the ascending part of the curve. In a country situated low down on the ascending

* An investigation into the epidemiology of Phthisis in Great Britain and Ireland—Medical Research Committee 1918.

curve, direct anti-tuberculosis measures may, at the beginning, fail to show results in the form of an actual decline in the mortality rate. It is not suggested that the national campaign against tuberculosis in India has come even one minute too early. The earlier direct action is started, the quicker the peak in the curve will be reached and the more rapid the decline will be. There is wisdom, however, in adapting the country's preventive measures to the stage of tuberculisation and general civilization reached. In this connection one of the recommendations of the Conference of Far Eastern Countries on Rural Hygiene held in Java in 1937 under the auspices of the Health Organisation of the League of Nations, may be quoted :—"In the anti-tuberculosis campaign in Asia, the greatest attention must be paid to the improvement of health by indirect methods; among these the raising of the standard of living with consequent improvement in physical and mental development is of outstanding importance."

State support and control.—The necessity of general hygiene, education and economic improvement for bringing about a reduction in tuberculosis incidence, shows that it will take the resources of the State to combat this evil. The report of the Tuberculosis Commission of the League of Nations said :†—"At present, the State is in the van rather than the rear of the movement: private initiative can never be sufficiently far-reaching, methodical or generous to conduct the campaign against tuberculosis single-handed." If the last part of this statement is true about well-organised western states, it is more true about India, where the sense of civic responsibility is comparatively less developed.

There is a certain amount of truth in the saying that tuberculosis is not a disease but a symptom, the real malady being social injustice. 'For every one that strikes at the root, there are a hundred that beat about the bush.' The modern tubercle bacillus that travels at high speed in trains and buses simply laughs at the attempt to eliminate him with the help of a dispensary here and sanatorium there. He professes to be afraid of tuberculosis doctors, but really and secretly he is more afraid of social reformers and legislators.

In a country where the vast majority of the people are illiterate and unable to know the why or the wherefore of the

† Quarterly Bulletin of the Health Organisation of the League of Nations December 1932.

simplest rules of hygiene, and where there are millions of half-starved bodies on which the tubercle bacillus can thrive, anti-tuberculosis work will have to wait patiently and long to see any results. General health-workers everywhere admit that good results in their work are obtained only when the people themselves have sufficient enlightenment and have acquired the desire and the ability to help themselves. Below this level there is a stratum of society in India which is the despair of all kinds of welfare workers. An anti-tuberculosis campaign is urgently needed in India, but it is well to remember that the problem is as much social and economic as technical or medical.

Among the ancient Hebrews there was a custom by which a son paid a sum of money to the priest and said "*Corban*" and the son was considered absolved of his responsibility to help and support his parents. Governments have no right to feel contented when they have made some grants of money. Public health is a direct responsibility of the state and in a large measure the ministers and legislators hold the key to the problem. Tuberculosis will take the resources of the State to combat it.

A discussion of the methods of State initiative and control in other countries and their adaptability to India would take too long. Some of such methods may only be mentioned :—It may be ruled that government officials or representatives be as the heads of the central, provincial and district anti-tuberculosis committees, so that these committees automatically become compulsory. Formation of a central organisation with strong government representation for research, supervision and co-ordination, enaction of suitable legislation according to local needs, (this may include compulsory notification in selected areas and tentative health and invalidity insurance for selected groups of people to begin with.) Recognition and liberal support of all institutions which have proved their worth in service to the tuberculous; exertion of moral pressure on municipalities and local bodies to make them take their proper share in anti-tuberculosis work.

General Organisation.—In the central and provincial anti-tuberculosis organisations of western countries there are various features which could be adapted to Indian needs. The central and provincial bodies are organised more or less on the same lines. Usually the Minister for Public Health is at the head of the organisation. On the committee would be represented the

Government, the medical department, the independent medical practitioner, the nursing profession, red cross societies, private charitable and philanthropic organisations etc. In some countries the committees include representatives from the State education department, public works department, large industries and trade unions, social insurance organisation etc. In India, the Christian Missions who have been the pioneers in anti-tuberculosis work and rural reconstruction experts have claims to be represented. It is usual for the central and provincial organisations to have one or more full time supervising, inspecting and co-ordinating medical officers with public health qualifications.

The functions of the central organisation are, general supervision and direction, co-ordination and control of the national campaign, research and technical guidance, consultation, information and propaganda, inter-national co-operation etc. In England, the national association seeks to influence the parliament and central authorities in favour of anti-tuberculosis measures.

Most European Ministries of Health have their own laboratories with tuberculosis sections in them. In this connection, the League of Nations report quoted above says:—"The technical part of the committee should not be a consulative council acting intermittently but a permanent organ of information and research."

The provincial associations have in their own areas functions analogous to the functions of the central body. In addition, they collect most of the money required. In the United Kingdom local authorities obtain some of their funds from a special local form of taxation (rates). On the Continent, Government grants and social insurance system provide large sums of money. In America and in may countries in Europe, funds are collected by organising at a definite time in the year and on a national scale, a sale of stamps, flower, christmas seal or some such emblem. In France and Italy, the sale is organised by the provincial organisations and the proceeds go to the provinces except for 5 per cent which is paid to the national committee. In Italy, school boys and school girls and religious organisations take a great part in effecting the sales.

Dispensaries.—Although in countries like Denmark, excellent results in anti-tuberculosis work have been obtained even before the advent of dispensaries, it is now becoming recognized that

the dispensary or clinic is the instrument par excellence of social hygiene and the pivot of tuberculosis prophylaxis.

"The real work of the dispensary is done for the most part outside the dispensary itself. A dispensary which was only a consultation centre would not fulfil its task. Its main function is epidemiological research and its essential agent is the visiting nurse"*.

In India one of the difficulties would be to prevent the dispensaries from degenerating into mere consultation and treatment centres. The danger is all the greater because on account of the dearth of trained tuberculosis doctors, it will be difficult to find men to do purely preventive work without private pratice and because on account of the fewness of treatment centres, it will be necessary for the dispensaries to act to some extent as treatment centres. This danger makes the regular supervision and inspection of dispensaries a necessity, the inspecting officer being preferably a public health officer or the officer in charge of the provincial controlling dispensary. (Italian legislation provides for one central controlling dispensary for each province.)

In Europe, a dispensary is held to be sufficient for a population of 50 to 150 thousand, according to the means of communication available. Germany has 2070 dispensaries, that is, one for a population of 30,000. To attain the European standard, India would need about 4000 dispensaries. The actual number available at present is about 40. To begin with, one dispensary for every district and one or more for every town of over 100,000 population may be aimed at in the new campaign in India.

One of the functions of the dispensaries in the West is the supervision and direction of home-treatment. In India, on account of the low standards of housing, education and customs of hygiene, this form of treatment will be found difficult in practice. On the other hand, it is the special advantage and privilege of the dispensary that it carries knowledge and healing to the door-steps of the patients and communities.

Sanatoria and tuberculosis settlements.—Sanatoria of the old type where only early closed cases are admitted, and where the treatment consisted merely of rest and diet and graduated exercise in a good climate under hygienic open air conditions, do not exist any more in Europe or in India. 75 per cent of cases admitted into Sanatoria now-a-days are advanced open cases. This is because accessory surgical measures, the chief among

*Quarterly Bulletin of the Health Organization, December 1932.

which is pneumothorax, have proved so effective even in advanced cases.

Now it is a mistake to look upon Sanatoria as purely treatment centres. Millions of tubercle bacilli which, if left uncontrolled, might infect many people, are daily being disposed of safely in every Sanatorium. Secondly, modern treatment, especially collapse therapy, is able to convert many open cases into closed cases and thus reduce sources of infection. Thirdly, by precept, example and demonstration, Sanatoria serve as centres of education in the methods of preventing infection. Although limited in their scope to patients, their relations and attendants and others who visit the Sanatoria, this method of education is one of the most effective methods. Thus, Sanatoria act as preventive agents by segregation of open cases, elimination of foci of infection and by education.

To quote again the report of the Java Conference of the Health Organisation of the League of Nations:—"Although for economic reasons the system of sanatorium treatment cannot be as extensive as in Europe, it is desirable that Sanatoria of a simple type should be set up in numbers appropriate to the development of the dispensary system. Apart from these, it is desirable to establish a few fully equipped Sanatoria serving as centres for post graduate work in tuberculosis and as central training institutes for auxiliary personnel."

In some countries in Europe, the old expensive types of Sanatoria are being superseded by larger but cheaper village settlements. On account of the nature of the climate, social customs and economic situation, Sanatoria in India have, from the beginning, taken a village settlement character. Few Sanatoria in India have many large buildings. The majority of buildings are small cottages where patients stay with their own attendants and arrange for their own food. This is more like a village settlement than an orthodox western Sanatorium.

One reason why Sanatoria in India are not as cheap as they should be, is because, often the money for maintaining the poor patients has to be found from the well-to-do patients. If the Provinical Governments, States and Municipalities take their proper share in supporting the absolutely indigent patients, there is no reason why Sanatoria of the colony type, (with or without occupation therapy and post-sanatorial industrial activities) should not be adapted to Indian financial conditions.

To have a large number of diagnostic clinics, without an adequate number of treatment centres, would be a mistake

especially in India where conditions are not favourable for home treatment. In any country the number of beds available should bear a reasonable proportion to the number of dispensaries. The ratio between the total number of beds in Sanatoria (excluding beds set apart for tuberculosis in general hospitals) and the number of dispensaries in England, Germany, France and Italy together is as 135000: 3700, that is, roughly about 35 beds to every dispensary. Thus, if India is to have, say 500 dispensaries to begin with, a proportionate number of beds to meet the treatment needs would be about 17,000.

This is a very moderate estimate indeed. It is generally admitted that there ought to be, in any country, as many beds for tuberculous patients as there are deaths due to tuberculosis during the year. In 1930, England had 24,578 beds for 31,500 deaths. In 1928, Denmark possessed 137.4 beds per 109 deaths and 75 per cent of the deaths occurred in the hospitals. Two beds per death are now being demanded in the U. S. A. At the rate of a bed per death, India would need about 500,000 beds! The number of beds available at present is less than 3000!

Summary and Conclusion.—1. Some of the ways in which the tuberculosis problem in India differs from that in the West are pointed out.

2. The effect of general civilization on tuberculosis mortality as revealed by epidemiological studies in the west is described. It is pointed out that the tuberculosis problem is as much social and economic as technical or medical. Under the present conditions, anti-tuberculosis work in India should be indirect as well as direct.

3. The need for State aid and control of the anti-tuberculosis campaign is emphasised.

4. The adaptability of certain anti-tuberculosis measures like dispensaries, sanatoria etc. to Indian conditions is discussed.

The dispensaries form the spear heads of the anti-tuberculosis campaign. They should be supervised by public health officers. Modern sanatoria have important preventive functions. The number of beds for tuberculosis in any country should bear an adequate proportion to the number of dispensaries.

A Short Resume on Acute Abdominal Affections—Diagnosis and Treatment*

BY

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Palamcottah.

I. **Acute Abdominal Affections** are fairly common in the admissions of hospitals. The patients come in for immediate relief of several symptoms that they exhibit at the time. The chief symptoms characteristic of the complaint are very acute pain, generalised or localised in the abdomen with boardlike stiffness of the abdominal wall, incessant vomiting—(unable to retain even a small quantity of liquid)—bowels acutely constipated—not even passing flatus. Patient sometimes cold and clammy with sunken eyes and anxious face, sweating of the whole body—restlessness and inability to lie in bed in one posture for a few minutes. Some patients have even expressed they would commit suicide during the attack or asked for poison if not relieved immediately. Now it is the doctor's benevolent and urgent duty to relieve the sufferer as early as possible. Unfortunately the causes of acute abdominal affections are very wide, varied and innumerable. Consequently, the diagnosis and treatment of the particular case is rather puzzling though not impossible.

When a case of acute abdominal disease is met with, three important observations have to be made and decided immediately :—

(1) Firstly, whether the condition requires immediate surgical interference.

(2) Secondly, whether the case requires only medical treatment and no question of operation need be entertained.

(3) Thirdly, whether the cases belong to certain types of diseases, which though they give rise to abdominal signs and symptoms are, in no sense, diseases of the abdomen.

In the first class, we have to think of inflammations of various kinds *viz.*, acute appendicitis, peritonitis, salpingitis, pancreatitis, cholecystitis, perforations of gastric or duodenal ulcers ;

* Specially contributed to 'The Antiseptic'.

of typhoid ulcers, haemorrhages due to ruptured ectopic gestations, ruptured blood cysts of the ovary or injuries, torsions of an ovarian cyst or gall bladder and finally the multitude of different forms of acute intestinal obstruction.

In the second class (*i. e.*), in those cases which required only medical treatment, we have to think of various forms of colic intestinal, renal, biliary or lead colic—acute constipation, pyelitis —early typhoid and Tuberculosis or puerperal peritonitis.

In the third class (*i.e.*), in those cases which are not really abdominal diseases—acute pneumonia — spontaneous pneumothorax, coronary thrombosis, gastric crisis of tabes, uraemia, occasionally rheumatic and anterio-sclerotic conditions which give rise to acute abdominal pain and vomiting.

After considering the above classes, we have to take into consideration all the facts of the case and arrive at a diagnosis.

The following diseases are apt to mislead :—

Pneumonia :—In early Pneumonia and diaphragmatic pleurisy, pain may be referred to the abdomen. There may be even rigidity and a little vomiting at the commencement, especially in children. In such cases temperature will be very high. Respiration pulse ratio will be increased. There may not be true rigidity of the abdomen. The chest will show signs of pneumonia in a few hours. Some eminent surgeons, have, it has been recorded, opened the abdomen in cases of Pneumonia.

Uraemia :—Certain cases of this simulate acute abdomen. There may be vomiting. Abdomen is distended. Bowels are constipated. The patient will be toxic. Examination of urine will make the diagnosis certain.

Typhoid :—Certain cases of typhoid start with vague abdominal pain, sickness, rise of temperature and pulse, so as to resemble appendicitis. It may be remembered that headache is common and severe in typhoid but not in acute abdomen. Signs and symptoms may not be very acute. If one remembers the possibility of Typhoid in an acute abdomen, he will not miss the diagnosis.

Colics intestinal, renal and biliary :—Biliary and renal colic have more or less definite distribution of pain. In biliary colic, pain radiates down the epigastrium through to the back and shoulder blade. Biliary colic will subside with morphine. It may be mistaken for an acute inflammatory attack in the gall bladder which may require an operation. In renal colic, the

pain starts in the back, radiates round and down to the front in the groin, testicle or thigh. The patient does not vomit. Intestinal colic causes violent griping pain. In such cases the enema will have a good result whereas in an acute obstruction, there will be no result. There will not be any visible peristalsis. In all colics, patients move and writhe about. In cases that lie still with pain, it suggests an inflammation or perforation as movement will increase the pain. If he writhes, it is most likely a colic or an obstruction.

Certain cases of Tabes with gastric crises may simulate acute abdomen. In such cases the previous history of similar attacks and knee-jerks will decide.

Coronary thrombosis and embolism may simulate acute abdomen. In such cases examination of the heart will decide.

Spontaneous pneumothorax may resemble perforated gastric ulcer. Examination of the chest will reveal at once the diagnosis.

Acute abdomen proper may be subdivided and discussed under four headings—*acute inflammations—obstructions—perforations—haemorrhages.*

Inflammations give rise to rise of temperature, increase in pulse rate and gradual pain. In *acute appendicitis* there is tenderness over the appendix in the area in which it is situated. Pain may be high up or low down or palpable in the rectum. In appendicitis there will be pain, vomiting and rise of temperature in order of sequence.

Acute cholecystitis:—There will be vomiting—pain in much severity. Temperature high and pulse rapid. Gall bladder will be quite tender and hard.

Acute pancreatitis:—The patient is often blue, there is marked diastase reaction and evidence of epigastric peritonitis and a subsequent inflammatory swelling in the left lumbar region.

Acute salpingitis in a young female may closely resemble acute appendicitis. Accurate and true history of the case will help in diagnosis. In salpingitis there is irregularity and profuseness of the periods and history of burning during micturition. Tongue is clean in salpingitis.

II. **Obstructions.**—The term intestinal obstruction is a purely clinical one and implies an interference with the passage of the bowel contents along the canal. It varies from a slight difficulty to move the bowels to sudden and complete arrest of the passage of fæces and flatus.

The causes of obstruction are very many and the nature of obstruction has to be diagnosed as the nature and site of operation depends on it. They are: lumen of the bowel being gradually narrowed by cicatricial contraction, blocking of the bowel by a tumour, invagination of the bowel one into another—twisting of the bowel on its mesenteric axis (volvulus) snaring by a fibrous band, next of a hernial sac or margins of an aperture in the mesentery, loss of muscular contractility, paralytic obstruction.

There is intense abdominal pain so as to double up the patient. When small intestine is implicated the pain is referred to the umbilical region. When the obstruction is in the colon, pain is referred to the epigastric region—vomiting starts within a few hours, proportionate to the severity of the pain. Vomited matter contains first of the stomach contents, later bile. After a time it assumes regurgitant or gushing type in which mouthfuls of dark brown and yellowish fluid are brought out without retaining effort, then very offensive material resembling that of fæces. Primary shock, well marked within a few hours, due to impression made upon the sympathetic. Then secondary shock occurs due to loss of fluid from vomiting and sweating and from absorption of toxins—face is pale—eyes sunken—pulse rapid, feeble and thready—respiration shallow and sighing—Temp.—Subnormal, Cold clammy sweat, persistent thirst and cramps. Enemata are often retained and if returned, the fluid flows away without force, and unaccompanied by fæces or flatus. Tympanites is most marked in obstruction of the large intestine—particularly in volvulus of pelvic colon. Except in cases of intussusception or of obstruction by foreign bodies or faecal concretions, a localised tumour can rarely be palpated.

When we consider all the available clinical data, we may form a correct opinion in many cases but in many others it is impossible to guess as to the causes.

In *infants* we have to think of strangulated external hernia, intussusception—retroperitoneal hernia—congenital abnormalities of the rectum or intestine.

In *children over two years of age*: likely causes are stangulated external hernia—intussusception. Strangulntion by Meckel's diverticulum—strangulation by bands or adhesions, if there is history of Tubercular peritonitis—appendicitis—injury or previous operation—Retro—peritoneal hernia.

Adults:—Strangulated external hernia–volvulus—strangulation by bands or adhesions or through apertures. Retro-

peritoneal hernia. Impaction of gall stone or faecal concretions pressure of tumours external to the bowel, gradual narrowing of the bowel by cicatrix or growth of malignant tumour.

In the aged :—Malignant disease of the colon. Strangulated external hernia, intussusception, faecal accumulation.

In chronic obstructions terminating acutely gradually increasing stenosis, suddenly occluded by a hard fæcal mass, gall stone or foreign body or congestion of the mucous membrane following a strong purgative from kinking or torsion of the affected segment brought about by rapid distension with gases or by a sudden change of position, unless relieved by operation, condition usually terminates fatally either by exhaustson or interference with heart and lungs, due to distended bowel pressing upon the diaphragm or of peritonitis or from perforation. The escape of blood stained fluid on opening the peritoneal cavity is strongly suggestive of the presence of a band or volvulus.

Strangulated hernia is the commonest cause of obstruction. One must remember to look for a hernia in every acute abdominal disease. A hernia when strangulated is tender, hard, irreducible and without an impulse.

In volvulus there is sharp pain with exacerbations of colicky character, definite tenderness in the left Iliac-fossa, severe tenesmus early and extreme degree of distension of the abdomen.

Intussusception usually occurs in babies. It may be confounded with enteritis. The palpation of a characteristic mass under an anaesthetic, if necessary, should settle the diagnosis.

III. Perforations.—Onset is very sudden with acute burning pain. The patient is collapsed and lies still with a thin rapid pulse. The abdomen is rigid as a board and tender with the muscles hard and contracted. On percussion abdomen is highly tympanitic. Liver dullness may be diminished. When there is a small perforation which leaks a little, adhesions soon form and there may be no acute pain or rigidity. When a duodenal ulcer perforates, rigidity is on the right hand side of the spine and it may be difficult to diagnose from certain cases acute appendicitis.

IV. Hæmorrhages.—A ruptured ectopic gestation may be one of the forms of acute abdomen. This usually occurs in the 2nd or 3rd month of pregnancy. There is sudden onset of violent pain and collapse patient becomes pale and restless with a

running pulse. There will be a diffuse tenderness all over the abdomen. Rigidity is usually absent.

Twisted ovarian cysts are mistaken for appendicular abscesses. There is a tender swelling below the umbilicus. In the ovarian cyst, the swelling is smooth, fairly mobile and more or less spherical. Whereas in appendicular abscess it is fixed by inflammatory adhesions. The appendicular swelling appears after a few days of illness whereas the swelling its present in the ovarian cyst from the commencement.

Treatment of Acute Abdominal Conditions.— As I mentioned before, decide whether the case is a surgical one or medical one or one of those diseases simulating acute abdomen. Decision as to whether or not an urgent operation is necessary is more important than acute differential diagnosis as to the cause of acute abdomen, though it may be of the greatest help in planning out his operation. After having decided about the urgency of operation, the patient should be examined as to his fitness or otherwise for the operation because even though the operation is successfully done the patient succumbs in a few hours after operation. Urgent operation is clearly indicated and should be done at the earliest possible moment in perforations of all kinds, ruptured ectopic gestation, volvulus, intussusception, various forms of internal strangulation by bands and apertures and strangulated hernias.

Some difficulty arises in some of the less acute lesions and inflammations. Acute appendicitis when seen within first forty-eight hours should be operated upon. If more than two days have elapsed and if the patient is getting better, a mass will be forming and localization occuring and it is better to wait in such cases and remove later the appendix. In the cases which are seen later still, either the patient will be forming an abscess or will be recovering. In the former case, it is wiser to allow the abscess to the surface and then operate. In the latter case, operation can be done later when he has recovered completely.

In acute salpingitis and acute pancreatitis difficulty lies in diagnosis. If diagnosis can be made with certainty, an operation, may be necessary if the case is seen within a day. In acute cholecystitis many cases will gradually settle down without an operation. In cases in which there is a hard, tensely distended gall bladder, operation is urgently indicated, as otherwise there may be perforation and gangrene,

In any case of obstruction, one or two enemas may well be given first both as an aid to diagnosis and to render the operation easier.

When the patient's sufferings are extreme and there is good reason to believe they may be due to some form of colic, opium should be given. If single Morphine and Atropine dose fails to give relief, no more should be given. If definite diagnosis cannot be made and if the case is fit to undergo operation, immediate exploratory operatiou should be done. Turpentine enema should be given, nothing by the mouth except sips of warm water, stomach is to be carefully washed out, patient is catheterized and abdomen is opened. Caecum is first examined. If distended, colon traced down. If empty, obstruction is in the small intestine. If a portion of empty and contracted small intestine is discovered it should be traced upwards till one meets distended bowel at the seat of lesion. If nothing but distended bowel can be found, it is probably safest to secure the lowest loop that can be reached and make an artificial anus in it. When the bowel has been emptied and the patient tied over, a secondary operation may be done to remove the cause. Every endeavour should be made to prevent coils of distended bowel escaping from the peritoneal cavity as it greatly diminishes the patient's chance of recovery even when the cause of obstruction is found and removed. As peritoneum has much resisting power towards organisms, it is always best to close the abdomen without a drain except in cases where there is pus. In retroperitoneal hernias, immediate operation is necessary. Bowel must be withdrawn from the fossa and the opening in the fossa closed. If obstruction is due to band, divide it between forceps and relieve obstruction. When bowel is prolapsed through an aperture divide the constricting ring before it can be released and close opening by sutures to prevent recurrence. If gangrenous, resect. If the patient is not fit, bring it to the surface, open and drain.

In certain cases of faecal accumulations, the following method of treatment has been useful, one or two turpentine high enema, after massaging the abdomen with the flat of the hand with a certain amount of castor oil, first at the navel, then around and then starting from the caecum, ascend up the colon transverse and finally descending colon for about ¼ hour or so. Atropine injections to relieve the spasm have been useful; frequent small doses of calomel, assafoetida and belladonna have been used with benefit. For laparotomy, Local, regional or spinal anaesthesia is the method of choice as against general.

In our country, there is a practical difficulty which has to be overcome in due course by education and propaganda. When a case of acute abdomen is admitted to a hospital and when the surgeon decides that an urgent operation is necessary, the patients advised by his relations refuse to submit to the operation immediately as they dread operations and especially abdominal and the surgeon is in a fix to relieve the patient's sufferings. In some other cases, the patient or his relations come forward at the last stage of his ailment for operation, probably when they think there is no other hope. In such conditions, the surgeon is not able to do the operation with benefit, as he surely knows that the patient may expire on the table or a few hours after operation.

So, it is highly necessary that the patients and relations should be advised strongly and dinned into their ears so as to make them understand the fatality of the disease and that every hour of delay means digging a grave for the patient.

References :

System of Surgery by Choyce.
Practitioner, 1933.

CASES AND COMMENTS

A Case of Preputial Calculi

BY

Dr. S. P. Roy Chaudhuri, L.M.F., (BENG.)

Formerly House Physician, Calcutta Medical School Hospital, Medical Officer R.D., Raj Dispensary, Hayaghat (Darbhanga).

A MAN named Chittoo aged 65 years came to my dispensary for the following troubles :—

(1) Extreme difficulty of passing water—duration 4 months. On enquiry, I came to know that he had this difficulty of passing water since last 15 years.

(2) A hard mass is felt in the foreskin of his penis causing great discomfiture.—duration 4 months. He felt the hard substance for more than 8 to 10 years.

(3) Phimosis—Congenital.

I, on examination, found that the patient had phimosis and some hard substances were felt in the preputial pouch. The

grating was distinctly marked. He gave me no history of any disease of venereal origin. His other conditions were all normal.

I diagnosed this case to be stones in the preputial pouch and advised operation.

Treatment.—On 30-5-'38, I circumcised the prepuce of the patient, but I was surprised to find the stones did not come in view after circumcision. I found a pouch containing calculi. I then opened the pouch and a good number of stones came out. Two large stones were found on either side of the frenum and other small stones around groove separated by compartments. All adhesions were then removed and the operation was finished as usual. Total calculi found were 63 in number including large and small.

Result.—The result of the operation is quite satisfactory. The patient is almost cured. The patient can now-a-days micturate freely.

The interesting features of the case are :—

(1) Such a good number of stones are rarely noticed.

(2) The patient carried the stones for good number of years without any trouble till the symptoms described above appeared.

(3) The abnormal sizes of the calculi.

A Sure and Simple Treatment for Pneumonia

BY

Dr. S. A. Malik, L. M. & S.

Medical Officer, Latur.

PNEUMONIA is such a common and widely prevalent disease all over that a simple and effective treatment is necessary. I have carried out the following line of treatment in this hospital with cent per cent success. It may be adopted on any one day of the disease when the patient comes up for treatment. It is after all a simple and cheap treatment which anyone can carry out.

1. I always start with an enema of ½ grain of Permanganate of Potash in two pints of warm water and if I find the patient has hard faecal schybala, I add an ounce of oleum Terebinth to the same. This is repeated on every alternate day until the patient is discharged cured from the hospital. For children of 1 to 5 years, I use ¼ grain of Permanganate in a pint of luke-warm water.

2. The next step is to administer an intravenous dose of 5 c.c. of a 0.5% solution of mercurochrome prepared in well sterilized boiled water. This solution may be preserved in wide-mouthed glass stoppered bottles and be used whenever necessary. To this 5 c.c. of mercurochrome, I add just before injection 5 grains of glucose boiled in 8 to 10 c.c. of water. Always take care to suck in the syringe mercurochrome first and then glucose solution to avoid any of the latter getting into the former, preserved in the bottle for further use. There is absolutely no reaction resulting from this injection even though the patient may have been injected at a high temperature. It is simply astonishing to find abatement in all his troublesome symptoms from third day onwards.

3. The third step is to administer for adults and the aged without any restriction of sex the following routine.

℞ Ammonia Carb	...	gr. v
Potassium Iodide	...	gr. v
Tr. Digitalis	...	♏ xv
Vin Ipecac	...	♏ x
Aqua ad	...	℥ i

(Sig) one, make three such;one dose three times a day.

I always avoid diaphoretics as they have proved useless in my hands. I never inject any of the narcotics or cardiac stimulants as they simply promote exhaustion and consequent failure of heart. If the patient is found delirious which is very seldom after this injection of mercurochrome, I prefer to give by mouth the following in one dose.

℞ Pot. Bromide	...	gr. xx
Spt. Ammonia Aromatic	...	♏ xx
Aqua ad	...	℥ i

Fiat Haustus to be given at bed time only.

I do not see any benefit resulting from the use of oxygen inhalation which is so widely carried out now-a-days. Perhaps the patients who have survived from the use of Oxygen inhalation could have as well, in my opinion, recovered without it.

It is needless to say that the patient should be kept in a well ventilated quiet atmosphere and on a simple milk diet, with absolute rest during the course of treatment.

A Review of Sixteen Cases of Tubercular Infection of the Intestines and Peritoneum

Treated Surgically at the Co-operative Hospital, Hubli, Since 1925.

BY

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IN the accompanying table I have given the notes of these cases briefly, with the nature of operation done and its result. The symptoms and operative findings also are given in the table.

I was one day casually talking about my experience of T. B. Cæcum cases with a medical friend of mine who has by his work established his position in the front rank of the profession. He seemed to be astonished at the results of some of my cases, so much so, I feared he was incredulous, though his modesty would not allow him to express his doubt. The friend has not been in touch with Surgical work, his field of work being confined

Cases of T. B. Caecum and small intestine treated surgically in the Co-operative Hospital, Hubli from 1925 to-date.

No.	Names.	Sex.	Age.	Pain and tenderness.	Vomiting.	Gurgling.	Lump.	Temperature.	Emaciation.	Obstruction.	Date of operation.	Nature of operation.	Findings.	Result.	Remarks.
1	Sangawa.	F	18	Yes	No	Yes	Yes	No	No	Partial	24- 4-1925	Iliocolostomy.	T. B. Caecum.	Cured.	Healthy up to now. Case first diagnosed as chronic Appendix.
2	Ningawa Basappa Abbigeri.	F	30	,,	No	,	,,	Yes	Yes	No	13- 5-1925	Removal of Caecum and Anastomosis.	do	Died next day.	—
3	Seetabai R. Hombal.	F	25	,,	Yes	,,	,,	No	No	Partial	10- 9-1925	Iliocolostomy.	do and matted glands.	Recovery.	Patient healthy till now.
4	L. G. Dharwarkar.	F	28	,,	No	No	,,	No	No	No	19- 9-1925	do	do	Recovery.	Patient doing well.
5	Chandrabai Joshi.	F	22	,,	No	Yes	Yes	Occasional	Yes	Yes	27-12-1925	do	T. B. Caecum; ulceration mark outside the Caecum.	Recovery.	—
6	H. S. Gondkar.	M	29	,,	No	Yes	No	Yes	Yes	Yes	14-10-1927	Abdomen Closed without doing anything.	General T B. miliary infection of peritoneum.	Patient died on 6th day of operation.	Anaemia.
7	Umabai S. Chandawar.	F	18	Yes	No	Yes	No	Yes	Yes	No	18-12-1927	Abdomen Closed without short-circuiting.	Mesenteric glands plus. T. B. Caecum.	Improved.	Ultra violet rays treatment after operation.
8	Dyamawa S. Nagosi.	F	8	Symptoms of Acute Abdomen	—	—	—	—	—	—	1-12-1930	Iliocolostomy.	T.B. Caecum causing obstruction.	Cured.	History of no long-standing.
9	Seetabai Sugandhi.	F	18	Yes	No	Yes	No	Yes	No	Yes	15- 9.1930	do	T. B. Caecum.	Recovery.	History of pain for 4 years privious to operation.
10	Anusuya J. Deshpande.	F	4	Yes	No	No	Yes	Yes	No	Partial	28-10-1930	Iliocolostomy.	T. B. Caecum and ascending colon big mass.	Cured.	Symptoms of a month's duration only. Quite a healthy girl today.
11	Honnawa C. Mullur.	F	35	Yes	Yes	Yes	Yes	Occasional	Little	,,	8- 1-1933	Enterectomy; removal of Caecum and part of ilium with glands.	T. B. Caecum and terminal ilium.	Cured.	Living quite a healthy life today.
12	Modinbi Nabisab.	F	30	Yes	Yes	No	Yes	Yes	Yes	No	4- 8-1934	Iliocolostomy.	T. B. Caecum with scattered deposit in small intestine.	Much improved.	Living to-day; has given birth to 2 children after operation.
13	Dr. Kalyanpur.	M	34	Yes	No	Yes	Yes	Yes	Yes	No	13- 5-1935	Appendicectomy.	T. B. Appendix scattered deposit on peritoneum.	Died 8 months after operation.	Lungs infected. Abdominal wound did not heal till last; had weak granulation and undermined edges
14	Rudrappa Basappa.	M	35	Yes	No	No	Yes	No	Little	No	29-12-1935	Iliocolostomy.	T. B. Caecum.	Recovery.	—
15	Laxmibai Kulkarni.	F	35	Yes	No	Yes	Yes	Yes	Yes	Partial	23-10-1936	Iliocolostomy and entero-intersectomy.	T. B. Caecum and small intestine on various parts but causing obstruction in one place. Had many round worms in the intestine.	Relieved of pain.	Ultimately died after 4 months of T. B. Lungs.
16	Davalsab Lalsab.	M	25	Yes	No	No	Yes	No	No	No	25- 9-1937	Iliocolostomy.	T. B. Caecum and appendix.	Recovery.	He is quite alright; considerably improved.

to some other branch of the profession. I had also found that the general practitioners in general were not very enthusiastic when surgical treatment was recommended to their patients affected with this disease. My impression, on the other hand, of the success of surgical methods was most optimistic. I wondered if I was wrong in that impression. This made me search the records of my operations and the result I have tabulated for my study.

I am venturing to publish the same with a hope that other Surgeons will also publish their results and we shall be able to judge of the proper value of the Surgical treatment in these cases.

My cases are not selected. In fact, I have always been advising Surgical treatment to every case which had pain and tenderness in the right Iliac region with a lump felt and symptoms of stasis in the terminal Ilium. A few have accepted my advice, some have gone elsewhere to bigger and more famous Surgical Centres, but many have been discouraged by their Medical attendants who generally think that an operation in T. B. infections is not helpful, on the contrary, they expect it would make the patient worse.

They are not wholly wrong. It will be seen from the table that patients who had general miliary infection of the peritoneum,and in whom there was little or no obstruction to the contents of the intestines did not do well; so also patients who had lung infection though quiescent at the time of operation did not do well. In the two cases which had previous lung trouble the lung infection has become active and led to the death of the patient. I myself have abstained from recommending patients with diarrhoea and with stools containing blood or muco-purulent discharge to undergo an operation.

Of the sixteen cases, twelve were female cases, one died on the next day of the operation of lung trouble though she was completely free from abdominal pain. The infection in this case was also gross.

Of the four males, one died six days after operation and the other eight months after; he also had lung trouble. The immediate operative mortality was thus two in sixteen. One after Enterectomy and the other who died on the 6th day on whom nothing more than only an exploration was done.

As to age, the youngest is four years and the oldest thirty five. There have been only two juveniles both girls, one of four and the other of eight. Both came with acute symptoms. The first was referred to me as a case of sub-acute appendicitis. She

was a robust girl till she took ill and was sent to me from Gadag before the complaint was of one months' duration. The other case of eight came as a case of acute abdomen. On opening the abdomen, Tubercular Caecum causing complete obstruction was found in both and they were short-circuited. Both have done well and are quite healthy to day. I wonder if in this tender age the disease takes an acute form; acute in only this much that is tends to produce serious obstruction. In the first case though not complete it was serious enough to cause visible peristalisis and severe colicy pain which made the child cry aloud every few minutes.

The rest of the cases were between eighteen and thirty five.

Some of these cases were diagnosed as chronic appendix and their real nature was revealed only when the abdomen was opened. Had they been diagnosed as T. B. previously perhaps they would not have consented for an operation.

Of symptoms it will be seen from the table that pain and tenderness were the most constant symptoms in all; gurgling in the Caecum was present in a few cases. A lump was felt in most of them. Some were emaciated markedly, none was plump. Partial obstruction was present in a marked degree in seven; in one, as stated above, it was complete. Vomiting after food was present in two cases only.

In at least two cases, there was history of old lung trouble though there was no active focus at the time of the operation. Active T. B. in the lung was considered a contra-indication to the operation.

Nine of these twelve were getting low evening temperature regularly or occasionally.

As to operative procedures adopted in these cases, two had the diseased part removed from these,one died on the next day of the operation. The other was cured, though she had a protracted convalescence in the hospital due to faecal fistula developing, in the wound in the plank, specially made for keeping a drainage tube. She has, however, done so well afterwards, that she is quite plump and healthy to-day and from her looks no one will even suspect that she had ever suffered from T. B.

Iliocolostomy was done on eleven; all have done well except one who died four months after, due to lung trouble. In this case infection was gross. Not only the Cæcum but also the Ilium was infected in many places; in one place it was also causing obstruction and entero-enterostomy was done in addition to

Ilio-Colostomy. The operation relieved her of the pain but could not cure her.

In one case the appendix only was tubercular. It was thick and studded with tubercles. There was no deposit on the Cæcum or the Ilium. The lungs had been infected though quiescent at the time of the operation. Appendix was removed in this case. The abdominal wound, however, suppurated and did not heal till the last. The patient was a medical man and the operation was done at his request. He developed active T. B. in the lung and began to have daily temperature. The wound in this case was, I am afraid, infected with a specific amoebic infection which often infects wounds in the abdomen and the groin and a detailed description of which I remember to have read in the Annals of Surgery of 1934 or 1935. I am sorry I am unable to give the exact number of the issue. The peculiarity in this infection is that there are practically no garnulations but a sort of white membrane develops in their place and the edges of the wound are undermined. Attempts were made to remove this weak tissue and the wound was freshened and sutured once without any benefit.

In the remaining two cases, simple exploratory laparotomy was done. One died on the sixth day, the other improved; Ultra Violet radiation was tried for two months after operation in this case.

My experience is admittedly small. It however, leads me to be optimistic. I am led to believe that in the presence of proliferative type of infection of the serous coat causing obstruction, Ilio-colostomy will certainly be a great aid to the patient. The pain stops at once. The lump also disappears in time. It is this that people find difficult to believe. I myself wonder how such a large thickened and matted mass, (the biggest I have seen is of considerable size, much larger than a mango,) disappears after the short-circuiting. I had once occasion to operate on a boy for volvulus of the ilium. This boy was operated on previously by my friend the late Dr. Y. G. Nadgir, M. S., Professor of Anatomy, Grant Medical College for T. B. Ilium. He had done entero-enterostomy and I had assisted him at the operation. The volvulus at the second operation was distal to the old anastomosis. I was wonderstruck to find neither a trace of any tubercular infection, nor any thickening. The mass at the first operation was of the size of a small mango. I have thus personal experience that a tubercular mass does disappear after short-circuiting. This case is not included in this

collection as it falls in the period before 1925. I am confident that we had some cases with encouraging results in the period between 1916 and 1925 but I could not get any reliable records and so I had to confine myself to the period after '25.

In cases where there is general miliary infection of the Peritoneum, my results have not been encouraging; there are only two such cases in this lot under review one of whom improved and the other in whom even the parietal peritoneum was found studded with tubercles died on the 6th day of the operation.

Of the sixteen cases here reported,the first three were operated on by the late Dr. Nadgir and the rest were operated on by me. The specimens from the cases in which enterectomy was done are preserved.

I am publishing this in the hope that other Surgeons will record their experiences so that the general practitioners will be encouraged to advise their patients to take Surgical aid when it is likely to help them.

Just as lung with proliferative Tubercular infection and even when cavities are formed benefits by the rest it gets under Pneumothorax, the intestine also benefits by the rest it gets from short-circuiting.

Of the total removal of diseased part, my experience is very small though encouraging. The operation however is severe and the patients generally are not fit to undergo a severe operation. Moreover, the shortcircuiting has been found to be quite competent to relieve and even cure the patient. I personally have no hesitation in recommending Iliocolostomy as the only treatment likely to give relief and even cure under favourable conditions. All these cases except one were from the poor class. They have had no regular after-treatment but most of them have kept in touch with the hospital and I am therefore in a position to know about their present condition.

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EDITORIAL

The Origin of Cancer

THE elucidation of the cancer problem has not yet become an accomplished fact. Enormous strides, however, have been made towards this elucidation. Three outstanding achievements can be mentioned. The analysis of the part played by heredity in human cancer by Waaler, later confirmed by Wassink was the earliest. Next came the synthesis of pure carcinogenic hydrocarbons by Kennaway and his colleagues, which not only identified the active carcinogenic agents in tar but laid down the remarkable chemical relations which exist between carcinogens of this type and oestrogenic hormones and other constituents of the normal body. The third main achievement was that of Lacassagne, who showed that the development of mammary cancer in susceptible strains of mice could be accelerated and increased by treatment with oestrin. These, however, have not been the only directions of progress. Many observations have been made which are likely to materially add to the elucidation of this very important problem.

Two excellent surveys of the subject in the *British Medical Journal*, one by Dr. W. E. Gye and one by Dr. W. Cramer have enabled us to present to our readers the present position. Although divergent in the aspect from which they consider the problem, each of these develops his arguments from a common

thesis which is fundamental and figures largely in cancer literature of recent times. Where definiteness and finality are not available our summary must of necessity appear to be scrappy but we shall only attempt to present our readers with a few of the salient features and conclusions arrived at by these two research workers. We leave it to our readers to weave, if possible, a connected account of the development of cancer and the probable lines of future research.

Recent researches have proved beyond doubt that there is an age incidence. The frequency of cancer is definitely known to increase with increasing rapidity as age advances. The death rate from cancer increases in almost geometrical progression.

Formerly, the insidious onset of cancer led workers to believe that the origin of cancer begins with the first appearance of a malignant cell. This is due to an intracellular change by which a normal cell becomes transformed into a malignant one and attention was riveted to the investigation of this change as the one and only problem concerned in the aetiology of cancer. The fact that cancer occurred in old people more frequently than in the young or the middle aged was explained by the assumption that the senility of the tissue is the predisposing factor in the origin of cancer. But the experimental investigation of cancer has shown clearly that it can be induced in young or middle aged organism as readily as in the old and that when cancer has arisen, the malignant cells grow in a young person as readily as in the old one. This, therefore, rules out senility as a direct aetiological factor in cancer.

These experiments have also shown that the aetiology of cancer is divisible into two parts or phases. The first phase is a long preliminary one which is called by Cramer as the "Origin of Cancer" and is designated by Ewing as the "causative genesis" or may be termed as Gye puts it as the "remote causes" of cancer. This extends over a long period of years amounting to a considerable fraction of the span of life and culminating in the sudden transformation of a few normal cells into malignant ones. During that phase in a more or less extensive though localised area of tissue a pathological condition develops characterized by increased cellular proliferation in which subsequently cancer arises in a single cell or groups of cells. The development of this pre-cancerous condition depends upon the action from without on the cells of a given tissue of agencies of the most diverse nature—agencies which are called carcinogenic agencies.

Space does not permit of even a brief survey of these carcinogenic agencies. They are already numerous and are being added to every year. Perceival Pott more than 150 years ago observed that chimney sweeps suffered exclusively from scrotal cancer and attributed this to soot. That X-Rays may induce epithelioma was proved by the pioneer radiologists. The causative association of parasites with cancer was observed long ago in Bilharzia. Laboratory investigations have amplified and extended these observations. Pure chemical substances inducing cancer-formation have been prepared. A whole series of carcinogenic hydrocarbons with a phenanthrene nucleus have been discovered by Kenneway and Cook and their collaborators. Yoshida and Kinosita and other Japanese pathologists have also been successful in inducing cancer with aniline dyestuffs. It has also been shown that carcinogenic agents may also be formed in the body as normal metabolites—for example, oestrone, a hormone formed by the ovary but which produces its carcinogenic effects not on the cells where it is formed but on the cells of another organ remote from its origin—the mamma.

The second phase of the problem has been termed by Cramer as the 'Growth of Cancer' and is designated by Ewing as 'the formal genesis' of cancer and by Gye is called the 'proximate causes' of cancer. The scene shifts now from the environment of the cell to its interior. A new race of cells arise—a race of cells that grow—that is, they multiply—sometimes rapidly, sometimes slowly, but always without any regard to the physiological needs of the tissue in which they have arisen and without regard to the physiological boundaries imposed after the growth of normal cells. By their destructive autonomous growth in a vital organ they kill the organism in which they have arisen. They also have the power of growing *ad infinitum* by successive transplantations into normal animals in a perfectly normal environment and without any further application of the carcinogenic substances which have brought about their appearance. What is the explanation of this change? This is the problem which faces us—a problem really much more difficult than that of the first phase. We are now concerned with the subtle problems of cellular pathology.

Numerous attempts have been made to explain this change by highly speculative conceptions. Two conceptions which are founded on a basis of experimentally established facts may be mentioned. The first is that the intracellular change is represented by an alteration in the metabolism of the cell in such a

way that it enables the cancer cell to obtain the energy necessary to maintain its life by a process of fermentation. The second is that this change is due to the presence of virus. Of these two, the latter theory that this change is due to virus has greater support because of the fact that there are many tumours where a virus cause has been established. For a long time, however, this conception of a virus has met with strong opposition. Firstly because cancer is not a contagious disease like most virus diseases and secondly because this does not fit in with the very long preliminary phase and age incidence of cancer. But these, however, have now been accepted as not being essential factors. It is now conceded that the virus may have been pre-existent in the animal in a non-pathogenic state and that the action of the carcinogenic substances have so altered the cells as to make the virus pathogenic to the cells. This view has received support from the recent experiments of Dr. Peyton Rous with the virus of the so-called Shope papilloma and from the experiment of Andrewes, Ahlstrom, Foulds and Gye who worked with the fibroma virus of Shope.

There is one other factor which has been clearly demonstrated in these experiments and that is the factor of susceptibility. But for this, the incidence of cancer in men, especially of those over sixty, would have been heavier than what it actually is. The carcinogenic stimuli or agents are so numerous that it is difficult to see how one could avoid them and then cancer would appear as a normal concomitant of old age. Fortunately, however, the effects of these agents and stimuli are heavily conditioned by factors which reside in the organism and which for convenience are grouped together under the term "susceptibility". Our knowledge of this is still very vague and incomplete.

An outline like the above must necessarily be incomplete. Space prevents a very detailed presentation. We would advise our readers to refer to two very excellent articles in the March and April 1938 issues of our distinguished contemporary, *The British Medical Journal* and also the very excellent books by the research workers on the subject. As we said in the beginning, we leave it to our readers to weave a more complete story of the research on cancer. We have only aimed at giving to our readers enough evidence to show that progress is being made in many directions and that it is high time the medical profession gives up the unjustifiable pessimism pervading the subject of Cancer.

GLEANINGS FROM MEDICAL PRESS

Surgery

Acute Infection of the Upper Lip.—J. Norman Elliott, M.D., Bloomington, Ill.—The paper calls attention to acute infections of the upper lip and of the face in the so-called danger area. It is described by Hunter "as the area between the hairline of the forehead above and the chin below."

The anatomy of this portion shows that the upper lip is drained normally by the facial vein which flows into the internal jugular. There is an anastomosis through the angular vein with the superior opthalmic which empties into the cavernous sinus. For this reason and the fact that the skin of the face is in constant motion, it makes it difficult to localize these infections and tends toward their severity.

In the following Gamble's classification, the infections are divided into three stages :—

(1) Stage of pimple or papule formation.

(2) Stage of extension.

(3) Terminal stage of cavernous sinus thrombosis, septicemia or meningitis.

During the first stage of pimple or pustule formation there is no doubt that we as physicians can do a great service by warning our patients about the dangers of these infections. Usually the explanation of the anastomosis of the angular and opthalmic veins and the dangers of the infection going to the cavernous sinus and the brain will suffice to awaken in the patient a consciousness of the dangers of any trauma.

Practically all the authors agree that traumatization of these infections in the early stages is the factor that increases their severity.

In the stage of extension the patient should be hospitalized, if at all possible. Hot, wet packs of either boric solution or magnesium sulphate should be continuously applied. The diet should be liquid or soft. A small duodenal tube can be passed into the stomach, if necessary, either through the nose or mouth, depending on the site of the lesion. X-ray has been used with great success during this stage. Whitemore of the U. S. Navy advises the use of X-ray and urges that it be used early. If the pain is not relieved he considers the treatment a failure.

The conservative type of treatment has by far the largest group of followers. Koslin, Cutler, and Martin all advise conservative treatment. Use of the scalpel early is forbidden by most of them.

In cases in which the general circulation has been invaded and in those cases in which the cranial cavity has been invaded any form of treatment will be discouraging.

The summary of the treatment can be given in the words of Dr. Blair: "I have never seen a fatal result in a case treated conservatively by non-operative measures, that is, which has not been pinched, injected, incised, or otherwise traumatized either by the patient or surgeon; and every fatal case that has come under my observation has been subjected to some of the above procedures. This condemnation of surgical interference does not apply to well developed abscesses in which there has been sufficient time for the development of a protective surrounding wall, nor to the destruction of the whole infected area by the use of an actual cautery."—(*Abstracted by the author.*) *Illinois Medical Journal*, 72:491, (Dec.) 1937.—*Medical World* (*U.S.A.*)

Treatment of Compound Fractures.—Paul E. McMaster, M.D., Los Angeles, California.—From the Departments of Orthopedic Surgery of the University of Southern California and the Los Angeles County Hospital.

Compound fractures which are becoming increasingly more common in this machine age are surgical emergencies and demand early adequate care. Failure to recognize this fact results too often in prolonged chronic infections of soft parts and bone, deformity, permanent disability, loss of limbs, and even death.

Three hundred and fifty-six cases of compound fractures have been studied and form the basis of this report.

There are three major problems to deal with in caring for compound fractures which are: (1) treatment of the patient (shock, hemorrhage, and internal injuries); (2) care of the soft parts injury at the fracture site; and (3) treatment of the fracture.

A compound fracture in general may be one of two types either direct or indirect. In the former the soft tissues are contused and lacerated by an external force while in the indirect type the soft parts and skin are punctured from within outward by a sharp bony spicule at the fracture site. The indirect type

results in a much higher percentage of healing per primum than in the direct type. Each added hour after injury that surgery is delayed enhances infection which is largely responsible for poor results in compound fractures.

The first aid treatment of these injuries is important. No attempt should be made to reduce the fracture, instead the injured limb should be splinted before moving the patient. Prevention of shock is important. The wound should be covered with sterile gauze and not probed. Indiscriminate use of constrictors which, if applied too tightly and left on for too long a period of time may lead to unnecessary damage of tissue and embarrassment to circulation, should be avoided.

The patient should be moved as soon as possible to a well equipped hospital. Shock if present is to be treated first, using external heat, warm drinks, morphine intravenous fluids and in some cases blood transfusions are necessary. Injuries to brain, spinal cord, lungs and abdominal organs must be looked for and may require attention before the compound fracture is treated.

All patients with compound fractures should receive tetanus antitoxin and the usual dosage is 1500 units. Four cases of clinical tetanus occurred in the 356 cases. Three of these did not receive the antitoxin initially and one succumbed. The fourth case received it and even so developed a mild attack but recovered.

It seems advisable to administer a polyvalent gas gangrene antitoxin. The type most commonly used is a mixed preparation containing 1500 units of tetanus antitoxin, 2000 units of perfringens (B. Welchii antitoxin) and 2000 units of vibrion septique antitoxin. Gas gangrene is to be prevented by early and adequate debridement and gas antitoxin. If the wound is several hours old at the time of debridement it should be left open to the air, as the organisms are anaerobic. Gas infections are diagnosed by demonstrating the organisms in smear and culture of wound discharge; also by the toxic condition of the patient, crepitation of soft parts and by the presence of gas bubbles in soft parts seen in roentgenograms. Low grade gas infections localized to the primary wound are treated by the use of oxidizing solutions leaving the wound open to the air. More virulent rapidly spreading gas infections should be treated by long deep incisions into muscle bellies or amputation. In both latter procedures the wounds should be left open and treated with frequent irrigations of an oxidizing solution of

which the most commonly used are Dakin's and hydrogen peroxide.

After shock has been controlled and tetanus and gas antitoxin administered, roentgenograms are made and the patient is taken to surgery. Primary amputation is at times indicated and should be determined by the amount of soft tissue and bony damage as well as the integrity of distal circulation. Care should be exercised against needless amputation.

One of the standard anesthetics is used. The skin of the injured limb is prepared by removing grease with benzine; the hair is shaved and the skin washed with soap and water. It may then be painted with one of the common antiseptics or simply rewashed with soap and water. During this time the wound is covered with a sterile or alcohol-soaked gauze.

The limb is then draped and debridement started. Using forceps and scalpel a segment of approximately 0.3 to 0.5 cm. is excised from the wound edge. Instruments are then changed and a further search is made for any additional lacerated tissue which is excised. Muscle is excised until it bleeds when cut and contracts when pinched. All pockets are explored and uncovered if necessary by enlarging the skin opening. Small detached bony fragments are removed. Larger detached fragments and all with periosteal attachments are left. Dirty bone ends are cleaned, rongeured or chiselled off. The wound may then be irrigated with warm saline. Iodine is not used in these wounds for it may do more harm than good. Viable muscle takes on a "cooked appearance" when iodine is poured on it.

Bleeding vessels are ligated and in wounds treated within the first six to eight hours severed tendons and nerves are sutured with silk or linen. Internal metal fixation appears inadvisable.

Wounds treated within the first six to eight hours after injury are closed. Those treated up to ten hours after injury are sutured loosely to allow for wound drainage (mechanical drains such as rubber are not used in the wounds). All other wounds are treated by the Orr method, that is, packed open with vaseline gauze.

After the wound has been treated according to the above indications the fracture is then reduced. Skeletal traction may be necessary in some cases while in others a plaster cast may be applied. Early and uninterrupted immobilization enhances the healing of any wound hence the sooner this is obtained the

better.—(*Abstracted by the author.*) *American Journal of Surgery, XXXVIII:468 (Dec.) 1937.—Medical World (U. S. A.)*

The Management of Tuberculous Glands in the Neck.—Frankau states that tuberculous infection of the glands is bovine in 90 per cent. of the cases. The pathways of the infection are via the nasopharynx, the intestinal tract, and the mediastinum. The treatment should be conservative if the involvement is early and not yet caseous, if the infection is massive and advanced, or if the involvement is diffuse but not caseous. The treatment should be operative in caseation and old abscesses. Irradiation may be of value in certain cases. Tuberculin is valueless.

Radium treatment seems to be of definite value, according to Pugh. From 24 to 30 applications are necessary. The results seem to be lasting; of over 300 patients so treated, only two were readmitted. It is a distinct advantage for the irradiation therapy to be as long as possible, as this permits adequate constitutional treatment.

At Middlesex Hospital, Windeyer reports that cases have been treated by: (1) surgery with radiotherapy; (2) roentgen irradiation; and (3) radium irradiation. Irradiation seems to be definitely beneficial, but only as an adjunct to proper general constitutional treatment. Septic foci must be removed, and broken-down glands aspirated before irradiation is attempted.

P. Turner does not aspirate, but curettes broken-down glands, and shrinks tonsils by ethyl iodoricinoleate. He believes that fistulæ should be curetted as thoroughly as possible.

Nicholls thinks that the disease is milder than formerly. and that constitutional treatment is about as effective as surgery or irradiation.

The procedure varies with the virulence of the infection, according to Donald. In some cases small incisions with expression of the material are still satisfactory.

If the portal of infection is in the nasopharynx, G. Turner states that the whole cervical chain, on both sides, if necessary, should be cleaned out. If the portal is in the trunk, the general measures are more important than surgery.—*Frankau, Pugh, Windeyer, Turner, et al, Proc. Roy. Soc. Med., London, 1937, 31:103.—Medical World (Lond.)*

Changes in the Brain in Accidental Electrocution.—George B. Hassin presents the histopathological study of a man, 35 years of age, who was found dead between the railroad tracks of

an elevated electric railroad station near Chicago. Changes in the brain and its coverings are described in detail. While hæmorrhages are not commonly found after death from electrocution, the typical changes are tears of the cerebral tissues, shrinkage around the smaller blood vessels and the glia nuclei, and rupture of the tunics of the larger blood vessels, especially the *membrana elastica*. The writer believes the last mentioned to be pathognomonic of electrocution. He discusses the histological differences seen in cases of accidental and legal electrocution, and believes the reason for the difference is that in the latter case the electric current is brought into closer contact with the body and that in passing from the forehead to the lower extremity it invariably involves the brain.—*The Journal of Nervous and Mental Disease, December, 1937.—Medical World (Lond.)*

Nerve Injuries Caused by Intravenous Injections of Dextrose.—Six cases of injuries to the large nerve trunks (especially the median) of the upper extremities were observed by George B. Hassin, Chicago (*Journal A.M.A.*, March 26, 1938), at the outpatient neurologic clinic of the Cook County Hospital during a period of eight months; all were caused by intravenous injections of dextrose. The instructive features in the cases recorded were predominant involvement of the median nerve, which was regularly affected in all the cases except case 6; the prevalent lesion of the sensory nerve fibers (the motor disturbance prevailed only in case 6); the long duration of the anesthesia, and the obscure mechanism of the origin of such nerve lesions. That they are due to the injections there can be no doubt, but it is doubtful whether they are caused by a possible nicking of the nerve by the needle. The presence of ecchymoses (cases 1 and 5) around the elbow would speak for such an etiology, though pressure by the adhesive plaster in holding the needle in place on the arm or the arm's fixation against the board combined with the long duration of the injections in patients debilitated and weakened by protracted illness (diabetes) or dangerous surgical states may also be responsible for the neuritic phenomena. The edema or swelling that was present in some cases can hardly be considered a contributing factor, as in other cases swelling was not mentioned. Probably several factors were instrumental in the causation of the lesions and should be borne in mind at the time the injections are given.—*Texas State Journal of Medicine, May 1938.*

Medicine and Therapeutics

Thiamin Chloride and Nicotinic Acid in Pellagra.—Spies and Aring (*J.A.M.A.*, April 2, 1938, p. 1081) report on the effect of the administration of vitamin B_1 in six cases of classic pellagra with peripheral neuritis. Irrespective of the cause of the pellagra, prompt relief of spontaneous neuritic pain resulted from the intravenous injection of thiamin chloride (crystalline vitamin B_1 hydrochloride). These observations suggest that vitamin B_1 deficiency plays a part in the development of clinical manifestations of peripheral neuritis associated with pellagra. The vitamin B_1 does not appear to cure the glossitis and stomatitis of pellagra but nicotinic acid which has been referred to in *The Journal A.M.A.* (Jan. 22, 1928, p. 289; Feb. 26, 1938, p. 622), does relieve these symptoms. The Cincinnati investigators have demonstrated that all types of pellagra are benefited within twenty-four to forty eight hours after the administration of nicotinic acid. Certainly both thiamin chloride and nicotinic acid deserve further intensive study in their relation to pellagra. (*J.A.M.A.*, April, 2, 1938. p. 1115.)—*Minnesota Medicine.*

The Treatment of Erysipelas with Prontosil.—This report contains a review of the literature concerning the effect of prontosil in cases of experimental animals as well as human beings infected with streptococci. Prontosil is believed to be nearly a perfect specific against erysipelas; it reduces the duration and decreases the severity of the condition. However, it does not prevent complications. It is also effective in other streptomycoses, especially in puerperal fever and in infected abortion. In cases of streptococci sepsis it is useless; perhaps it may prevent this condition sometimes.

These conclusions are based on the results of the application of prontosil in 35 cases of erysipelas and their comparison with the results in 35 similar cases not treated with prontosil. A graphic presentation of the individual cases is given. It is clearly shown that prontosil given by mouth every three days in doses of 2.0, 1.5, 1.0 or 0.5 gm. respectively promotes and hastens the cure of erysipelas, reduces the fever, and limits the spread of the inflammation. Apparently, it tends to prevent a relapse. Prontosil treatment has not caused any disagreeable consequences. — *J. E. Minkenhof, Die Erysipelbehandlung mit*

Prontosil, Nederl. Tijdschr. v. Geneesk., 1936, p. 5197.—Medical World. (Lond.)

Vitamin Therapy in Practice:—Vitamin A with its property of protecting the epithelium, applied in the form of cod liver oil, has proved valuable with badly healing wounds; for instance, ulcer of the leg, diabetic gangrene. Successful results have also been obtained with injections of vitamin A in obstinate cases of gastric and duodenal ulcer. According to Wendt large A-doses produce a decrease of the general metabolism and an increase of bodyweight in subjects of Graves' disease. The most effective means for combating gastritis with anacidity or hypoacidity is vitamin A in the form of drops, very small doses being prescribed before meals (rapid improvement of appetite and putting on of weight, cessation of gastrogenous diarrhœa, etc.). It may be supposed that the improvement due to vitamin A in Graves' disease is also attributable to the good influence on anacidity and hypoacidity which is almost always present. In subjects of carcinoma the fattening effect of A (injections) prolongs the patient's life and increases his physical capacity. Of the foodstuffs, cod liver oil, from which all vitamins A are produced, is richest in vitamin A, but vitamin D, of which cod liver oil contains large quantities, may occasionally have an antagonistic effect. With regard to the diet, butter, yolk of eggs, liver, lettuce and spinach are chiefly to be recommended.

Vitamin B: A complete lack of B_1 results in beri-beri which has been frequently observed in Europe. The lack of B_1 is further the cause of œdema due to war and starvation. The practitioner will occasionally see conditions of general muscular weakness, muscular pain, sensory disturbances of the limbs and œdema, etc., which disappear if the patients are supplied with B_1. There are further connections between B_1 and the carbohydrate metabolism (with a very liberal supply of sugar the body becomes poor in B_1) and diabetes, funicular myelosis and pernicious anæmia. It seems that B_1 is especially important for the carbohydrate metabolism of the nerve cells; in any case it is often possible to exercise a good effect in cases of isolated neuritis and polyneuritis, diphtheritic paralysis and even disturbances affecting the spinal cord. B_1 may heighten the sensitiveness to insulin. B_1 hypovitaminosis may be a consequence of an oversupply of vitamin A. With regard to diet, yeast, vegetables (cabbage, beans, French beans), nuts, wheat, oats, rice-bran, pork, internal organs should be prescribed.

The growth-promoting vitamin B_2 is chiefly contained in spinach, eggs, yeast, peas, the germs of cereals. By the B_2-complex or vitamin G is understood B_2, B_6 (protective factor against pellagra) and Castle's extrinsic factor (anti-anæmia vitamin). Diseases of the tongue and oral mucous membrane, pellagra, sprue, some forms of tropical anæmia and leprosy are treated with the B_2-complex. A diet rich in B_2-complex consists of liver, fish, milk, eggs, yeast, peas, tomatoes, cabbage, yeast products; possibly liver extract in addition. Preparations of B_2-complex are not yet available.

With vitamin C we treat not only scurvy but all the disorders associated with hæmorrhagic diathesis, even cholæmic hæmorrhage, typhoid intestinal hæmorrhage, hæmorrhage due to ulcers, etc. C accelerates the blood coagulation and makes the capillaries more impervious. Further indications are: dental caries, pyorrhœa alveolaris, gingivitis, disturbances of growth, malignant diphtheria. A should not be given at the same time as C (antagonism). C-carrier: lemons, oranges, grape fruit, horse radish, etc.

The anti-rachitic vitamin D should also be given for osteomalacia, tetany, pulmonary tuberculosis and allergic diseases. It has been maintained that the parathormone treatment of disturbances of the calcium metabolism can be fully replaced by the tenfold antirachitic dose. A and B especially are antagonists and should therefore not be given at the same time.

The anti-sterility vitamin E is also prescribed for sexual weakness, azoospermia, habitual miscarriage. It is chiefly contained in oil procured from the seeds of wheat.—*R. Boller, Wiener med. Wschr., No. 46, 1937.—Medical World (Lond.)*

Eggs in Biliary Disease and Gout.—Sufferers from biliary troubles should avoid eggs in their pure form (boiled, scrambled or poached) on account of the high content of fat in the yolk. Raw egg yolk incites strong contractions of the gall bladder which may cause colic or irritation of the gall bladder. When finely distributed in the preparation of food, such as soups, puddings and other dishes, eggs are, however, well tolerated: individual sufferers from slight biliary disease may even consume one or two eggs daily without discomfort. Since eggs contain no purin bodies, they are not prohibited with gout nor with renal calculi, but in these cases also more than one egg daily is not advisable because any overburdening of the protein metabolism should be avoided.–*Med. Welt, No. 7, 1938.—Medical World (Lond.)*

The Prevention of Paralysis in Poliomyelitis.—The seasonable outbreaks of infantile paralysis are not far distant. Last week a statement in the correspondence column of the journal emphasized the necessity for complete rest for patients in the early stages of this disease. Complete rest is so important that it is usually far better to leave the child in bed at home when the disease is first suspected than to move the patient any appreciable distance to a hospital. When these patients are disturbed or moved as little as possible a majority in whom the disease has not progressed beyond the early stages escape paralysis entirely. Should the patient have paralysis, especially of the extremities, the affected part should be immobilized properly at the earliest moment. Early rest of a weakened muscle under these circumstances will help to prevent permanent crippling. Infantile paralysis can be suspected when there is fever, headache, irritability, possibly vomiting, perhaps a tremor in the hands, and especially a tender rigid spine, which makes it impossible for the child to touch his chin to his knee. When such manifestations are present, the spinal fluid may be examined to confirm the diagnosis. Thus far there is no specific effective remedy in the acute stages of infantile paralysis nor any generally accepted preventive.—*Jour. A.M.A., May 14, 1938.*

Myasthenia Gravis. Consideration of Recent Advances and Influence of Pregnancy.—Harry Tabachnick Milwaukee (*Journal A.M.A.*, March 19, 1938), discusses the recent advances pertaining to etiology, treatment and diagnosis of myasthenia gravis. Interest in the undetermined etiologic role of the endocrines is further enhanced by the consideration of myasthenia gravis associated with pregnancy. In the case of myasthenia gravis cited myasthenic weakness had its onset after childbirth and the myasthenic facies with exaggeration of symptoms was observed to set in during the early course of the next pregnancy. Myasthenic weakness may precede the myasthenic facies. Prostigmine is a valuable drug in both treatment and diagnosis of myasthenia gravis. It is suggested that prostigmine may be of aid in the diagnosis previous to the onset of the myasthenic facies; that is, when the malady is in what may be termed a stage of incipience. There is need for more determinate information on myasthenia gravis with pregnancy. An accumulation of data including use of the newer quantitative endocrine determinations is likely to assist in clarifying the possible relationship of the endocrines to the disease.—*Texas State Journal of Medicine, June, 1938.*

PROCEEDINGS OF CONFERENCES, SOCIETIES, ETC.

The Dayapuram Hospital and Homes for Lepers.

Speech of the Hon'ble Dr. T. S. S. Rajan, Minister for Public Health, Government of Madras, on the occasion of the Opening of the Madura Silver Jubilee Hostel for Boys at the Dayapuram Hospital and Homes for Lepers, Manamadura, at 5 P.M. on 23-7-1938.

Leprosy is as old as humanity. It has been recorded in the past histories of the nations of the world, and even in our country which we claim as one of the oldest in existence, and which has perhaps one of the longest traditions, we have been told that leprosy has been prevailing from the earliest times. Recognition of this fact has been found in the codes of our forefathers, where distinct mention is made of the disease and society has been asked to take note of the fact that the disease is an infectious one and that every effort should be made to prevent its propagation. Laws of Inheritance and Succession disqualify the leper from inheriting property and prevent the propagation of the species by marriage. Historians of the early Christian era have also recognised the prevalence of this disease both in Europe as well as in Asia. But it is regrettable to note that in spite of its antiquity and the incessant effort on the part of mankind, it has not yet been found sufficiently possible to prevent the onslaught of this scourge. Religious sentiment, human philanthropy and mandatory injunctions from world reformers, have, to a certain extent exercised a restraining influence on the progress of this disease. The grip of old ideals have yielded place to new, and it has become necessary to review the conditions relating to the disease and its ultimate cure in the light of research that has been made till now. The question has really come to the front and Governments have been set thinking seriously about the lines of approach to be pursued in future with regard to tackling this fell disease.

The disease is a very chronic one and its onset is very insidious and slow. While it does not produce death rapidly, it lingers sufficiently long in the human system nursing the poison and thus affording opportunities of years for the disease to spread its root from generation to generation so that it has almost become well nigh impossible to root out the disease from our midst. But the possibilities of human endeavour and the resultant success are such that a true note of optimism and faith in the ultimate goodness of things shall alone make success in this direction possible.

The British Empire Leprosy Relief Association and the Mission for Lepers have been endeavouring to do a good deal of

humanitarian work on behalf of the leper population in the British Empire and outside. Whatever may have been the influence of Imperialism with regard to politics, the fact that organised medical relief has become a land mark—it may be that it is a side issue consequent upon political influence—but still the fact remains that it is a great endeavour trying to afford relief to suffering people. The work has developed in two directions. One is of providing the necessary financial strength and man power for carrying organised relief and the second is the education of the public to realise the importance of prevention of this disease by making people understand the full implications of the disease in all its aspects and to explain the duty laid on them to relieve this suffering. The extension of leprosy relief has become part of the State Medical Relief work in our province and we have been rapidly multiplying centres of treatment and to-day we have as many as 451 centres of leprosy clinics in our province besides eleven institutions, the latter managed by Christian Missionary bodies and partially helped by the Government.

We have now arrived at a stage when we should go into the whole question of State Leprosy Relief and review the position as has prevailed in the past and also mark out a line of work for the future. In doing so, we will have to take note of the prevailing expert opinion on the subject. As far as I could gather from the literature and from personal conversation and also after inspecting a number of leprosy institutions in the province, I think I will be safe in enunciating the following proposition.

1. That no definite cure has yet been found for tackling leprosy.

2. The origin of the disease is still obscure and requires elucidation.

3. The finding of lepra bacilli and the particular methods of its progress in the human system have been elucidated, but it has not been possible to create a resistance in the system by means of protective inoculation.

4. There are many things that influence the disease in its progress and probably the influence of diet is perhaps a very important one.

5. After some years and after the body has sufficiently developed its powers of resistance, it is able to arrest the disease by its own inherent strength and those cases have come to be termed "burnt out cases". Though gruesome in appearance, the disease gets arrested in these people and they are no more a danger to the public or to themselves.

6. The disease has got to be tackled in children more than in adults with a view to arrest the spread of the disease in its early stages.

Any drive against leprosy must take note of these factors if anything like a tangible result has got to be attained in the course of a few years. It is time that leprosy relief work should be directed on the lines that would conduce to its permanent eradication rather than merely attending to the after-effects of the disease. To put it briefly, the Government will be justified in spending its money more on the efforts for eradication of the disease than of doling out relief, which is an uneconomic investment upon human beings who have ceased to be an economical unit for the State. The State can take cognisance only of those people who are a danger to others on account of the disease they have. They should not spend their money in mere relief work of the incapacitated but should leave that sort of humanitarian work to the charitable instinct of people and allow them to do what they can in relieving the sufferers from the crippling effects of the disease.

In fact, the relief work by the various agencies in the province should have two clear cut functions. A clear analysis has got to be made between infectious and non-infectious cases and the claims of the infectious cases should be put in forefront of new treatment and protection offered to them in the institutions to which they seek admission. This will include necessarily the early recognition of the disease in children and hospitalisation of all those cases which apparently look harmless but are still very potent as carriers of infection. This indeed is the primary duty of all leper institutions.

The second duty is one of rendering assistance to those that have been incapacitated by the ravages of the disease who though innocuous to society are yet rendered incapable of helping themselves. Herein comes the field for human philanthropy and probably the Mission to Lepers will have a great field in rendering this service. A time may come in the near future when Government help may become restricted only to those who endeavour to work on a rational basis with regard to the eradication of the disease.

Efforts are now being made to make the Leper Settlement at Tirumani a really Research Institution which will spread up-to-date knowledge in combating leprosy to the profession and at the same time indicate also to leper institutions the proper lines of approach to the solution of this problem. The findings of this research work shall be the subject of expert criticism by medical men who are entitled to speak on it with knowledge and experience and the progress shall be verified in terms also of the results obtained at the Settlement. These shall be placed at the disposal of the leper institutions in the province as a guide.

Therefore, I want the institutious like the Dayapuram Hospital and others in the province to realise what the Government proposes to do with regard to the question and I would ask

them to utilise the opportunities provided by the Government through the Tirumani Leper Settlement for the benefit of the leper patients in the province. Treatment centres will certainly continue to function but they shall only play a secondary part in the organisation of leper relief and though a secondary part, it may still continue to be a necessary part in the campaign. The Government are endeavouring to give discriminating help to research workers whose quest for arriving at correct conclusions is expected to yield positive results in the course of five or ten years. A few years spent on this rational approach shall not be too much of a time for a disease which is so ancient but yet so persistent. What is really wanted is patient endeavour on the part of those devoted to the cause and who should be helped liberally and enthusiastically in the pursuit of a thing that may eventually give us the desired result, viz., the saving of humanity from the clutches of a disease which is defying time and skill. This is what I want to place before all the leprosy institutions and you will realise from what I have said the importance of providing Childrens' Clinics in Leprosy Centres.

I congratulate the Mission on the right step they have taken and I hope that they would realise the full implications of Governmental help and would try to co-operate with the Government in all that we do for the welfare of our people.

I take this opportunity of thanking all the institutions that have been endeavouring to help suffering humanity and they are in a way relieving the Government of a great burden of responsibility to the people. These institutions are entitled to our support and sympathy and we in turn look forward to them to co-operate wholeheartedly with us so that through our combined efforts we shall soon be in a position to say that we have reached the end of our labours by getting rid of this dire disease from our holy land.

The Tinnevelly District Medical Association, Palamcottah.

Joint Meeting of Pandya & Chera Medical Associations.

A Joint Meeting of the Travancore State Medical Association, the Madura Medical Association, the Ramnad District Medical Association and the Tinnevelly District Medical Association, was held in the splendid palace of Ramnad on Saturday the 23rd of July 1938, at Courtalam, one of the most charming waterfalls of Southern India, noted for pretty mountain scenery.

Colonel Shastry, requested Dr. C. B. Rama Rau, to declare the Medical Exhibition open and Dr. Rama Rau, did it in an inspiring speech expatiating on the social benefits of such an Exhibition.

The meeting began under the Presidenthip of Rao Bahadur Dr. Raman Tampi, M. D., the President of the Travancore State Medical Association.

Resolutions congratulating Rao Bahadur Dr. T. S. Tirumurti, B. A., M. B. & C. M., D. T. M. & H., (LOND)., on his appointment as Principal, Stanley Medical College, Madras, and Dr. Mrs. Poonen Lukose, B. A., M.B., B. S., (LOND)., L. M. (ROT)., on her appointment as Surgeon-General of the Travancore State, were passed *nem con.*

The following resolutions of the Tinnevelly District Medical Association were read out and passed unanimously by the joint meeting:—

I. "The Tinnevelly District Medical Association is of opinion that the time has come when the All-India Medical Licentiates' Association and its Branches together with its membership, Funds, and Journal should be entirely amalgamated and merged with the Indian Medical Association, thereby facilitating the formation of a united front for the redressal of the legitimate grievances of the Licentiates and to unify the Allopathic Medical profession as a whole".

II. "The Tinnevelly District Medical Association is of opinion that the question of forming a provincial Branch of the Indian Medical Association for the Madras Presidency may be considered when an adequate number of District Branches of the Indian Medical Association have been formed in the Presidency."

III. "The Tinnevelly District Medical Association is of opinion that the Indian Medical Association subscription may be reduced from Rs. 3/- to Rs. 2/- in as much as the membership of the Indian Medical Association has increased appreciably since its formation and as there is every likelihood of more Medical Associations joining the Indian Medical Association *if the subscription is reduced* and that this suggestion may be sent up to the Central Council of the Indian Medical Association."

IV. "Resolved that a definite number of seats not less than 10 per cent in the Medical Colleges of the Presidency, be allotted to the children of the Alumni of the Medical Colleges and of the old Medical Schools."

V. "Resolved that the Cambridge Senior examination be recognised as before for admission into the Medical College.

VI. The following were nominated as President and Vice-President of the Indian Medical Association for the ensuing years:—

1. *President*:—Colonel Kukday, I. M. S., (RETD)., Nagpur.
2. *Vice-Presidents*:—(*a*) Lieut. Col., T. S. Shastry, I. M. S., Palamcottah.

(*b*) } Left open for names from
(*c*) } other Provinces.

Consideration of the membership of the Indian Medical Association when persons are transferred to places where there is no Branch of the Indian Medical Association was discussed and it has been suggested that each District Medical Association should have non-resident membership also from amongst their old resident members.

Three cases of Regional Colitis and Ileitis which were operated and treated by Lieut. Col., T. S. Shastry, I. M. S., at the Govt. Head Qrs. Hospital, Palamcottah, were read out. Lieut. Col., T. S. Shastry, I. M. S., delivered an interesting lecture on Regional Colitis and Ileitis.

Dr. A. L. Ananthanarayana Iyer, M.B., B. S., demonstrated a case of Ataxia and read notes of the case.

Dr. P. Rama Rau, Radiologist, Madras, delivered an interesting lecture on "The uses of (*a*) Deep X-Ray Therepy & (*b*) Radium Therapy" and also demonstrated skiagrams of some of his cases. He exhibited one of his old patients cured of Cancer of Tonsil and Tongue & Lymph glands.

Dr. Karunakaran Menon of Trivandrum, delivered an intersting lecture on "Deficiency Diseases".

After lunch, Lieut. Col., T. S. Shastry, I. M. S., moved a vote of thanks to the guests of the other Medical Associations, to the organisers, to the Estate Manager for having permitted us to hold the meeting at the Rajah of Ramnad Palace and to the representatives of the Medical Exhibition. Dr. M. V. Natesan on behalf of Madura, Dr. Kesavan Nayar on behalf of Travancore Medical Association, Dr. Venkappa on behalf of the guests offered a hearty vote of thanks to the Tinnevelly District Medical Association for the excellent arrangements and organisation of this unique gathering and wished for many a happy return of the same.

BOOK REVIEWS

Food and Physical Fitness—*By E. W. H. Cruickshank*, M.D., D.Sc., 1938, pp. 148. Edinburgh: E. & S. Livingstone. Indian Publishers: Messrs. Butterworth & Co., Ltd., Avenue House, Calcutta. Price: Rs. 3 12.

The author is the head of the department of Physiology in the University of Aberdeen and this book is the outcome of a series of lectures given by him under the John Faraquhar Thomson bequest during 1936—37. The book begins with a chapter on the Problems of Nutrition. "Our knowledge of what constitutes an adequate diet is still incomplete. We cannot tell precisely what the requirements are for any food constituent. Indeed, the requirements vary widely according to age, sex, occupation and sometimes even with individual idiosyncrasies. But otherwise for a safety margin it is possible to draw up diets which will contain so far as is known at the present time, sufficient of all the constituents to enable a person to attain his full inherited capacity for health and physical fitness. It is impracticable to lay down a standard diet or even a series of diets for universal use. They would have only one feature in common, that is, they would all contain a sufficient amount of what are now called "protective foods", that is, those rich in protein, minerals and vitamins"—so observes Sir John B. Orr in his foreword to the book. The book gives the energy needs of the body and the calorific values of food-stuffs in a descrpitive and practical manner. The role of the vitamins and minerals has been emphasised and the book is bound to be of immense use to all these interested in the welfare of the country, and its people. The book also contains many useful tables

on various foodstuffs and is very informative. We recommend it to all our readers.

Illness—Its Story and Some Common Symptoms—*By S. Henning Belfrage*, M.D., (LOND.), 1938, pp. 173. Oxford University Press, Bombay. Price 3/6.

This is written specially for the guidance of the layman. One very often meets with conditions of ill-health, wherein medical science can do little to alleviate the sufferings of the individual. Neglect of the bodily disorder at the earliest stage contributes a great deal to such advanced conditions due to a lack of knowledge of health on the part of the sufferer. The author gives in a very descriptive manner the chapter on the attainment of health, the meaning of symptoms, the causes and nature of disease. The need for consulting the physician at the earliest symptoms of breach of health and the need for a better and clever co-operation of the patient and doctor in the fight of the disease has been well stressed.

The second part of the book deals with the index of diseases explaining the main symptoms of most of them. This is a book that ought to be read by every one and we wish it occupies the book-shelves of many households.

Leprosy—Diagnosis, Treatment and Prevention—*By E. Muir*, C.I.E., M.D., F.R.C.S., (EDIN.), Published by the Indian Council of the British Empire Leprosy Relief Association, Delhi. Sixth Edition, 1938, pp. 192.

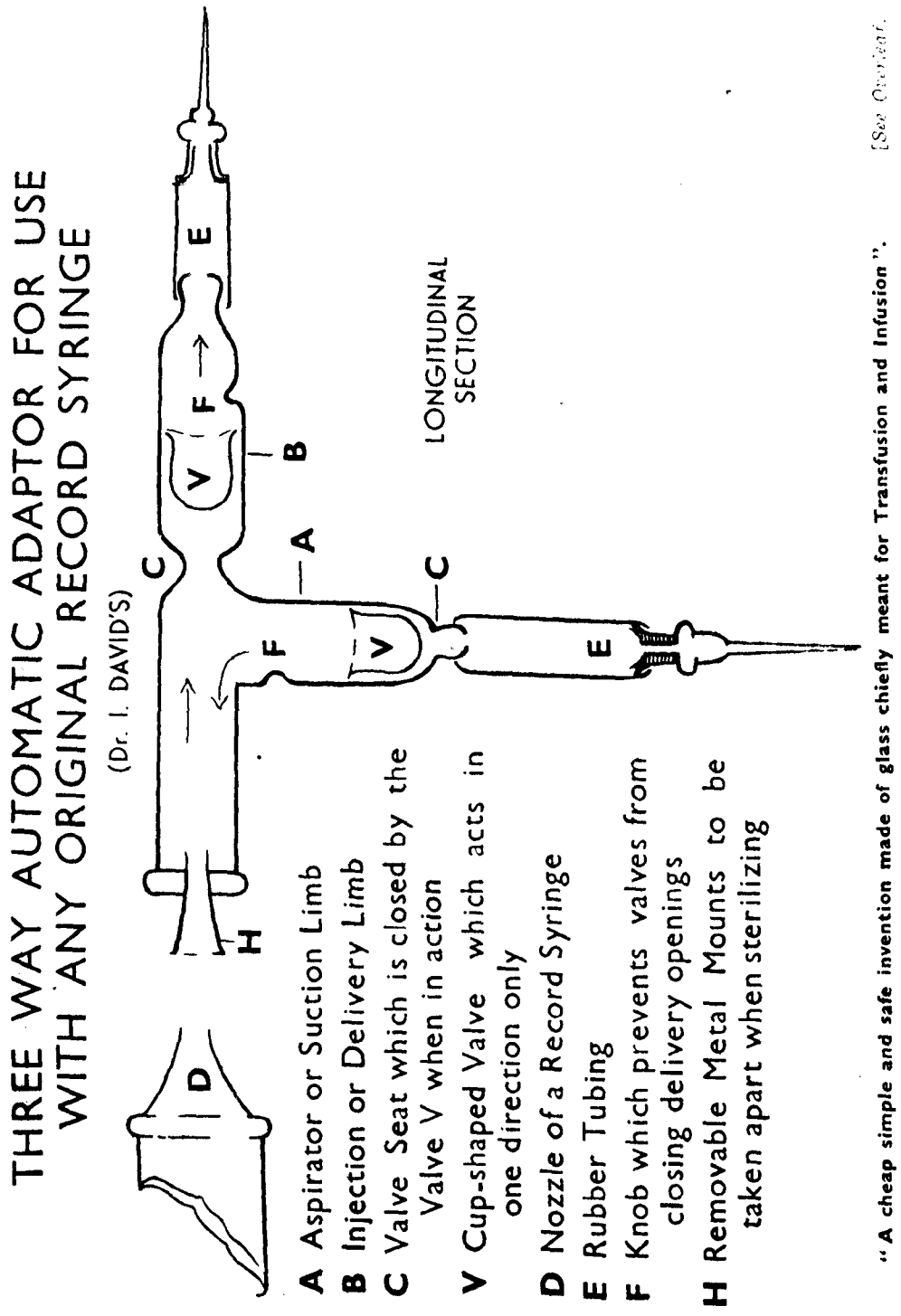
This book is issued by the Indian Council of the British Empire Leprosy Relief Fund for the use of medical practitioners in India interested in the treatment and prevention of leprosy. The present volume is in its sixth edition. The book has been revised and portions re-written in the light of the latest advancement in our knowledge on Leprosy.

Sections on Endemiology and Bacteriology have been added. The book is divided into three parts.—Diagnosis, Treatment and Prevention of Leprosy. This book will be very useful for all practitioners interested in Leprosy Problem.

"Planned Clinics for Collective Ultra-Violet Radiation; A Manual of Modern Equipment." Demy qto; twelve pages, illustrated. Issued free. Hanovia Ltd. (Slough)

Actinotherapy—the use of artificial light treatment as a tonic and remedial measure—was first introduced into Public Health work in 1924 by the Medical Officer of Health for Hull; since that time it has grown to be a very important part among the facilities offered at Public Health and School Clinics, with whole time physicians and operators practising each application.

At the present time Public Health Departments and Hospitals in many metropolitan and provincial boroughs are in course of planning Light Treatment Centres on a scale which calls for special design not only of the building but also of the equipment for collective irradiation. In the present brochure, the manufacturers illustrate some of the new designs in ultra-violet lamps which find use as unit installations in these Clinics.



"A cheap simple and safe invention made of glass chiefly meant for Transfusion and Infusion". [See Overleaf.

How to use the Instrument.

Before the blood is drawn in see that the valves move with each stroke of the piston. There need be no fear of air entry if the air is driven out with the aid of a citrate or normal saline solution before the syringe is filled with the Transfusion fluid, provided the syringe is a good one of five to ten c. c. capacity or even twenty c.c. Even in a good syringe air will be sucked in unless the piston is worked slowly and steadily. I always prefer using a 2 c. c. Record syringe. Smaller the syringe lesser is there the chance of blood clotting or air entering. Every part must be air tight, piston, rubber tube connections, nozzle and socket etc. It is safer to hold the adaptor firmly against the nozzle of the syringe when injecting as the adaptor is liable to fall from the nozzle and break.

The instrument can also be used for infusion, aspiration etc. Very useful in Out-Patient Department for washing out ear and nose, and giving rectal and vaginal douches.

'Uleron'.—Havero Trading Co. Ltd., the sole representatives of "Bayer" Laboratories at Elberfeld, Germany, beg to announce to the profession that Diseptal some times ago referred to in British Medical papers is now introduced in India under the trade name 'ULERON'. It is the first successful chemotherapeutic against gonococcal infections. Up to date clinical results show that its curative action is best seen in sub-acute and chronic gonorrhœa and its complications, i. e. when the patient has developed a certain amount of specific resistance. A course of treatment lasts for 3-4 days only and has been found sufficient in a large percentage of cases. Only in resistant cases is a second course of treatment necessary after an interval of at least 6 to 8 days. Relapses are comparatively vary few. Such a short course of treatment with a very high percentage of successful results in a disease which has so for baffled all kinds of treatment is a unique achievement indeed.

CORRESPONDENCE

"M & B" 693

Messrs May & Baker (India) Ltd., Calcutta, write to us as follows:—

"Some attention has been given in the Medical Press in England and subsequently in the Lay Press recently throughout India, to the latest product of May & Baker's Laboratories, "M & B" 693. This attention has resulted in our receiving a large number of enquiries and telegrams from the medical profession and we should be very much obliged if the position regarding this product could be made clear through the medium of your journal. The product is still an experimental one and until sufficient controlled clinical research has been done this preparation will not be put on the market. Supplies are, therefore, not available at present."

MEDICAL NEWS

International Medical Postgraduate Courses in Berlin.

1. Course in the field of internal diseases in which lives are suddenly endangered (from 3rd to 8th of October)
2. Postgraduate course on the subject of ailments of muscles and joints (from 10th to 16th of October)
3. Progress in the field of hormones and vitamins (from 17th to 22nd of October)
4. Course on tuberculosis in the Berlin Municipal Hospital for Tuberculosis (from 24th to 29th October)
5. Course in diseases of the ear, nose and throat (from 26th of September to 8th of October)
6. Course in accident-Surgery (from 17th to 22nd of October)
7. Postgraduate course on the subject of neurotic diseases (from 24th to 29 of October)
8. Propaedeutic respectively additional training course in homeopathy (from 10th of October to 5th of November)
9. Special courses in all branches of medicine with practical work at the bedside and in the laboratory, to be held every month. For these courses participants are requested to communicate their wishes in order to find a complete program on their arrival.

Courses 1 to 8 will be held in German, and the special courses also in foreign languages.

For programmes and further information apply to the Geschaftsstelle der Berliner Akademie fur arztliche Fortbildung, Berlin NW 7, Robert Koch-Platz 7 (Kaiserin Friedrich-Haus).

NOTICE

Dr. U. B. Narayan Rau, General Secretary, All India Medical Licentiates' Association, writes as follows:—

Notice is hereby given that the subject for the Dr. Joseph Benjamin's Thesis Prize of the value of Rs. 35/- (Rupees thirty five) only for the year 1938, is '*Enteric Fever*' and for the Dr. P. S. Ramachandrier's Prize of the value of Rs. 25/- (Rupees twenty five) only, for the year 1938, is "*Infant Mortality—Its Causes and Prevention*".

All bonafide members of the Association can compete. Intending competitors are requested to write papers from practical point and on lecture style, and the same should not exceed 1000 typed lines or their equivalent. That the thesis paper be despatched to Dr. Jamiatram B. Desai, 52, Pritamnagar, Ahmedabad, so as to reach him on or before the 30th November, 1938.

CORRIGENDUM

In the article entitled "Bites by Wild Animals" appearing on page 537 of the June '38 issue of *The Antiseptic*, *substitute* "S. U. P. 468", *for* "S. U. P. 36" wherever it may occur.

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(see "Med. Press & Circ.")

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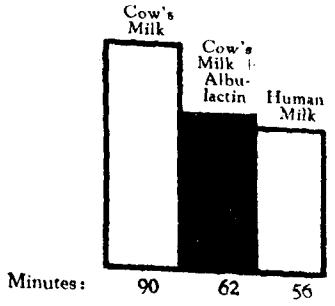

(see "Folio Therapeutica", IV, No. 1)

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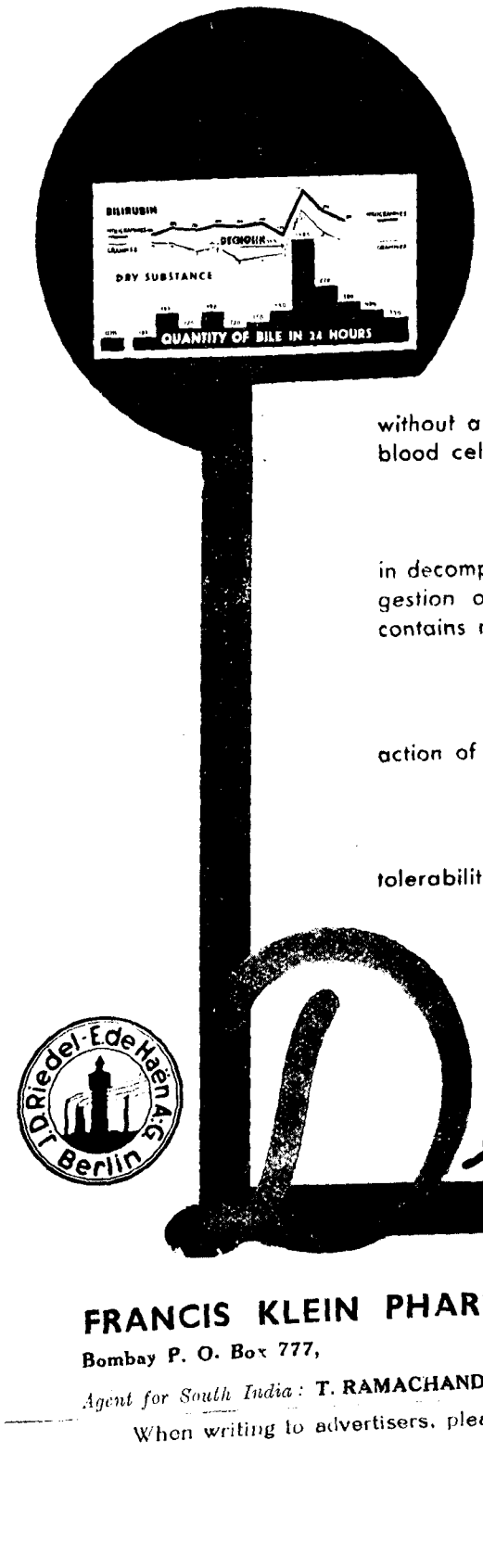

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