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The Antiseptic

A MONTHLY MEDICAL JOURNAL

Edited by

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

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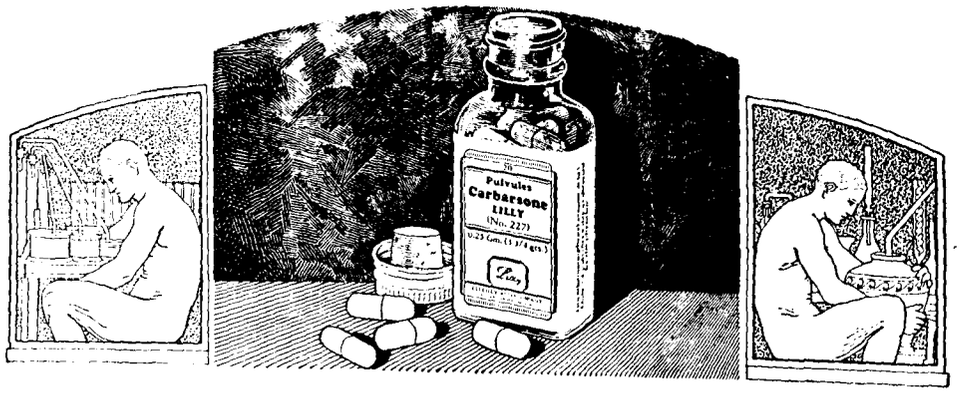

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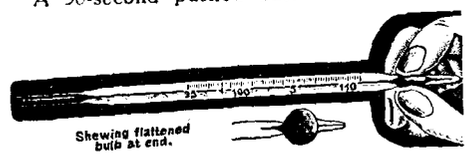

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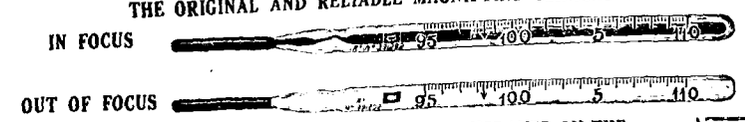

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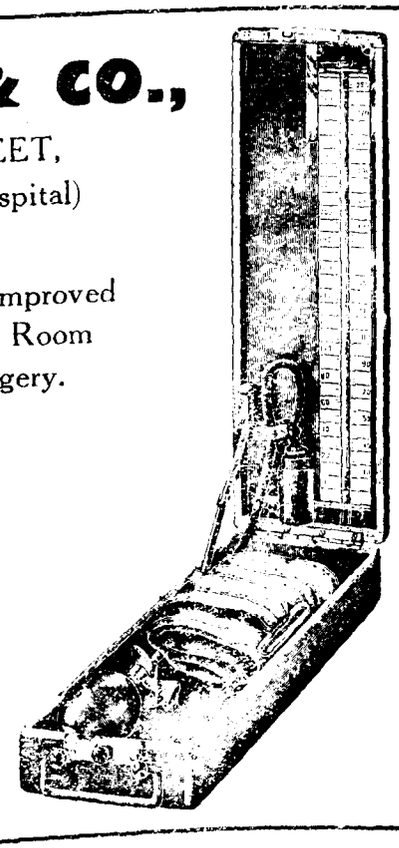

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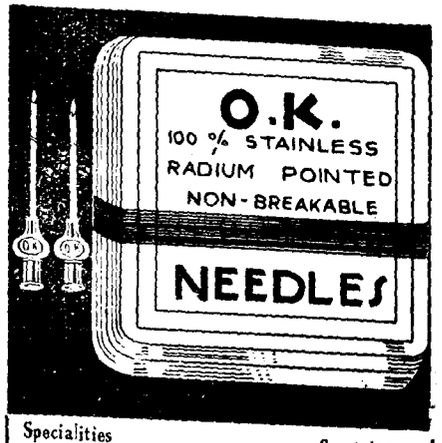

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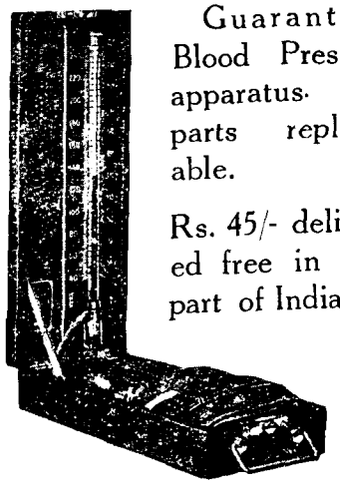

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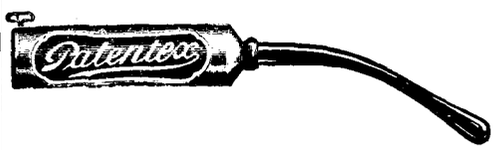

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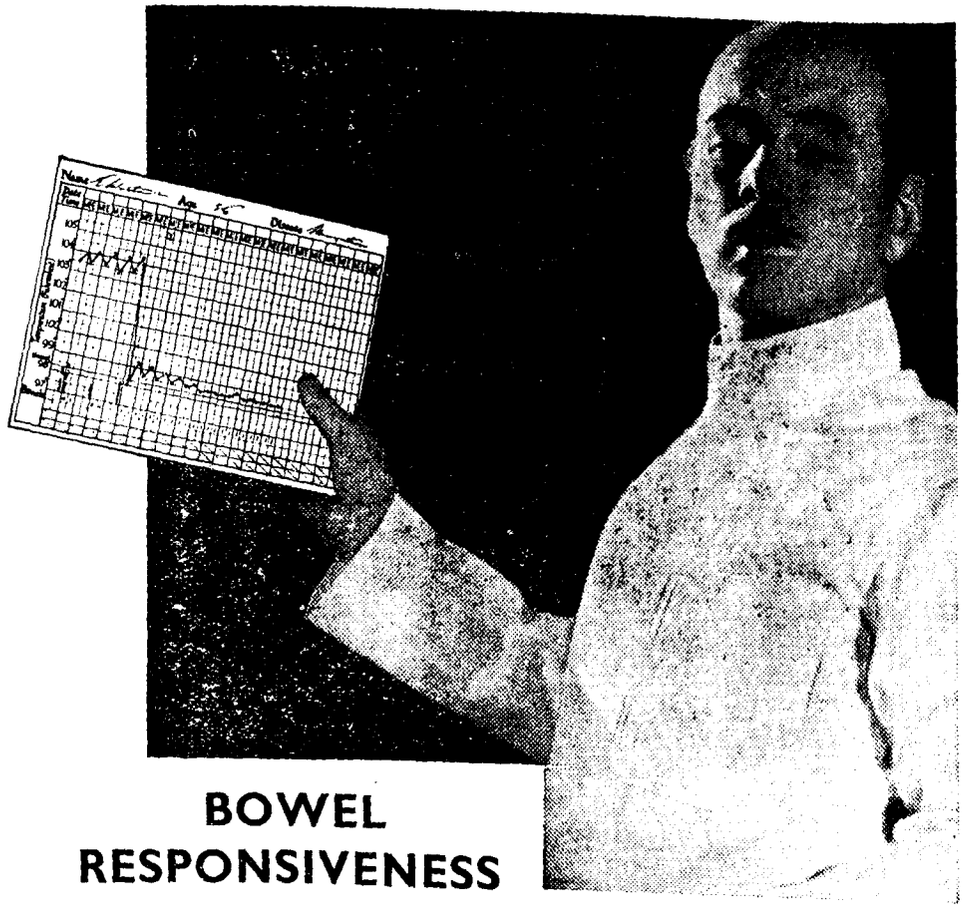

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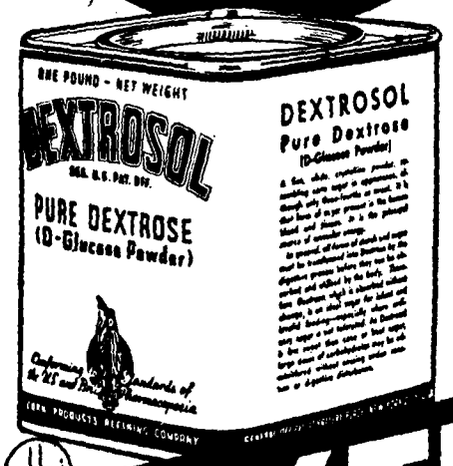

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Original Articles

THE PEPTIC ULCER, ITS ÆTIOLOGY AND CURE BY CHOLECYST—ENTEROSTOMY*

BY

CAPT. MAKHAN SINGH KHERA, F.R.C.S., (E.),

The Mawchi Hospitals—Karenni States—Burma.

Part I.

The Aetiology of the Peptic Ulcers

SINCE the peptic ulcers occur both in the stomach and the duodenum it is essential to recapitulate very briefly the anatomy and the development of the two parts. That the disease in both simulates each other in all the pathology is not at all surprising, seeing that the two organs develop from the same segment of the foregut in the embryo, and in its evolution carries a common source of both the blood and the nerve supplies.

In the development the part of the foetal foregut dilates to form the stomach, with its various subdivisions, as the fundus, the pyloric antrum, the canal and the pylorus, and then narrows down to a uniform-shaped duodenum. The duodenal papilla marks the site of fusion of the first segment with the second of the foetal guts. With the growth the first carries its own exclusive blood supply through the coeliac axis of the aorta, from which the main trunk passes directly through the mesentery towards the organs at a right angle to the foregut. As

* Specially contributed to the Antiseptic.

the latter subdivides to form the various parts, each of the latter carries a branch from the parent trunk. In the process of rotation of the gut when it seeks fusion with the second the directions of each subdivision of the foregut varies, and drags the blood supply, in the corresponding direction, but the end arteries never vary from their vertical axis to the organ.

In the close association with the corresponding blood vessels the sympathetic nerve supply is derived from the common source along the coeliac axis and branches for all the parts which have their origin in the foregut. The central nuclei in the spinal medulla are also common for all these parts. The common parasympathetic nerve supply through the Vagus from the latter accounts for the close association to the response of the subdivisions of the foregut in health and disease.

Another most vital organ associated in the process of digestion is the gall bladder, also very closely developed from the foregut and having a common blood and nerve supply through the coeliac axis, which enables it to function in harmony with the various stages of digestion, counter—effecting the chemistry of the gastric process at the proper time, and in the correct proportion. It is inevitable to consider the gall bladder in the pathology of the foregut and, what is most important, in the treatment of any resulting disease, seeing that it is the natural counter poser of the foregut in the chemistry.

In the process of rotation of the foregut, the mesentery carries the branches of the hepatic artery on the right side and the splenic artery on the left side, so that eventually the organs are supplied from above and below respectively, by branches running very vertically and at right angles to the long axis of the stomach. This last point is very important in the aetiology so often accused of in the peptic ulcer: that is the compression of the blood supply of the upper part of the stomach during tension on the peritoneal fold through which the vessels pass, in the event of any traction on a full stomach in the erect posture or by gastroptosis. Compression could possibly occur if the vessels run transversely, when by traction at right angles a kinking may be produced. Yet a temporary occlusion, even if complete could be compensated by a corresponding dilatation of the anastomosing vessels from the splenic and the gastroduodenal arteries, as nature's defence against such disfunction. It is possible that a sudden and complete occlusion, as by thrombosis, might lead to a deficient supply, but only when there are no anastomosing vessels, and the vessels are diseased in the stomach where there is such a profuse

anastomosis such a deficiency is remote and most unlikely even if the vessels be diseased and such disease of gastric vessels has never been demonstrated in connection with the ulcers. This also applies to the venous return. In the latter case even assuming that such temporary traction did exist, the compensatory venous drainage by the double exit would relieve it. That such stagnation does not occur is again established by postmortem evidence of freedom from any venous dilatation as a result of stagnation at the site of the supposed tension of the vessels. If any dilated veins are ever seen round an ulcer they are a mere result of chronic inflammation with diffuse fibrosis.

Again the added advantage of gastric venous drainage is evidenced by the double exit by this portal and the systemic anastomosis, where there is a certainty of drainage by one at least of the paths. Still conceding that the traction of the portal vein or its tributaries does result in its partial or even complete occlusion such damming back of the venous return never starts at the pyloric end of the stomach, and is usually situated at the oesophageal junction, where then an aggravation of ulceration is more likely, and not at the common site of an ulcer. The tiny venule dividing the duodenum from the stomach has been blamed as the offender, merely on the ground that ulceration is usually on either side of it. But this vein is never constricted nor dilated at post mortem. Blood supply is a very important item in the case of the digestive tract, and undoubtedly it is the second best supplied part in the body. Again it has one other most marked characteristic, that is, the definite sensibility to adaptation to the requirements of the function, being greatly increased during the process of disgestion and reverting to the lowest supply when the organ is empty. This is permitted by the profuse nerve supply through the sympathetic and the parasympathetic systems, and a very sensitive reflex, which is definitely and severely controlled both by the intrinsic and the extrinsic stimulus, as a full stomach leading to an increased supply, or the reflex stimulus through the olfactory or gustatory or even the visual or the auditory organs leading to an increased or diminished blood supply. This reflex is also most marked in all febrile or general toxic conditions of the body, causing lessened blood supply which in turn leads to anorexia, then to poorer digestion and nutrition of the whole body. Further any physiological factor, as fear, worry, mental strain, disappointment in love etc., leads to a sudden depletion of the blood supply of the stomach. Disease of the heart or the vessels, as in venous obstruction in hepatic

cirrhosis, etc., lowered chemical contents of the blood itself also alter the flow of the blood. The close relation of the stomach, anatomically, to the heart would cause a reciprocal sympathy in functional or pathological state of either. The effects of such stimuli reach the whole section of the digestive tract which, developmentally arises from one section of the embryo, in this case, the foregut : that is from the gullet to the doudenal papilla embracing the distribution of blood from the main artery of the foregut, the cocliac axis. The latter also supplies the liver and the gall bladder ; and since the nerve supply is the same along the subdivisions of the parent trunk, it is natural that the reflexes that effect the blood regulation of the stomach would have a common result. This is not surprising as the development of the latter is also from the same part of the embryo, and function in close harmony with the stomach. They also carry the nerve supply from the common source, the vagus, originating from the spinal medulla. Though the stimuli pass through the medium of the nerve paths, the effect of such stimuli is essentially through the blood supply regulation by vaso constriction or dilation. Primarily the source of such stimuli is from the vagus centre in the spinal medulla, which is very closely associated with the higher olfactory, visual, and mental centres in the cerebellum. Hence any delicate stimulus in any of these nuclei would have a definite reflex effect on the blood supply of the foregut. In an individual with a coarser sensibility, as in farmers, labourers, the resulting excitement of the blood supply would not be marked, whereas in a person too sensitive or nervous as a result of brain exhaustion by hard thinking, worry or disease, any finest stimulus would have a decided reflex effect, through the vagus stimulation or atony of the sympathetic nerve supply, causing a corresponding increased or decreased blood supply to the stomach and hence effecting the functioning of its secretory cells. Such "ulcer diathesis" of Hurst in the case of that active and short stomach in sthenic persons, is quite in bearing with the high incidence of ulcers, as a result of vagus tonicity. This is evident in almost 100 percent of duodenal ulcers. A constant high acidity found by Hurst in 90 per cent. of cases of duodenal ulcer, and a constant average normal in the rest, while no case of gastric hypoacidity was found in any case, are exactly in keeping with the results that would be expected in cases of such vagus hypertonia of the neurasthenic or the sthenic person. Even in cases of gastric ulcer a high acidity in 33 per cent is found. In other cases where the acidity is apparently low it is merely an advanced stage of the gastric disease

where the secondary gastritis has masked the primary hyperacidity. There is therefore a very definite factor in the imbalance of gastric acidity which is to be accused at least in the maintenance of the peptic ulcer, though the essential cause might have been an embolism or thrombosis of the artery in starting the ulcer. A normal stomach has the healing power of any other part of the body, hence if the ulcer is maintained for any prolonged period some other factor is the party to it. In Hurst's diathetic stomach the hyperactivity is also a part of the overstimulus of the vagus, which also accounts for the increased blood supply. It is therefore that the association of the hypermotile and the hyper acid stomach is so definite. For our purpose then, the maintenance of the ulcer is more important than the initial cause of it. And that lies in the vagotonia which in turn results in active peristalsis and increased acid production in the stomach. The higher ratio of the duodenal to the gastric ulcer is possibly accounted for by the natural higher acid resistance of the gastric mucosa, and a corresponding lower resistance of the alkaline bile-accustomed duodenal membrane exposed to higher acidity. Monsarrat's contention of alteration of gastric motility leading to prevention of regurgitation neutralization by the loss of reverse current of peristalsis as by toxic or reflex effects caused by a diseased appendix etc., is but a poor explanation of the high incidence of the duodenal ulcer. Such a lowered reversed peristalsis might be instigated by the spasm of the sphincter, but there is no such sphincter between the first and the second portions of the duodenum. It is possible that in the case of some gastric ulcers, a reflex spasm of the pyloric sphincter may lead to an increased stagnation of the acid in the stomach, but in the case of high acidity it is most unusual to find any stagnation due to reflex causes, hence it is incoherent to suggest any sphincteric factor. Possibly the frequent appendical disease associated with the gastric ulcer may cause such a presumption of a reflex interference, as often the former causes spasm of the pyloric sphincter. But such a reflex spasm could never cause any effect on the duodenum.

Excessive nicotine intake leads to paralysis of the sympathetic nerves, and hence unopposed intensity of the parasympathetic through the vagus nerve which in turn leads to an increased gastric secretion of acid and greater motility of the muscular wall. Alcohol has the direct irritant effect of exciting gastric secretion by local action.

It is unnecessary to speculate on the initial cause of a peptic ulcer from the point of treatment. What really concerns us is the

factor which prevents the healing of the acute ulcer more than that. While the acid factor is the main cause of the maintenance of the ulcer, a secondary factor is the infection of the ulcer, and finds a parallel in any other ulcer on the surface of the body, initiated a chemical, a thermic irritant or injury, and kept up only if secondary infection follows. In the latter case the primary cause has usually lost its effect while the infection is maintained, whereas in the stomach the initial cause is not only of main importance in starting the trouble, but is the most persistent irritant, preventing the healing. The treatment of any disease is first to remove the primary disturbance and then to deal with the secondary causes. Hence the necessity of dealing with the hyperacidity in the peptic ulcer.

Fibrosis around the ulcer is often accused of preventing the healing process by diminishing the blood supply. This in the case of the peptic ulcer is very late in appearing, and then perhaps the fibrosis may also have to be dealt with, by excision of the fibrosed area. Even then acid factor has to be rigidly borne in mind, and has to be dealt with just as if it were the main cause.

The site of the pyloric ulcer at the upper right region of the pyloric canal in the majority of cases is not a surprise where the absence of the acid-resisting actinic cells and the easily affected lymph follicles exist. They cannot put up the same resistance as the cells at the fundus. In the duodenum the complete absence of such acid-resisting cells, and the existence of the alkaline accustomed ones instead, causes a great damage when they are exposed to the rapid and frequent projection of the hyperacid gastric secretion, the more so in a person with a hyper-motile-stomach. Traumatism plays little or no part. Undoubtedly the initial causes of both the pyloric and theduodenal ulcer are the same, and any secondary pathological results vary according to the local anatomy.

Peptic ulcers at the fundus of the stomach and at the lower part of the oesophagus occur in cases of intense acidity.

Another type of peptic ulcer that occurs after gastrojejunostomy at the site of the anastomosis is certainly maintained by the same acid factor, and we need not discuss its initial cause for the view of treatment, though certainly there too the hyperacidity plays a prominent part. Such acidity is absent in the lower gut hence the freedom of local secondary post-operative ulcers, in the latter. Whatever the primary cause of the anastomotic ulcer, be it trauma at operation, blood clot or ligature, these could not maintain the local ulcer, as they invariably disappear sooner or later, and yet the ulcer is left there. Further such an anastomotic ulcer never appears at any portion of the lower gut after any type of anastomosis, merely because the acid is never found there, although they run the very same chances of operative trauma, blood clot or even silk ligature which may never be absorbed. In the stomach the long periods of maintenance of the ulcer is the hyperacidity. More often such an ulcer is on the proximal surface of the stomach at the anastomosis, and very rarely on the jejunal surface. This is evidently due to the neutralisation of the jejunal contents with the alkaline bile, which owing to gravity and the high position of the stomach, does not come into contact with the stomach aspect. This is further proved by the persistent high acidity of 70 percent of the gastro-jejunal ulcers. In the majority of cases the pain follows very shortly after the operation, showing neglect of post operative care or a bad choice of the operation in the presence of hyperacidity. Post operative alkaline drugging has been inefficient. Drugs given by mouth would naturally pass out through the dependent aperture much faster than in the normal stomach, so that the largest dose of the alkali which may render the stomach temporarily neutral would do so for a comparatively far shorter period than before the operation, since the neutralised gastric products would be removed faster, leaving the gastric surface almost as acid. So that the neglect of post operative alkali care is more dangerous than it would have been before the operation, and the net result then means more dosing and medical treatment for the condition for which the surgeon tried to supplant surgery. Unless the post operative alkaline dosages are regulated at hourly or even half hourly intervals throughout the day *and the night*, and rigorously maintained for months, it is difficult to conceive how a haphazard treatment could be of any value. Such unsatisfactory after results of any supposed radical cure by surgery for a condition which may just as well be treated by medical means with no higher mortality, with all its risks of haemorrhage or perforation, would hardly justify the mortality of surgery with all its grave and frequent postoperative complications.

Choice of surgery for the peptic ulcer.—The choice of surgery varies in the hands of various surgeons, but a general consensus of opinion favours a Gastro-duodenostomy for a duodenal ulcer and a posterior gastro-jejunostomy for a gastric ulcer, modified by some with the addition of excision of the ulcer site. Others go for a partial gastrectomy in the hope of removing an ulcer-bearing area.

The Partial Gastrectomy: Apart from the serious nature of

the operation, and the error of dealing with the effects in place of the cause, few surgeons could hope to have a relatively satisfactory result for an otherwise trivial complaint which could be treated medically with a lesser mortality. The greatest defect is that the cause of the ulcer formation is left behind and after the operation the liability for a secondary peptic ulcer at the anastomosis is no less than after gastro jejunostomy. Pernicious anaemia is a very frequent result. The mortality of the operation itself varies from 3 to 18 percent by various surgeons (Schoemaker and Schwarz).

The posterior Gastro-jejunostomy:—With all its post-operative risks and the immediate mortality combined, it is scarcely a sound radical cure for a simple ulcer. The mortality varies from Coffey's 2. 4% to Schwarz's 17.5%. These are the results of experts accustomed to every day gastric surgery. Apart from that the gravity of complications after posterior gastro-jejunostomy is not to be lightly treated. Pernicious vomiting is common. Technical errors as angulation of either the proximal or the distal loop of the jejunum cause obstruction. The jejunal loop is liable to be drawn up through the omental aperture and so kinked. Torsion of the loop of even a volvulous of the afferent loop might occur. Herniation into the lesser sac or between the afferent loop and the mesocolon are possible. Retrograde intussusception of the afferent loop into the afferent or the other way about may occur, inspite of all care at operation, owing to the high acidity usual in such cases exciting antiperistaltic waves. After going through all these immediate risks he may yet have to face later complications of the treatment itself. A peptic ulcer at the site of the anastomosis follows in 1 to 15% of cases according to different medical men. Thereafter the patient is just as liable to bleeding, perforation, and develops a special tendency to the formation of a inflammatory mass of adhesions around the anastomosis with its very frequent implication to that most horrible gastro-jejuno colic fistula, where the patient feeds on his own faeces.

The end results of gastro-jejunostomy have been in from 4% (Coffey) to as much as 18% or even 36% (Schwarz), and they are by those used to every day gastric surgery. The results have been "good" in merely 50% (Schwarz) to the best at 70% (Solky); and "slight" "or no improvement" in others. The end results of all present day standard operations for peptic ulcer have been "good" in 172 out of 261 cases of duodenal ulcer (Fremont—Smith), with "slight" or "no improvement" in 89; in the gastric cases there were only 104 "good" results out of 154, while 47

had "slight" or "no improvement" (Fremont-Smith). Here quite two thirds of the cases in these series were not sufficiently benefitted by the operation. Fremont-Smith's later "bad" results rose from 10% after one year, to 15% after four years and to 20% after six years. With all the immediate risks of the operation, do these later results justify it? The cause of these relapses was certainly due to leaving the essential cause of the disease in the organs. Certainly the temporary benefit was due to the operation which at the start merely was a half way step to the cure by that it permitted a partial neutralisation of the acid gastric contents by the reflux of the alkaline bile through the artificial aperture. The relapses were due to that step not been carried further by locating the reflux flow of bile at the proper place. The temporary benefit to the operated cases has followed the rest in bed entailed by the operation and the associated alkaline treatment. That could also follow after ordinary medical treatment.

The end results after partial gastrectomy have not been a radical cure, in fact that has involved the patient in further trouble. Middlesex Hospital reports by Taylor show anaemia in 44% of the 52 cases, very often of the pernicious type which is a very grave condition. Later gastro-jejunal ulcers certainly occur, and after resections of the latter further local ulcers follow sometimes. No type of resection is immune from this evil. Balfour mentions 53 cases, of which 21 were verified at operation. There were 10 recurrences after sleeve resection, and 3 after Bilfroth I. performed for gastric (14), duodenal (8) and even gastro-jejunal (6) ulcers. M. J. Stewart mentions 8 cases of recurrence after excision of the gastro-jejunal ulcer. The chief cause is the persistent high hyperchlorhydria. In desperate cases life has to be saved by a jejunostomy. Of 25 cases medically treated 13 were relieved and 7 were operated again and had further recurrence in 3 of these latter cases. Here a second operation amidst adhesions has had a very unsatisfactory result, and might as well have been treated medically.

Part II

The treatment by choice of operation

As in any other disease the treatment will have to be based on the aetiology, pathology and the ANATOMY of the part. Essentially the treatment of all types of peptic ulcers, gastric, duodenal, or gastro-jejunal, or jejunal, is the removal of the hyperacidity.

This may be tried first by medical means, as by the regulation of diet as Soppy food which does not excite the nasal or gustatory senses to avoid the reflex acid production. Plain clear soups etc., which do not irritate the gastric surface, and which permit a rapid emptying of the stomach by quicker digestion so that the stomach is freed from the acid secretion at frequent intervals, well spaced. These could be assisted by the chemical action of drugs which neutralise the acid, as soda bicarbonate, etc. These should be given in constantly spaced intervals by day and night, to neutralise the steady flow of the gastric secretion, which in such cases is maintained at a persistent high level at all hours of the day, being merely further increased by variations of diet etc. Any omission of the dosage would restart the ulcerative process. The pain which is caused by the spasm from irritation could be eased by the alkalies, and might be further relieved by antispasmodic drugs, as the belladonna group, which relieve spasm, and reduce the vagotonia which is one of the factors in the acid production, so that, it also indirectly reduces acidity.

Up to six months the ulcer has a fair chance of spontaneous healing, if assisted by medical treatment. After five attacks or after one profuse bleeding or two minor ones, surgery is indicated. Then either the medical care has been inefficient or the acidity is far too high to be controlled with it.

The essential cause being high acidity, usually very well-drained in such hypermotile stomachs through the natural passages, stagnation plays absolutely no part in either the origin or the maintenance of the ulcer. The object of a gastro-enterostomy is a more rapid evacuation of the gastric contents, presumably for securing rest to the stomach, and yet that has *not* been shown to be lessened, for the cause of the hypermotility of the organ is central in the spinal medulla, and it cannot be understood how a bye-pass is going to rest the wall. There has never been any obstruction, except in the late case where the ulcer has healed and shrunken. The source of error is an increased action of the gastric cells, and a short circuit has definitely no effect on the latter. If the object of the operation is to permit an inflow of the bile through the stoma, it is but half hearted step to the solution of the trouble, as the results show. Possibly some portion of the duodenal contents may come in contact with the stoma, but in an abnormally high placed stomach it would be impossible for such alkaline bile to come anywhere near the site of the ulcer region, at the roof of the pylorus. In

the gastro-enterostomy it was a first step though a feeble one, to the solution of the evil. With the gastro-duodenostomy it was a next nearer step for the benefit of surgery, but yet incomplete, and so it would be expected. With the former though it provided a rapid exit for the acid secretions, it exposed other parts lower down, as, about 1.5% get a secondary ulcer. The latter lessened that risk for the exuded gastric secretion was at once neutralised by the bile owing to nearer projection at the duodenal papilla. Here though the risk of a secondary ulcer is lessened, yet the end results as shown above have been beneficial in about two thirds of the cases only. Hence there is yet an advance to be made in surgery. The outflowing gastric secretions, though certainly partly neutralised by the bile, there are certain drawbacks to the complete and *persistent* neutralisation. The ampulla of water relaxes only when the food, special fat, comes in contact with the papilla and is held in a tonic contraction at other times; hence the flow of bile at the site of gastro-duodenal anastomosis is very intermittent and entirely dependant on arrival of food or drugs in the duodenum. But the hyperacidity which can cause a duodenal ulceration is persistent and continuous, being increased higher still with intake of food. When the organ is empty the hyper-acid gastric contents are not being neutralised so that in a state of intense acidity the operation fails just as the irregular drug treatment. Another defect of even the gastro-duodenostomy is that as the flow of bile from the duodenum into the stomach is entirely by gravity, and, as the gastric contents would also find the lower outlet during the stomach contractions, the site of the duodenal ulcer, just beyond the pylorus would naturally not have the full benefit of the bile influx reaching it, except from a reversed peristalsis along the natural passage which could just as well occur without the operation. The nearest approach would be Finey's pyloroplasty, but still the continuous flow of bile would not be secured.

If surgery could produce all the effects to counter-effect the pathology of the ulcer, that could be the only justification at a radical attempt with it. There is but one method by which that could be achieved to meet all the defects. It is by the production of a continuous anti-acid factor in the body, so arranged that by natural gravity the neutralising agent could come in absolute contact with the ulcer bearing area. It should be regular and safely effected. The anastomosis of the fundus of the gall-bladder to the right upper anterio superior surface of the stomach about an inch and a half from the pyloric vein, would meet all the desired

needs, arranged in the exact position favourable to the flow of the bile to be continuous from above, coming down by gravity, and smearing the ulcer bearing area, and then neutralising the gastric contents. No after treatment by drugs would be required, and the patient is satisfied that the surgery has done the trick.

It would be a very much safer procedure than gastro-jejunostomy, and could be applied with equal advantage to either the duodenal or the gastric ulcer, and what is of the greater advantage, it is suitable for both the anterior or the posterior ulcers. Every surgeon knows the difficulties and the dangers of a posterior ulcer operation. If it cannot be excised it could be very safely left. But if it could be removed by an eliptical incision the gall bladder might be joined on at the gap.

Another difficult ulcer is that situated at the fundus, and very refractory to any form of treatment. The writer knows a case where in a case of a very high ulcer, possibly at the lower end of the oesophagus, where abdominal removal was out of question and the danger of thoracic approach alarmed the patient, he has had to be without any relief. Here certainly a cholecys-gastrostomy would cure the condition.

In a case of a recurrent ulcer anywhere near the anastomosis after other operation the procedure of choice would be a gall bladder anastomosis, where the acidity would be corrected and the ulcer would heal, and so save the patient from an extensive dissection in a mass of adhesions, and the surgeon, his reputation.

Of course the gall bladder could not suit where a duodenal obstruction has supervened, and then a gastro-jejunostomy would be done.

Usually the gall bladder is easily apposed to the stomach but where the gall bladder itself is buried in dense adhesions then a difficulty might arise; but in the latter case the added weight of the necessity of the gall bladder drainage would induce one to find a solution to the operative technic. That contracted and buried gall bladder is a danger to the body and has to be dealt with, but owing to the local conditions a removal would be dangerous and yet unnecessary. It needs rest to its walls from tension and an effective outlet to its dammed up contents. External drainage would only bring a temporary relief. An internal drainage would be of permanent benefit, and the associated ulcer in the stomach would be treated with it. In quite a quarter of the cases of gastric trouble the gall bladder is at fault, and a shot at the two would be economical for all concerned.

The difficulty of the adhesions in those cases should not deter the surgeon from carrying out his aim. A stab incision into the gall bladder with one end of a T tube stitched into it, and the other similarly carried into the stomach would join the two organs. Another stitch or two between them would bring them together, and a piece of the omentum tucked on with a stitch at the connection would solve the difficulty. The vertical limb of the tube would act as an external drain till the stitch holding the horizontal limbs comes away. With a free internal flow the external opening would close up.

THE DYSENTERY-SYNDROME AND THE SPRUE COMPLEX*

BY

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A STUDY of 1265 cases of dysentery in the civil population of Madras which includes all types during the four years 1928 to 1931 had been made.

These are analysed as follows:—

Protocol I

	Amœbic.	Bacillary.	Mixed and other unclassified group.	Total No. of cases.
1928	146	103	52	301
1929	64	184	37	285
1930	103	201	32	336
1931	62	257	24	343
	375	745	145	1265

In the above series, Balantidium coli and helminthic infection were not found. From the figures, except for the year 1928,

* Specially contributed to the "Antiseptic".

there is a large preponderance of the bacillary dysentery over that of amœbic infection. During the period of four years the ratio of occurrence of bacillary dysentery as compared to amœbic infection works upto 2 : 1 in the city of Madras but these figures do not agree with our subsequent findings.

In Bacillary dysentery Flexner infection with strains varying from V to Z is the commonest. So far as statistics of the Madras Hospitals are concerned they form nearly 80% of the total cases admitted and treated for bacillary dysentery. Shiga infection is found to occur in about 12% of cases, and these are found to have more acute symptoms than flexner infection and rarely they pass on to a chronic stage.

The next commonest infection is Morgan, though it is met with in summer diarrhœa of infants (epidemic or follicular enteritis and asylum diarrhœas). Sonn bacillus and Schmitz bacillus infections of d'Herpelle and para-shiga of Dudgean infection have not been found in our series. We missed them so far; probably the symptoms were of mild nature, almost resembling that of Flexner and no further attempt had been made to find them out. All the same we presume that the indentification of either Sonn or Schmitz bacilli does not alter either the treatment or the prophylaxis of the disease.

We hold that dysentery occurs in an epidemic form and that this is the commonest infection among the poor. There is little to doubt that primary infection of bacillary dysentery is a much more serious disease in the ill-nourished, exhausted and improperly fed individuals, than among those who have become infected while in a good state of health.

On analysis of a total number of 343 cases of dysentery for the year 1931 the laboratory records show the following results :—

Total number of cases with mucus and blood ... 319

Cell exudate characteristic of either bacillary or amœbic infection ... 225

Number of cases with fever, mucus and blood in stool ... 265

Number of cases without fever but with mucus and blood in stool ... 78

Number of cases, Cell exudate not characteristic of either bacillary or amœbic infection ... 24

Bacillary dysentery is definite-B dysenteriae isolated ... 210-61.2%

Suspected: Cell exudate characteristic ... 47-13.3%

Amœbic dysentery: E. Histolytica present ... 22- 6.4%

" " suspected-cell exudate characteristic

Cause not ascertained (on account of too short a stay in the hospital) or doubtful results ... 24- 7%

On the whole the percentage of amœbic infection ... 19%

and bacillary dysentery ... 81% for the year 1931

According to our statistics for the year 1931, the relative incidence of bacillary dysentery is 5 times as common among the Civil population of Madras as the amœbic dysentery.

[Colitis enteritis and unclassified diarrhœa where, only mucus with other concomitant symptoms were present are excluded from our series.]

Protocol No. 2.

Months.	Years. 1928	1929	1930	1931	Total No. for each month.
January ...	39	25	60	56	180
February ...	25	16	21	27	89
March ...	22	22	18	26	88
April ...	14	17	19	28	78
May ...	26	26	25	27	104
June ...	10	22	17	22	71
July ...	33	34	30	39	136
August ...	43	27	28	31	129
September ...	22	19	31	20	92
October ...	26	15	22	16	79
November ...	26	29	26	26	107
December ...	15	33	39	25	112
Total No. of cases for each year ...	301	285	336	343	1265

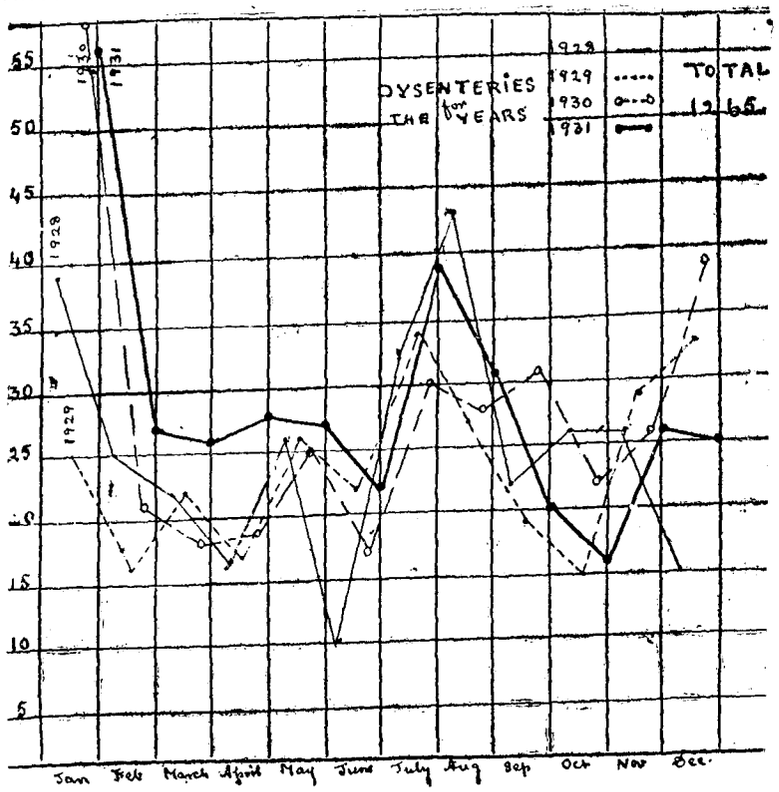
The above protocol No. 2, indicates the number of cases that occurred during each of the months from 1928 to 1931. A graph which indicates the seasonal variation of dysentery from the above table is plotted. All the years are plotted in the same graph in order to make a comparative study. We find in the graph, two peaks one in the month of January and the other in the month of

August. There is a period of quiescence during the rest of the months of the year. An interesting fact that is noted here is that, in each of the years we find at least two smaller peaks corresponding to the months of January and August. We are aware that in other presidencies particularly in Bengal the main increase in the prevalence of dysentery closely follows the onset of the heavy monsoon rains, and then the mean temperature ranges between 80 to 82 F. But so far as Madras is concerned our findings are different. We are also alive to the fact that particularly bacilliary dysentery is a water borne disease, but we find that maximum prevalence of dysentery does not correspond to the onset of monsoon in Madras. The monsoon generally starts in the middle of October and continues intermittently till about the middle of December. It is during this time we have the maximum amount of rainfall. The temperature for the corresponding period ranges between 70.7 to 86 F., the relative humidity ranging from 79 to 87 for the same period.

Our summer commences towards the end of February and lasts till about the end of October. There is not a wide variation between the highest and the lowest temperatures recorded during the months of the year. The maximum rarely reaches more than 106 F. and the minimum rarely lower than 70.6. Practically Madras enjoys a fairly good climate all the year round and one cannot say that we have hot and cold seasons, as we have 10 months of hot season and 2 months hotter season. Even during our rainy season and during our severest 'winter' one could go without any wollen clothing and yet run no risk of exposure. Thousands go without even cotton clothing. Therefore we have to seek some other cause to account for the invariable peaks of dysentery curve, during the months of January and July for we cannot lightly brush aside the fact that in all the years 1928, 1929, 1930 & 1931 without any exception, there is a systematic rise in the incidence of the disease during these months. We venture to suggest the following explanation for this variation.

That during the months of December and January there is a large advent of floating population hailing from the mofussil to Madras to witness races, Park Fair and other amusements and attractions of the city—this is the busiest period for the year. Congested places, irregular diet, unwholesome and unsuitable food, presence of passive carriers and other concomitant factors naturally account for the peak occurring in January. These mainly water-borne diseases presumably have a short incubation period, a rapid reach of the festigium and an equally rapid decline.

As abundance is no less dangerous than scarcity and as the floods in November and in the subsequent months brought in their train a long series of intestinal diseases, so the month of July with the rigours of the drought brought in its wake these dysenteries. This accounts for the peak in July. Added to this important factor, there is always the ignorance of the people, unhealthy habits and insanitary conditions—in the main illiteracy and ignorance appear to be the one factor that is responsible for the development of various forms of ill-health, the flesh is said to be heir to. It is an acknowledged fact that many of the diseases are diseases which can thrive only in places, beyond the pale of civilisation.



Madras is famous in more than one way and it is no less famous for its high percentage of humidity. This condition favours in no small measure the harbouring and development of respiratory and intestinal diseases.

The approximate optimum conditions necessary for the growth and development of E. Hystolytica and Bacillus dysentery appear to obtain with a temperature of 98 to 80.5 F. and a humidity of 57.

The bacteriological quality of the untreated raw water was of fair quality (L.F. in 5 C.C's during the months of January, February, March, April, May, June, July, August and September, while it was of poor quality during the remaining months of the year). But after chlorination, the water was uniformly of good quality from the bacteriological point of view showing lactose fermenters (present or absent one in 60 c. c. in cent per cent. of samples) except in January when only 86.2% of the samples were 1st class ones. Therefore it cannot be said exclusively that quality of water is exclusively responsible for the increase of the incidence of the disease during the months of July and January. The rainfall during these months is very low as compared with other months.

Cunningham and Theodore's statistics deal with asylum and prison forms of dysentery but ours are confined entirely to the civil population. In our series, parotitis, iridocyclitis are found to be rare complications ; and still rarer, is the presence of septicaemia with B. Coli infection ; arthritis is sometimes met with : perforation, haemorrhage and the occurrence of an acute abscess in the liver, during the active stage of infection with amoebae are not found in our series. Hepatitis is a fairly common symptom. But in our series there have been cases of all grades of severity from a mild diarrhoea with mucus of a few days duration to a fulminating attack with fatal results.

Sprue

Our present investigation once again confirms our previous observations that sprue is a complex following Flexner or Amoebic infection. There were 192 cases admitted and treated during the years, 1929 to 1932. Most of them had the following clinical symptoms ; soreness of the mouth, great emaciation, marked distension of the abdomen, pale, frothy and copious motions, weakness and anaemia of the varying grades. Laboratory findings indicate hypo-chlorhydria and achlorhydria, increase of fatty acids in stool, megalocytic anaemia and an indirect positive Vandan-Bergh. Cholecystography reveals Gall Bladder infection ; barium meal radiographs show evidence of ulceration and loss of haustrations in colon. It is interesting to note that in a majority of our cases the serum gave a strong agglutination reaction, to a titre 1 : 160 against flexner : and that the bacteriological examination of stool revealed the existence of three groups of organisms (1) Flexner (2) Streptococci and (3) Monilia.

Such a rigid application for selection of cases of sprue both

on clinical and laboratory evidence has had to be made. It must be said that there is infinite variety in the combination and in the severity of the various symptoms of sprue ; with characteristic periods of quiescence and exacerbation in the course of the disease. That is why we have to classify the condition into the acute, the sub-acute and the chronic varieties.

These cases have been classified according to their occurrence during the following months.

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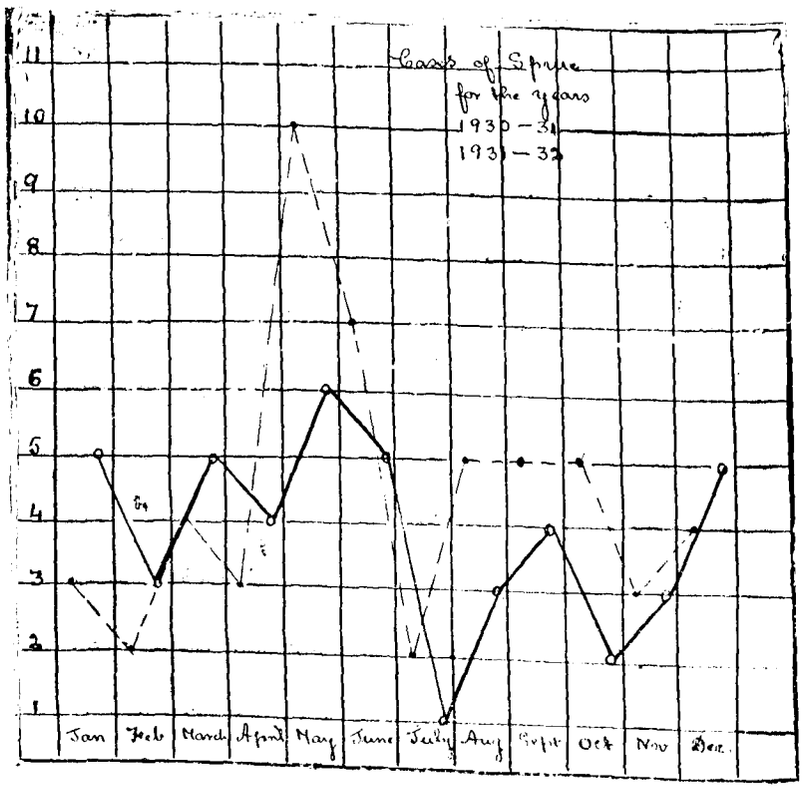
Potocol No. 3.

Months	Years			
	1929	1930	1931	1932
January ...	2	3	5	6
February ...	1	2	3	3
March ...	3	4	5	4
April ...	3	3	4	4
May ...	6	10	7	9
June ...	4	7	5	6
July ...	2	2	1	2
August ...	3	5	4	6
September ...	4	5	3	5
October ...	3	5	3	4
November ...	2	3	2	3
December ...	3	4	4	4
Total ...	35	53	46	56

These figures have been plotted on a graph. During the months of April to June in all the years under review, the incidence of the disease seems to be fairly high. There is only one peak here, unlike, as in dysentery, where there are two peaks. It is interesting to observe that the peaks of the dysentery do not correspond with that in sprue. It is evident from this piece of information that we have not been mistaking cases of chronic dysentery for sprue, though we are inclined to view sprue to be a post-flexner phenomenon. Once Col. G. E. Malcomson remarked that sprue could be defined as "burnt out infection of dysenteries." This seems to correctly portray the condition.

April, May and June are the hottest months in the year at Madras. What relationship temperature, humidity, soil, water,

meteorological conditions, that are prevailing at Madras, bear to sprue, it is not easy to assess. It is also difficult to account why this fell disease occurs in the Eastern tropics alone, and not in the Western tropics; and secondly why it should have exacerbations of symptoms with dramatic suddenness, without any apparent



cause, is difficult to answer. For purposes of comparison, this graph is plotted along with that of the dysenteries.

Age incidence of the disease.—Sprue is found to be very common in adult life and very rare under ten, though two cases of infantile sprue have come to our notice. But these two were complicated by the existence of other diseases and therefore our knowledge is meagre about the infantile sprue.

There is a graph which indicates that the maximum incidence of the disease is during the age periods between 25—35. From the age of 40, there is a gradual fall in the incidence of the disease. The lowest age limit was 18 years, and the highest age limit was 65 years.

No malignant forms of sprue have been met with in any of the age periods. Though sprue is apyrexial, we have noted cases with

temperature, as a complication in sprue-the invading organism was found to be B. faecalis alkalines. The increased virulence of this comparatively tame disease was a most striking factor and 2 of the 4 cases went downhill so rapidly as to almost justify the term "Malignant Sprue".

Radiology in addition to helping in the diagnosis of the condition of the alimentary tract in dysenteries and sprue also helps in the treatment of those conditions. There have been a few cases which have been subjected to X-Ray Therapy after administration of barium meal. The administration of X-Rays produces secondary radiation by striking on the barium content of the intestinal tract. These soft radiations prove inimical to the growth of organisms. While the X-Rays tended to help in the healing of the intestinal ulcers, it also prevented the formation of thick adhesions by their destructive action on the newly formed young fibro-blastic cells.

Conclusion

We are inclined to view sprue as a complex following flexner and amœbic infection only in a few cases; while many people suffering for years, failed to develop the sprue syndrome. We postulate that allergy is one of the possible etiological factors in sprue and further adduce evidence as to why we meet with cases of sprue in various stages. We believe in the bilateral representation of functional activities of the specialized pair organs, of the presence of numerous cells lying dormant which resurrect themselves as it were, in times of emergency *viz.*, with regeneration of partially disabled cells and replacement of the completely disorganised ones. This principle ought to account for the various stages of sprue met with for, we have cases of complete recovery, wherein during attack, complete loss of tone of the intestines was demonstrated. We further postulate that in all specialised organs with a bilateral representation, there is a tendency for alternating cyclic action of each of the pair of such organs *viz.*, one kidney functions vigorously while the other rests partially to gain momentum and vice versa (demonstrable by X-Rays) and in single organs, there are a number of cells which though dormant, take on the activities of the disabled and degenerated cells in particular lesions, as in sprue, where periods of quiescence, exacerbation and recovery, partial or complete, are explained by the above mentioned observations.

We offer our thanks to the several medical officers of the Government hospitals in Madras, to Col. G. E. Malcomson, in

particular, to the bacteriologists and to the registrars for helping us during the course of our investigation.

We are grateful to Major-General Sprawson, I.M.S., for having directed our investigations to the study of Epidimiology.

Our special thanks are due to Captain T. W. Barnard, for encouraging us in every way and generously helping us with all facilities available at the Barnard Institute of Radiology, Madras.

A NOTE ON DIHALEN (ROCHE)*

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IN a paper on the activity of preparations of digitalis and strophanthus official and otherwise sold in the market in Madras, the senior author (1928) remarked that strengths of Digalen, a product of Hoffman La Roche and Co., Basle, assayed by him were not sufficiently potent. In the year 1932 a communication was received from the manufacturers requesting that a fresh batch of Digalen sent along with it, might be assayed and its potency reported on.

The consignment consisted of Digalen solution in bottles of 15 c.c. for oral administration and boxes containing ampoules of the solution for injection. The oral solution was said to contain in 1 c.c 150 frog units, while 1 c.c. of the solution in the ampoules was equivalent to 75 Frog units, where 150 Frog units correspond to 0.1 Gm. of the League of Nations Standard powder and equal approximately to one cat unit. Since the strength of the standard digitalis tincture is 10 per cent, the oral solution corresponded in strength to the B. P. tincture digitalis.

Both solutions are colourless and are said to contain the total glucosides of digitalis leaf. We assayed these on cats using a minimum of three and a maximum of six animals for each assay. The solution was diluted 20 times with normal saline and injected intravenously at a slow rate into cats anaesthetised with urethane

* Specially contributed to the 'Antiseptic'.

and artificially respired, according to the method described by Burn. The results are tabulated below :—

Table I

Preparations used Digalen ampoules.	M. L. D. per kilo of 1 in 20 dilution in c.c.
Assay No. 1	17.2 c.c.
,, 2	16.5 ,,
,, 3	30.8 ,,
,, 4	21.8 ,,
,, 5	19.5 ,,
,, 6	18.2 ,,
	Average 20.6 c.c.

The M. L. D. per kilo of a 1 in 20 dilution of a tincture prepared from the International standard digitalis leaves is 20.39 c.c. Therefore the strength of the digalen solution in ampoules is 98.9 per cent.

Table II

Digalen 'oral' solution.	M. L. D. per kilo of 1 in 20 dilution in c.c.
Assay No. 1	13.15 c.c.
,, 2	12.16 ,,
,, 3	13.60 ,,
	Average 12.97 c.c.

The strength of this solution is therefore 157%. The results are quite satisfactory. While the oral solution is said to be approximately equivalent in strength to the B. P. tincture, the sample assayed gives a higher figure, so that maximum doses of this preparation would digitalise the patient even earlier than equivalent dose of the tincture. The solution in the ampoules meant for injection also shows an activity equal to that of the standard tincture.

Cases and Comments

AN INTERESTING CASE OF CONGENITAL MALFORMATION

BY

DR. L. R. FERNANDEZ,

Physician and Ophthalmic Surgeon, (Regd.), Trichinopoly.

On the 20th instant I was called in to see an infant, born the previous night, with an elastic swelling in the middle line of the back at the lower part of the spine. The swelling was covered by thin translucent skin which was perforate at two spots one below the other and through which the cerebro-spinal fluid was leaking out with sanguinous fluid. The nerves and vessels were very clearly seen. The child was otherwise quite healthy-looking and weighed 7½ lb.

I took the infant to Dr. Rajan's Clinic where after examining the infant he slit open the swelling, cut the irregular edges, inserted a ball of aseptic cotton and closed it up, asking me to dress the patient daily and to bring him back after 10 days if the child survived.

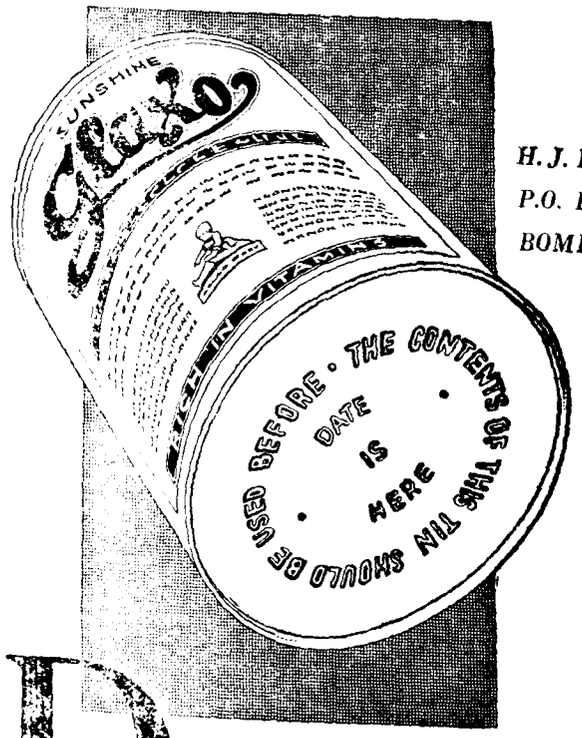
On the 4th day unhappily the child developed meningitis and breathed his last the very same night.

Points of interest:

(1) Usually infants born with spina bifida and similar menigo-cele don't survive even a single day.

(2) Along with the spina bifida, the child had also paralytic talipes.

(3) Owing to the tumour at the back, it was a very prolonged labour and in spite of 4 injections of pituitrin, delivery was not affected until at last forceps had to be applied for extracting the child. The forceps of course was applied by a lady doctor, as the patient had sentimental objection for the male-doctor.



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TREATMENT OF MALARIA, PAST AND PRESENT

BY

K. GOPALAN, L.M.P.,

Sub Assistant Surgeon, Tiruvelangadu.

THE treatment of malaria is considered to be very simple and is undertaken even by laymen. But in practice it is not such a simple task as it appears to be and it taxes the skill and ingenuity of doctors and very often, ends in chronic malarial cachexia and consequent invalidism, if continued and proper treatment is not taken.

A few preliminary words on the diagnosis of Malaria will not be out of place here, as the correctness of the diagnosis is all important. Even with the help of a microscope the diagnosis of malaria by blood examination is not so easy, especially in mofussil places and very suspicious deposits resembling malarial parasites are commonly found due to the bad quality of the stain used or improper technique. Moreover, the clinical diagnosis is also not easy as a first attack does not possess the characteristic features of an ague and is likely to be mistaken for severe bronchitis or the initial symptoms of eruptive fevers. Unfortunately even in places with well equipped pathological laboratory and expert examiner, the exhibition of a few grains of quinine or the synthetic drugs like atebrin before the blood smears are taken, makes the finding of the malarial parasite in the blood difficult.

Now let me pass on to the treatment, taking for granted that the diagnosis of malaria is settled.

The old Treatment.—The old treatment is the exhibition of quinine in some form or other. The usual method is quinine sulphas in 10 grain doses either in mixture or tablet form, being given two or three doses a day after food, after a preliminary opening purgative has been given. This serves the purpose and the case appears to be cured for the time, if the treatment is continued for at least a week. The Calcutta School of Tropical Medicine gives the following mixture for its out-patients. Quinine sulphas 10 grains; acid citric 20 grains; magsulphas 10 grains; spirtus anisi 10 m.; aqua add one ounce; One ounce of this mixture thrice a day for one week, the same twice a day for another two weeks. The quinine treatment set out above are for the normal uncomplicated malaria. The large doses of quinine used leave their after effects on the patients. For cases who cannot or will

not take quinine by mouth, quinine has to be given either intravenously or intra-muscularly. The former is an emergency measure and has to be used only in grave cases such as cerebral malaria etc., and intravenous quinine causes a profound fall of the blood pressure and the doctor should not leave the patient for atleast half an hour after the injection. Intra-muscular injection of quinine is a measure which has been thoroughly condemned by eminent authorities, now and again. For all that it is very commonly practised in the malarial tracts and a procedure often requested for by the patient himself. I have reduced intra-muscular injections of quinine to the minimum and still in the course of my stay of one and a half years in the Agency tracts of Ganjam, I had to resort to this measure, for various reasons on about thirty occasions and I am glad to report I had not a single case of mishap or even severe pain. Iron and arsenic is the usual after-treatment for anæmia resulting from malaria.

The New Treatment with the Synthetic Drugs.—The two predominant drugs used are atebrin tablets and plasmoquine tablets, both produced by Bayer. Atebrin tablets are grains 1½ each; plasmoquine tablets are supplied in two strengths—1/3 grain and 1/6 grain each. Atebrin is specific in benign tertian and quartan malaria. It is given after the usual preliminary purgative one tablet thrice a day after food and is to be continued for five days. For women two tablets a day is found sufficient. Generally fever stops after the third day of treatment. In most people, it is absorbed very soon and urine is tinged yellow in about four hours. It is excreted slowly and the tinge continues in the urine even after a week after treatment stops. In some people, the absorption is delayed and the urine begins to turn yellow only after two or three days treatment. In such cases toxic symptoms such as giddiness, fast and feeble pulse are observed after the fourth day of treatment. The treatment should be forthwith stopped. Barley water should be given in plenty and other methods for eliminating the drug should be resorted to in addition to the stimulants for the circulatory failure. I have treated nearly 200 cases of malaria with atebrin, though the full course has not been given in all the cases, due to the high cost of the drug. I have not had a single case of failure, no case of yellowish dis-colouration of the skin has been observed in my cases. But the yellowish discolouration of the conjunctiva has been observed, which promptly disappeared on stopping the treatment. Atebrin is also advised intravenously, but I had no occasion to try it.

Plasmoquine.—Plasmoquine is very efficacious in M. T. malaria,

It is to be given as plasmoquine co. It contains 1/6 grain plasmoquine and 2 grains of quinine. Three tablets a day after food for eighteen days is the full course; and an addition of 5 to 10 grains quinine sulphas may also be given every day. Plasmoquine may also be given as plasmoquine simplex when it is said to kill the gametocytes of all forms of malaria, particularly valuable in killing the crescents of M. T. which is resistant to all other forms of treatment. In cases where the particular kind of parasite cannot be made out and in cases where there is combined infection, atebrin and plasmoquine have to be given at the same time. The course is three tablets of atebrin with two tablets of plasmoquine 1/6 grain daily. The atebrin is to be stopped after five days and plasmoquine to be continued. Plasmoquine is contra-indicated in well marked jaundice. In some cases a continued course of plasmoquine produces very severe gastric pains, usually in the stomach region sometimes accompanied by nausea and even vomiting. Prolonged course of an excessive dose also causes circulatory failure, and general intoxication, when the drug should be immediately stopped and appropriate measures applied. A combined exhibition of atebrin and plasmoquine together appears to be more toxic to some people. It is therefore safer to give them separately and not at the same time. Plasmoquine and atebrin are said to cure black-water fever, which I have not tested. I have observed that the tendency to black-water fever is lessened in cases where only atebrin and plasmoquine have been used for treating the malaria: and further the case of black-water fever that occurs in such individuals is very mild and easily amenable to treatment, and does not end fatally.

On the whole, I have found in my experience for the last one and half years of stay in the highly malarial tracts of Ganjam Agency, the synthetic drugs of atebrin and plasmoquine an improvement on the older quinine treatment, in that the course of the disease is cut short and the patient treated, comes out much better than those treated by the older method. Particularly atebrin is very valuable and I would suggest that it should be tried more widely in treating cases of malaria.

METHOD OF MAKING QUININE TASTELESS

BY

S. B. MATHUR, L.M.P., L.O., (MAD.),

Ophthalmic surgeon, Gurgaon.

In spite of great advances made in the treatment—clinical and prophylactic—of malaria, Quinine still holds the field. But the taste of Quinine is its greatest drawback, especially great difficulty is felt in administering it to children To hide its taste various devices have been made. The substitutes of bitter Quinine are costly, which the lower classes of people in India can ill afford. Sugar coated pills are in the market. These are not so efficacious. Another method of giving quinine in emulsion form hides the taste to a considerable extent. But the emulsion itself becomes difficult to swallow. I have, however, practised another method of making quinine tasteless. My only apology in sending this to the press is that this does not seem to be widely known.

If the bigger variety of myrobalans (Hindi-Har) is roasted in ghee, finely powdered, and mixed with Quinine in equal quantities it will remove the bitterness of quinine without in any way affecting its effectiveness. I have tried this preparation on thousands of patients for the last 3 years and consider it to be more potent than euquinine. Children can thus be given quinine in prepared betel leaf without their even knowing what they are taking. If quinine mixture has to be taken its bitterness can be avoided by keeping a grain or two of the roasted myrobalan powder in the mouth before taking the mixture. There is another advantage of taking quinine in this form. It avoids the necessity of a laxative, so essential in the treatment of malaria-myrobalan being a well known laxative. The preparation is very cheap while it is more potent than other tasteless preparations of quinine, for then actual quinine is administered which is decidedly more potent than the other tasteless preparations of it.

What, however, has struck me most is that none who so took quinine complained to me of cinchonism. Myrobalans appear to have some influence in controlling cinchonism. These powders have by preference been given to these people who refused to take quinine for fear of its 'hot effects' as they call it. They have been given these powders and told that quinine is not being given. I cannot say, therefore, how far the absence of the complaint of cinchonism is psychic. This point needs elucidation by more extensive trial.

It is indeed remarkable how these two bitter substances—myrobalans and Quinine mix together on equal terms to their mutual advantage and usefulness, at the same time minimising considerably their worst drawbacks.

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Editorial

THE FOURTH ALL-INDIA OPHTHALMOLOGICAL SOCIETY'S CONFERENCE—1935

THE fourth Conference of the All-India Ophthalmological Society was held in Madras in the Medical College Hall on the 22nd April 1935 and the two succeeding days under the presidency of Lt. Col. Wright, I. M. S., Superintendent of the Madras Ophthalmic Hospital. Madras, which can boast of having one of the best eye institutions in the World and which ranks third in the list of cities where eye infirmaries were originally established in the British Empire, had, unfortunately, not had the privilege of having the Society's First Conference held therein. Lt. Col. Wright rightly deplores this attitude of the Society towards the claim of Madras. Better late than never. The Conference was opened by Sir Mohamad Usman, a quondam (acting) Governor of this Presidency. A large number of delegates and visitors from all over India attended the Conference and judging from its proceedings, the Conference must be deemed a success.

Dr. E. V. Srinivasan, as Chairman of the Reception Committee welcomed the delegates in a short speech and in so doing, made some valuable suggestions which went a great way towards that happy consummation of the unification of the service and non-service medical men serving in eye-hospitals all over India. He condemned the present system of staffing eye-hospitals and advocated a thorough overhauling of it, so as to secure adequate training for all medical men in ophthalmology and to provide ample facilities for post graduate study. "The system of keeping

these large institutions", he said, "as one man's show should be replaced by one which will allow as many ophthalmologists as might be reasonably thought necessary for the population served, to find a place on the staff. Science is not concerned with the problem whether these should be honoraries or stipendiaries and if the latter, whether they should be recruited from the Imperial or Provincial Service. In order that there should be freedom and equality of opportunities for original work and to facilitate their hearty collaboration, the status of all in the hospital, apart from and in spite of their drawing salaries or not should be absolutely equal". In short, he aims at 'equal opportunities for all medical men' and 'equality of status'. This view, we heartily endorse.

The Presidential address of Lt. Col. Wright was full of enthusiasm and optimism. After tracing the history of Ophthalmology in India, he began to deal with those aspects of Ophthalmology which "give the greatest and most expeditious relief to the greatest number". He deprecated the idea of converting academic centres of Ophthalmology in this country into factories for repairing damaged eyes and suggested that 'these institutions should be concerned more with the academic side of our Science associated with pathological and aetiological investigation, scientific and up-to-date refraction and sound practical under graduate and post-graduate education'.

In the matter of prevention of blindness, he was satisfied that the medical profession in India had contributed and are contributing their quota by relieving one-sixth of the blind population and leading them to light every year by their cataract operations. This is no doubt a creditable record, but we fear if the medical man's duty stops at that and he has no further responsibility in the matter of preventing blindness. Dr. Harvey J. Howard, M.D., of the Washington University, Saint Louis, Missourie, U.S.A., in his admirable contribution to the Health section of the World Federation of Education Associations held at Denver in July '31, has made the following significant observation :—"We, eye surgeons, often swell with pride over the blind whom we have made to see but it would be more proper for us to bow in humility over the blind who never can be made to see and for whose condition we must accept a share of responsibility". The prevention of blindness must commence with the New-born baby. We understand that, in one of the progressive countries of Europe, a law is being enacted by which the treatment of the new-born baby's eyes with silver nitrate solution is made compulsory for prevention of blindness, in the same way as vaccination

is for prevention of small-pox. Then comes the question of saving the sight of the pre-school child and the school child. With regard to the latter, medical inspection of school-children must be done with precision and perfection and not in the haphazard manner in which it is being done in India now. To quote Dr. H. J. Howard again, "Every child's complete physical examination upon his first admission to school should naturally include a careful examination of the ocular functions. The important information gathered by this examination will reveal defects that can be corrected, defects that can be compensated for, and defects for which nothing can be done but about which the teacher ought to know. It is important that we should know the condition of the ocular functions of every child before he begins his lifetime of more or less close application of his eyes". Then comes preventing vision impairment caused by venereal diseases. Eradicating trachoma is another world problem with which India is also concerned. Last but not least is the reduction of eye hazards in Industries.

These are problems in which the State, the Eye Surgeon, the Health Officer, the Social Worker, the School Master and the general public are vitally interested and unless they all club together and work in unison in a team spirit, no tangible result can be achieved.

A heavy and onerous duty therefore falls on the All-India Ophthalmological Society and we trust that they will create enough public opinion and bring enough pressure to bear on the Government of India and the Provincial Governments to set apart large sums of money for the development of that branch of medical science which confers a real boon to humanity and contributes not a little to the industrial and economic advancement of the nation. We wish the All-India Ophthalmological Society Godspeed in their earnest endeavour to alleviate the worst of human sufferings one can imagine.

THE FIFTH PROVINCIAL CONFERENCE OF THE SUBSIDIZED (RURAL) MEDICAL PRACTITIONERS IN THE MADRAS PRESIDENCY

The fifth Provincial Conference of the subsidized Medical Practitioners was held at Bezwada on 20-4-35, under the presidency of Dr. D. S. Ramachandra Rau, M.A., M.D., Dr. N. Rama Rau, L.M.P., of Gollapalli welcomed the delegates. The Presidential Address, the Reception Committee Chairman's speech and the Resolutions passed at the Conference all find a place elsewhere in

this issue. This Conference which was to have been held during last X-mas week had to be postponed for various reasons to Easter of this year and we take this opportunity of congratulating Dr. S. Rama Subbu, L.M.S., the indefatigable Secretary of the Association for the splendid organization and success of this conference.

We find from the resolutions that the grievances of the subsidized medical practitioners are multiplying rather than decreasing every year and that they are real and substantial, calling for immediate redress. We do not propose to comment on each and every one of those resolutions for they are self-explanatory, but only three, however, deserve special mention. First is with regard to the hours of work at the Rural Dispensary. The rural medical officer will certainly be deprived of his private practice if he should attend the dispensary both morning and evening. We understand that his jurisdiction extends to a radius of 10 miles from his headquarters and in order that he might establish his influence throughout the area, he must be able to attend calls from those places for which he must have spare time. In short, we wish him to be a sort of itinerary medical officer, within his jurisdiction and so long as he undertakes to work from morning 7 to 12 noon in the headquarters and spend the night in the headquarters, there can be no valid objection to letting him off in the afternoon, provided he is on duty elsewhere within his jurisdiction. After all, the subsidized medical officer is an independent medical practitioner or rather is expected to set up independent practice and forego his subsidy after a time, when he has firmly established a lucrative practice, and so, no restrictions as to attendance need be placed over him. The second is with regard to the experiment now being made of deputing subsidised medical practitioners for health duty in their respective areas. It is the health work in rural areas that is most neglected and this move to make the rural medical officers responsible for the health and sanitation of the areas under their control is, therefore, most welcome. But they must not be saddled with heavy work to the detriment of their professional duties. Their request for a vaccinator to help them in their work seems to us to be a reasonable one. The third resolution is with regard to their transfer to Local Fund service. We honestly believe that such transfers if contemplated would sound the death-knell of the rural scheme and must therefore be discouraged as far as possible. The rural medical officer will always have his eye on the Local Fund job and will not seriously work to improve his rural

practice. On the other hand, we wish all Local Fund dispensaries abolished and more rural dispensaries established and maintained out of Local Funds. There should be a central well-equipped, up-to-date Taluq Hospital maintained from Provincial revenues, to serve the needs of the taluq. This will conduce to economy and harmony and will be the surest means of literally bringing efficient medical relief to the very door of the villager.

Gleanings from Medical Press

MEDICINE AND THERAPEUTICS

Pains in Joints and Muscles from Prolonged administration of Barbiturates.—Early in 1934, Beriel and Barbier published seven cases of painful "rheumatism" following the exhibition of gardenal. When it was discontinued, the pain diminished and finally ceased, recurring when barbiturate medication was resumed. Altogether only 16 such cases have hitherto been published. Yet they must be far more common than this figure would suggest, and P. Castin and P. Gardien have alone observed 6 cases, details of which they record. With the exception of one patient with atrophy of the right deltoid muscle, these patients suffered only from symptoms without objective signs of disease. The tendon reflexes, for example, were normal and no sensory or vaso-motor disturbances were demonstrable. The barbiturates responsible for the algias were gardenal, luminal, rutonal and prominal. It was not until one or other of these drugs had been given for some time that the attacks of cramp-like pain set in. The sex incidence was equal, with 3 men to 3 women, and their ages were between 43 and 56—"l'age des douleurs dites rhumatismales", With the exception of one patient who had suffered from rheumatism of one shoulder several years ago, there was, curiously enough, no previous history of rheumatic aches and pains in this group of cases. The standard anti-rheumatic remedies, such as aspirin and antipyrin, afforded no relief of the pain, the mode of causation of which is obscure. Is it that, with the wholesale production of barbiturates at the present time, impurities have crept into their composition? Or is it that the number of such cases has grown merely in direct proportion to the increased popularity of barbiturates at the present time? At all events, these barbituric algias do not warrant the discarding of this valuable group of drugs any more than do the

rashes, constipation and various other sequels which sometimes follow their exhibition.—*The Clinical Journal, Feb. '35.*

The Nature and Relief of Some Common Gastric Symptoms—By J. A. Ryle, F.R.C.P., M.D (From *Guy's Hospital Gazette.*)

1. *Hunger pain.*—Is felt in the epigastrium described as "growing" in character or as a "bad ache", associated with a sensation of sinking, hollowness, or emptiness; develops between two and three hours after the last meal; increased by cold, fatigue, mental worry and tobacco and relieved by warmth, peace of mind and holiday. Frequently encountered in cases of duodenal ulcer, sometimes with gastric ulcer and occasionally with early growths of the stomach. Found also in some cases of dyspepsia due to gall-bladder and appendicular disease and in patients with an over-active and over-acid stomach, it may arise without a lesion of any kind. The cause of the pain is the abnormal increase in the muscle tension—a hypertonic "behaviour" or "posture" (an excessive tonic and peristaltic activity) due to an irritation, local, distal or central. Food relaxes the tension and eases pain. Alkalis are believed to relax the cardiac and pyloric sphincters and ease the situation by an expulsion of gas and a diminution of intra-gastric pressure. At one time hunger-pain was regarded as a symptom of hyperchlorhydria, but it is seen in association with achlorhydria, and many people with hyperchlorhydria never experience it.

2. *Flatulence.*—Is characterised by sensations of fullness or discomfort of varying degree in the epigastrium or chest, and eructations of gas or belching. When it smells of "rotten eggs" or sulphuretted hydrogen, it indicates gastric stasis with protein decomposition—pyloric stenosis or obstruction. Eructations of flatus or bowel-wind are pathognomonic of gastro-colic fistula. The sensations of flatulence may clearly be produced by an actual excess of air or gas in a normal stomach or by a normal content in a hypertonic organ. Repeated and noisy eructations are always due to air-swallowing of organic lesions. Duodenal ulcer, gall-stones and cholecystitis are responsible for its causation and "bursting flatulence" is a frequent complaint in the dyspepsias of gall-bladder disease. The habit of air-swallowing or aerophagy is initiated by forcible attempts to relieve a gastric discomfort by eructation, the act being preceded by gulping of air. A simple explanation and instructions to avoid eructation may result in dramatic cures.

3. *Heart-Burn.*—Is a sensation of burning in the course of the gullet, distributed vertically at any level between Pomum Adami and the Xiphisternum. It changes its level and fluctuates in intensity, and is not a symptom of organic disease, but is an association of hurry and worry, of carbohydrate excesses, of anaemic dyspepsias, and (replacing the nausea of the earlier phase) it is, with many women, a most troublesome symptom in the later months of pregnancy. It is not always a symptom of "acidity", but it may occur in patients with complete achlorhydria. It is due to some degree of tonic œsophageal contraction and sodium bicarbonate and aloknol probably by relaxing the cardio, give the best help.

4. *Acid Regurgitation* into the gullet and mouth of sour fluid is a symptom of gastric hyperacidity and the treatment is of any underlying cause, such as duodenal ulcer, tobacco excess, or rushed irregular meals, combined with alkaline therapy.

5. *Water-Brash.*—Is the sudden arrival in the mouth and gullet of large quantities of clear, tasteless watery secretion. It occurs frequently in duodenal ulcer, synchronous with the "hunger pain", is due to a sudden secretion of saliva, and possibly has a protective purpose, for, if swallowed, it may even relieve the pain.

6. *Hiccups.*—Are generally due to trivial causes as bolting of food and starch excess in children, a reflex consequence of gastric irritation as in alcoholic bout and may be of evil import as accompaniments of acute abdominal catastrophes and uraemia. In the abdominal catastrophe the stomach is usually dilated and filled with turbid brownish fluid and sometimes regurgitated intestinal contents. In uraemia, either uraemic gastritis or a nervous intoxication might be invoked. In their graver forms hiccups are most intractable. Gastric lavage in cases of dilated stomach, oil of cajuput, tincture of iodine, etc., by the mouth, or ice-cold application to the epigastrium, or violent sneezing (not applicable in abdominal cases or the presence of exhaustion) may put a stop to it. Stronger remedies as heroin and morphia may be necessary sometimes. The mechanism of the symptom would seem to include an abrupt diaphragmatic spasm with simultaneous closure of the glottis.

Haematemesis.—Dr. Charles Bolton discusses the diagnosis and treatment of Haematemesis in a post-graduate lecture delivered at the University College Hospital, London. Diagnosis of haemorrhage is made by the blanched face and almost pulseless condition of the patient together with the evidence of the vomited

blood. If acid in reaction the patient has without doubt vomited the material. If alkaline and consisting chiefly of saliva and mucus, with red blood intermingled, it has most likely come from the mouth or pharynx. Haemoptysis initially is red and frothy, and is commonly followed by rusty sputum and malæna does not result. In epistaxis in children, blood may be swallowed and vomited back. Coffee-grounds vomit indicates that the bleeding is moderate in degree and has been poured out slowly, so that acid haematin is formed by the HCl—an ulcer, cancer or mechanical congestion as hepatic cirrhosis. If blood is red, small in amount and mixed with mucus—acute toxic gastritis. Dark—coloured clots point to a more profuse bleeding—chronic ulcer, cancer and cirrhosis. Large amounts of bright red blood indicate an acute ulcer, an oesophageal vein rupture in cirrhosis of the liver, splenic anaemia and less commonly chronic ulcer and rarely cancer. A gastric ulcer patient may die of profuse haemorrhage without any blood having been vomited at all.

Treatment. Peptic ulcer: (haemorrhage may occur at the formation of the initial lesion, or at any stage during the evolution or cicatrisation of the ulcer.)—

(1) Withhold food and keep the stomach in the resting phase till the clot is sufficiently consolidated to withstand dislodge by the movements or stretching of the gastric walls, the digestion of the clot or vasodilation of the arteries.

(2) Keep absolutely at rest on a firm bed with light clothing, in a cool and well ventilated room, with the foot of the bed raised and cradle to relieve the pressure of clothes.

(3) Small amounts of water by mouth to relieve thirst.

(4) A hypodermic injection of morphia and atropine.

(5) Half a pint of glucose—saline solution per rectum every 4 to 6 hours. This treatment is continued till the bleeding has been arrested for two days.

MOUTH FEEDING.—Begin with albumin water or whey in small quantities, gradually increased to 5 oz. two-hourly. Later equal parts of whey and citrated milk, 5 oz. of citrated milk every 2 hours and finally 7 oz. three—hourly (reached in ten days) *Lavage*: not to be advised since the clot may be dislodged by this.

Hypersecretion is controlled by atropine gr. 1/100—1/50 or Tr Belladonna m. 20—30 by rectum.

BLOOD TRANSFUSION.—Not to be used after the initial haemorrhage, but after one or more recurrences as decided by the physician. Two transfusions of 250 c.c. each at an interval of two hours between is safe. One sees now and then a case in an almost desperate state recovering without transfusion, and it may fail to save the patient in an apparently less serious condition. Persistence of bleeding is another indication for transfusion.

HAEMOSTATICS.—as perchloride of iron or haemoplastin are of little use.

OPERATION.—Acute ulcers are better left alone. Indications for directly dealing with a chronic ulcer are recurring and persistent hæmorrhage or pyloric stenosis.—(*The Lancet. October 27, 1934*).

Auscultatory Percussion in Ascites.—(*The Lancet, Oct. 27, 1934. Page 938*)—Abdominal distension, shifting dullness, and a "fluid thrill"—by these signs were we taught in our youth to look for and recognise ascites. In a recent paper from France we are offered a new physical sign, characteristic of ascites, and obtainable when the collection of fluid is too small to be demonstrated by other clinical signs—"double bruit ascetique" of Lian and Odinet. To elicit this one taps or flicks the patient's abdominal wall with the finger, in one illiac fossa, while auscultating in the other. The stethoscope is applied light; its chest-piece must be conical in shape and free from any sort of diaphragm. In the normal abdomen the blow of the finger is heard through the stethoscope as a single brief sound, its pitch varying with the state of the abdominal wall. When ascites is present the same sound is heard but is followed at a distinct interval by a characteristic second sound, which is longer and louder than the first and which coincides in time with the fluid thrill when that is obtainable. Lian and Odinet attribute it, along with the fluid thrill, to the wave of displacement set up in the sea of ascitic fluid by the stroke of the finger. There remains the question whether other clinicians can elicit it in cases of ascites of small amount, otherwise difficult of recognition.

Treatment of cellulitis, Suppuration and Burns.—Dr. John J. Robb of Royal Infirmary, Dundee, in the B. M. J. March 9, 1935, describes his improved methods in the treatment of these conditions which will reduce both attention and attendances in the out-patient departments of large hospitals without any reduction in efficiency.

CELLULITIS.—The adhesive elastic bandage is applied so as to cover generously the part involved, and if lymphangitis is present the bandage is continued proximally to cover it. In a bad case the patient may be seen on the next day, but it is unnecessary

in most cases to see him sooner than from four to seven days He is warned, however, to report immediately should his general symptoms increase. At the end of four to seven days the splint or sling is removed and the limb is palpated through the bandage. If no pain is elicited and no fluctuation felt, he is merely asked to report again a week later, when the bandage is removed. Only if a local abscess is formed is surgery required.

SUPPURATION.—Where an abscess has formed, incision is made and all contents and slough evacuated. Where no masked resulting cavity remains, as in fingers, palm, etc., once bleeding has stopped, adhesive elastic or viscapaste bandage is again applied, and a splint used if necessary. The patient does not report again at the hospital for one week. The oozing of discharge, if any through the elastic bandage dressing may be remedied by washing the part once or twice a day with soap and water. Nothing must be applied over the bandage which might hinder free evaporation : the freer the evaporation, the less the discharge. Where the lesion occurs in soft tissue planes, such as the neck or buttock, and, by virtue of surrounding structures or damage to immediate tissue, a large non-collapsible cavity results, it is wise to pack such spaces. The best pack is gauze soaked in pure glycerine, and the optimum time for removal of the pack is the fifth day. After drying the skin with surgical spirit, adhesive bandage may immediately be applied, or when the pack is removed on the fifth day. A weekly change of the dressing is usually at first required, but later the interval may be prolonged. Between each dressing, the lesion should be cleansed with sterile water or surgical spirit.

BURNS.—Clip away all blisters and apply the elastic bandage and a splint. Unless the area is very foul, preliminary cleansing appears to be unnecessary, and hence no anæsthetic is required. Air must be allowed to circulate freely about the area involved. In the hospital, he is treated in a hot-air bath with the bed coverings so arranged that free through circulation of air is possible. Immediately the shock phase is over the bandaged areas are exposed to the air without bed covering of any sort. Tissue fluids are allowed to exude through the bandage and there dry, and only when there is excessive need they must be removed. On an average the first bandaging is left in place from two to three weeks in the out-patient department and from three to six weeks in the hospitalised case, the length of time depending on the degree of burn present. After the first bandages are removed, only raw areas are re-covered, and many of these require merely patches of

adhesive bandage. According to the author, the advantages of these methods are dressings are greatly reduced in number, antiseptics are practically elimininated, and the staff consequently liberated for other duties.

Correspondence

L. M. P. BOARD EXAMINATIONS AND THE NECESSITY FOR RAISING THE PRELIMINARY STANDARD FORTHWITH.

Dr. U. D. Gopal Rau, Secretary, The All-India Medical Licentiates' Association, Madras, writes :—

A common observer of things would not fail to note with great anxiety the unsatisfactory results of the L. M. P. Board Examinations for the last three years, especially under the " Five years course " and the raised standard of examination. A glance over the results would show that failures are more on the way to increase in the Government Lady Wellingdon and Vellore Medical Schools than in the Stanley Medical School.

The reason for this is not far to seek. The rules of admission of students into the three medical schools in the presidency are based on a very weak ground so much so, there is a constant tendency for an unhealthy competition between the students of the different schools. It is definitely laid down in the rules of admission that preference would be given first to graduates, secondly to intermediates and lastly to S. S. L. Cs. with 40 % in English. Practically the selection is made on this basis.

Thus, there is a fundamental difference in the preliminary qualification which has got a great thing to do in the study of medicine and the results of the examination. There is a gulf of difference in the standard of English between the S. S. L. C. and the Intermediate. Students of the Stanley Medical School 75% of whom are intermediates are in a more advantageous position to cope with the extra work and the mental ability needed for the raised course of instruction and the standard of examination than the Lady Wellingdon and Vellore Medical School students majority of whom are S. S. L. Cs. It is no wonder that failures are common in those two institutions.

Of course, there might be other reasons also to account for the poor results such as improper equipment, inefficiency of the teaching staff etc. I do not wish to discuss them here but I would like to point out to the Government and the authorities

concerned that the fundamental difference in the preliminary educational qualification stands foremost as a bar to achieve good results in the examinations. I earnestly hope that the Government would consider this matter seriously and raise the preliminary standard to the Intermediate. This would not only help the students to study medicine with a wider outlook but would also accelerate the forward policy on the part of the Government to establish a uniform standard of medical qualifications in India to achieve which many of the medical organizations, particularly the All-India Medical Licentiates' Association, have been working heart and soul for several years.

Proceedings of Conferences Societies, etc.,

THE IV ALL-INDIA OPHTHALMOLOGICAL SOCIETY'S CONFERENCE

The Fourth Conference of the All-India Ophthalmological Society was held under the presidency of Lt-Col. R. E. Wright I.M.S., at the Medical College Hall on the 22nd April, '35. A large number of delegates and visitors from the different provinces of India were present.

Welcome Address

By Dr. E. Srinivasan.

Dr. E. V. Srinivasan, the Chairman of the Reception Committee, welcomed the guests. In his address, he traced the growth of the two premier medical institutions in the city, the General Hospital and the Ophthalmic Hospital. The All-India Ophthalmological Society in its report of its working last year, expressed the hope that all ophthalmic surgeons, practising in India would join it as members. They should not merely increase the number on the rolls of the society, but help to produce well trained and enthusiastic ophthalmologists. This could be done by creating more opportunities for a sound training and radically improving the methods of such training, and secondly by giving candidates so trained adequate opportunities, and befitting status, so as to encourage them to take a lively interest in the growth of the science.

Proceeding, Mr. E. V. Srinivasan said: "To attain the objective of the Society, the system of staffing eye hospitals must be thoroughly remodelled for the training of sound Ophthalmologists. Special hospitals of the magnitude of Presidency Eye Hospitals

must expect to be judged not merely by the number of cases treated, but by the number of soundly trained workers turned out. The best way to do it is not to take in all the post-graduates that apply for admission, but to throw open all the appointments right up to that of the R. M. O. to the temporary House Surgeons, who can be reappointed and promoted on their merits as in the Moorfield Hospital. You will all agree with me that a House Surgeon gets far more opportunities than a mere post-graduate for acquiring a deep insight into the management of cases, for making a more detailed study thereof, for making original observations on the condition and progress of cases and above all for gaining confidence in his powers of observation and ability to face emergencies. On the other hand, most of the subordinate staff, as is at present found in these hospitals, not only never reach the status of first class Ophthalmologists, but prove a positive hindrance to the full development of post graduates. Graduates to be employed as House Surgeons should have preferably done House Surgeoncy in medical and surgical departments previously, and they should volunteer for eye work. Having thus planted the seeds, preparation for the full growth of the plants must be made by creating more room at the top. The system of keeping these large institutions as one man's show should be replaced by one which will allow as many Ophthalmologists as might be reasonably thought necessary for the population served, to find a place on the staff. Science is not concerned with the problem whether these should be honoraries or stipendiaries and if the latter whether they should be recruited from the Imperial or Provincial Service. I shall not enter here into that question. But in order that there should be freedom and equality of opportunities for original work and to facilitate their hearty collaboration, the status of all on the staff of the hospital, apart from and in spite of their drawing salaries or not, should be absolutely equal. The title of 'Superintendent' should be relegated to a head-clerk, as in English Hospitals. This head clerk should administer the Hospital under the instructions of the medical faculty of the hospital composed of all the principal ophthalmologists on the staff.

In conclusion Dr. E. V. Srinivasan said that the Government of India were showing great concern in raising the standard of medical education to the level obtaining in Great Britain as was seen by the creation of an All-India Medical Council and a Committee for the inspection of the teaching institutions and he hoped that the delegates assembled would do their best to cooperate with the Government in achieving their ideal.

Dr. G Zachariah (Madras) requested Sir Mahomed Usman to open the Conference.

Sir M. Usman's Opening Address

Sir Mahomed Usman, declaring the Conference open, said :—

"I was greatly interested and pleased on receiving the invitation to officiate at the opening of this the Fourth Conference of the All-India Ophthalmological Society. I must confess that I was ignorant of the fact that the ophthalmologists of India had established this excellent method of exchanging scientific views. It is fully admitted that direct contacts such as are made possible at the great Scientific Congresses of the world, do more to forward the cause of the particular science concerned than perhaps any other method. Although I did not come directly in contact with medicine in my capacity as Home Member, I am thoroughly familiar with the numerous activities of your profession and I realise how important it is for this province and the whole of India to encourage the exchange of ideas and promote useful discussion, more particularly in the highly specialised branches of your science such as the one you represent. It gives me great pleasure, therefore, to see you here to-day, knowing that this session represents a landmark in the progress of Ophthalmology in India.

You are probably all aware that it was here in Madras that the third eye infirmary in the British Empire was established in 1819. Since that time, great strides have been made,—until now,—through the continued labours of those who staffed the institution, we have the present Government Ophthalmic Hospital, which may justly claim to be in many respects one of the finest of its kind in the Empire. I do not refer to its size or its appearance, for possibly those of you who are familiar with the large and beautiful modern buildings both in India and elsewhere may have constructional faults to find. I refer rather to its tradition. For the last half a century, the Government Ophthalmic Hospital has been the centre of active ophthalmological effort, and from it as centre, ophthalmic knowledge has gradually spread throughout the Presidency. This is largely the result of the excellent facilities for study which it has made available.

In addition to earning a name for itself in connection with ophthalmic relief, it gradually developed the more academic side of ophthalmic science, until during the superintendency of Colonel Kirkpatrick, the School of Ophthalmology, which is called after his predecessor, was founded as an extramural part of the Medical College. This annexe to the hospital—The Elliot School—was opened just before Colonel Wright took over in 1920. As you will see for yourselves, it has since that time been developed by the Superintendent and the staff along lines which make for easy assimilation of ophthalmic knowledge by the student. Colonel Wright has fortunately been enabled to continue this work for a period equal to the combined superintendencies of his two predecessors. Not only is the undergraduate catered for, but also the post-graduate, both official and non-official, Indian and Foreign, facilities for post-graduate study were offered freely to Government doctors with the object of spreading ophthalmic aid and knowledge throughout the Presidency. In this way it was hoped not only to establish more generalised ophthalmic relief, but also to disseminate information with regard to the prevention of blindness, an even more important measure.

Unfortunately, the slump very largely cramped efforts in this direction. Postgraduate study was also extended to unofficial doctors and a number of post-graduates from different parts of the world overseas came here to enlarge their experience, among others, the sons of such distinguished British Ophthalmologists as Mr. Priestly Smith, and Mr. William Lang. Specialists now practising in the United States of America, Australia, New Zealand, Malaya, Siam and other places have had part of their training here. During the more active academic development of the school in the past 25 years, unofficial ophthalmic specialists began to come into prominence and gradually assumed an important place in the sphere of eye work in this city and Presidency. They are still a relatively small body and all, but one or two, have received their early medical education in the Madras College. Most of them have not only gained experience in India but travelled West and obtained special qualifications overseas. A high percentage of these unofficial specialists are now serving Government in an honorary capacity and helping their official colleagues to keep up the standard of ophthalmic practice and teaching which is traditionally of a high order. I understand that it is largely through the efforts of some unofficial eye specialists of this Presidency that this important Society came into being. I congratulate those concerned who are present, and others from different parts of India in the same category, who have supported them. I think it augurs well for the future of Ophthalmology in India to see such a representative gathering here to-day both of Government medical officers and unofficial specialists meeting together in a friendly social atmosphere with the common object of discussing scientific problems, the solution of which is calculated to benefit the people of this country.

Ladies and gentlemen, I thank you for the honour you have done me, and in declaring this session open, let me express the hope that you will experience much mutual benefit from your intercourse and that Indian Ophthalmology, and that urgent problem, the prevention of bindness in India, will greatly benefit through your deliberations, and your subsequent activities.

Election of President

Dr. B. K. Narayana Rao (Bangalore) proposing Lt.-Col. R. E. Wright to the chair, paid a tribute to his work in the field of Ophthalmology. The science of Ophthalmology, he said, was the first branch of medical knowledge in which specialisation was undertaken even as long ago as the time of the Khalifo. Considering the incidence of eye diseases and the fact that they indirectly cause other diseases in the human system, he felt that Ophthalmology was not playing as prominent a part in medical practice as it ought to. The time had, he said, come when they should all devote themselves more and more to a careful study of the science in all its branches. Lt. Col. Wright, he said, had by his writings and his efforts to promote the study of Ophthalmology laid all practitioners and students of the science under a deep debt of gratitude. It was therefore, but fitting that he should preside over and guide the deliberations of the session.

Dr. S. C. Dutt (Calcutta) seconded the proposition which was then carried unanimously. Lt. Col. R. E. Wright took the chair.

Presidential address

[By Lt. Col. R. E. Wright, C.I.E., I.M.S., Superintendent, Government Ophthalmology Hospital, Professor of Ophthalmology, Medical College, Madras, and Member, International Council of Ophthalmology].

Members of the All-India Ophthalmological Society ! I wish to thank you for the honour you have done me in electing me President of this Conference and of the Society until the next Conference takes place. I can only assure you in return for the compliment you have paid me that any help I can give to the cause of Indian Ophthalmology in general or to the All-India Ophthalmological Society in particular, will be gladly given. I have been at the disposal of our energetic Joint-Secretary Dr. G. Zachariah of Madras from the early days of the Society, and although I may not always have done those things which he thought I ought to have done, and may perhaps have left undone many things which I might have done for the Society in the past, I shall make a greater endeavour in the future to live up to the position with which you have entrusted me.

It would have been a source of satisfaction to me if the first Conference of this Society could have been held in Madras, for, as you probably know it was here that the first eye clinic in the British Empire was established. Here in Madras the third eye infirmary in the English-speaking world was founded in 1819, a year before the foundation of the New York Eye and Ear Infirmary, while as yet an Independence Day had not dawned in America. The genesis of Ophthalmology in India as a special branch of Western medicine quickly followed upon its origin in London. As you will see recorded beneath the photographs hanging in the entrance hall of the Elliot School, Saunders founded the first special hospital devoted to the treatment of diseases of the eye in 1804. From this parent institution, now known to all the world as Moorfields, sprung six other eye infirmaries in fairly rapid succession, at Exeter in 1807, in Madras in 1812, in New York in 1820, in Calcutta, Bombay and Boston in 1824, started respectively by Adams, Richardson, Delafield and Rodgers, Jeafferson, Egerton and Reynolds. It is but fitting therefore that our All-India Ophthalmological Society should have had Madras as its birthplace. I know something about its accouchment, as the doctor in charge of the case our worthy Joint Secretary, Dr. Zachariah, and his colleagues, called me in consultation. My opinion was not very favourable as to the chances of what I consider to be a premature child in the light of what had happened to its cousins, the ophthalmic societies of the Presidency cities and others. There were also little differences of opinion as to the begetting of the infant so that doubts arose about legitimacy. But eventually the doctor in charge and his colleagues, one amongst whom must not be forgotten, namely Dr. Kugelberg, decided to deliver the baby then and there, no matter what anybody thought. You will see what a bad midwife I am and what a fine healthy child of six years old your committee has reared.

Before leaving the subject of our Society, I would like to take this opportunity of congratulating our immediate past President on the honour of Knighthood which has been bestowed upon him. You will agree with me that the Society has reason to be proud of the recognition of a well-known Indian Ophthalmologist. To sound a sadder note, our sympathy goes out to the relatives and friends of those members who have passed away since our last meeting. We are very conscious also of the great loss which Ophthalmology has sustained in the death of Mr. Mayou and Dr. Posey. Many of you no doubt have listened to, and benefited

from the teaching of the former and some of us have had the privilege of knowing the latter.

Ophthalmology in India

Now, for a few moments, let me draw your attention to certain aspects of the work in which we are all engaged, Ophthalmology in practice and principle. I will not attempt to remind you of recent work in this field, but rather confine myself to features of Ophthalmology in India about which we can speak with the authority born of experience. With regard to practice, all I would say centres round experience itself. Those of you who are young could not be in a better country for the accumulation of practical experience, and those of us who are older have had so much experience in certain branches that we are sometimes inclined to behave as if experience were everything, which, of course, is stupid; it can only effect its great value when combined with careful consideration, rational deduction, and sound judgment. The very vastness of the material on which our practice is founded has its disadvantages. The time absorbed in dealing with one aspect of it *i.e.*, treatment, seriously curtails the total time available for the study of other aspects e.g., the academic study of the minutiae of individual cases or the collection and campilation of academic records. Our experience therefore tends to be limited to certain aspects even of practice, namely, those aspects which give the greatest and most expeditious relief to the greatest number. We are largely in the position of collectors dealing with material in bulk who do what is necessary for the preservation of our specimens, making temporary observations and classifications in the hope of finding time later to work out the detail. Allowing for such limitation, the value of large experience, even if only partially digested, is infinitely greater than an extensive book knowledge embellished with the frills of detail, the importance of which is often out of perspective. This state of affairs will tend to disappear as ophthalmologists increase in number in this country, but in the meantime it affords us privileges which we must value and utilise to the fullest. As we gain experience, we all probably develop fads and fancies in our practice just as specialists do in other parts of the world, and ours are perhaps no better or no worse than theirs. We learn gradually, just as the experienced physician or surgeon, not to do harm if we cannot do good, and to give nature every chance, particularly in the young. We learn to be conservative and to think of the result on the patient of the wonderful operation towards which

inexperience might propel us, and yet to be daring in the right circumstances. We sometimes learn to hold our hand at the right moment—a very difficult thing—and to hold our tongues when the less experienced are vocal—also difficult. In gaining this experience, we often think we have made a discovery and rush into print, only to realise that it is not new to an older generation and that there is little really new in the field of our endeavours. Such lessons ought to teach us to respect the extensive literature on a subject which goes back to the Egyptian papyri and to search it as fully as possible, although this is one of our great difficulties in India where library facilities are poor.

Limitations of book knowledge

Gentlemen, you can get plenty of experience in India, and what is more you can get it before you are too old to use it. Perhaps the greatest fault of the young Indian post-graduate specialising in eye disease is a self-assurance born of book knowledge and a special qualification founded thereon. The same is true of course elsewhere. They should bear in mind that the old hand if sometimes hazy about the latest hypotheses, supposed to explain certain phenomena, is familiar enough with the practical bearings of such phenomena in their relation to daily life. In so far then as the practice of ophthalmology is concerned, the specialist in India is in as good a position of attaining experience as the specialist elsewhere, in fact in a better position as regards certain conditions which are more common-place here than in other parts of the world. I do not wish to be misunderstood and to appear to bolster up the idea that because some of us are privileged to deal with infinitely greater numbers of cases than certain of our colleagues elsewhere, that we have necessarily made the best use of that experience. It is not enough to see hundreds of cases or do hundreds of operations; as previously indicated, experience must be combined with intelligent observation to be of value. Automatic repetition of the same act or same observation does not place us on a higher level than the bricklayer We have sometimes been reminded of this by hearing disparaging references to Indian cataract punchers. It is desirable to avoid speed unless it is of definite value. Edward Jackson somewhere indicates that it is better to do one operation slowly, deliberately and with careful consideration of all the variants than a much greater number in the same time in slap dash fashion: these are not his words, but this, I take it is what he meant. I feel that he also meant it to be fair criticism of the arrogant

assumption that mere repetition of action constitutes valuable experience.

With opportunities, such as we have of gaining experience, and after careful consideration and comparative study of utilising it to improve practice, it is our own fault if we do not achieve a degree of proficiency of a high order. For reasons which may be inferred from the above remarks, we have always avoided the glorification of cataract work in the Madras clinic, although, perhaps, we have utilised the opportunities offered to us no less than other institutions in India which deal with a vast amount of material. During my Sueperintendency, visiting ophthalmologists who came with the sole idea of getting experience in cataract operating have been discouraged. Unless their knowledge of ophthalmic principles was of such an order that it became a duty and a pleasure to help them to master this very limited field of human carpentry, their overtures were regarded as rather an insult to our intelligence. For although good cataract work in bulk is still extremely important to India, as I hope to show in a moment, it is infinitely more important that the academic centres of ophthalmology in this country should not degenerate into factories for the repair of damaged eyes, to the neglect of the more academic side of our science associated with pathological and aetiological investigation, scientific and up-to-date refraction, and sound practical under-graduate and post-graduate education.

Prevention of Blindness

And now let me say a word about the prevention of blindness. I shall insert it in here between practice and principles, as it is not truly to be regarded as part of our practice being largely a function of a Ministry of Health,—if we had such a thing,—but it hangs on a knowledge of the principles of ophthalmology. Our function is to put our knowledge at the disposal of the State in order to enable it to give effect to measures largely outside our province, to help to devise ways and means of educating the State and the public, to keep on reminding those in both groups who are most likely to take notice, and to supply the scientific detail necessary for the compaign. I will not enlarge on the prevention of blindness even in outline here. I have done so on numerous occasions and in several publications. I would just like to mention one aspect of the problem. You will all find that it is much easier to arouse public sympathy and raise money for the care of a handful of people after they have become blind than to rouse

the same enthusiasm or raise the same money in preventing ten times the number becoming blind. You all know why this should be so; there are many reasons, but in spite of the best of these reasons,—the humane promptings of pity towards our fellows,—the old saying is still true, prevention is better than cure. Having taken the liberty of dragging in prevention which is really a major problem for the Department of Education, Health and Lands of the Central Government inasmuch as all three divisions of this portfolio are directly concerned, let me now say a word on one aspect of the relief of blindness.

I have previously spoken of cataract operating in bulk, and disparaged its elevation as such to a prominent place in our speciality, but I do not want to underrate its importance as a blind relief measure in India. This is rather a different proposition. Many a surgeon has been of value in the cause of blind relief because he has acquired skill in cataract operating without any real claim to being an ophthalmologist. I do not hold that such a person is ever as good,—even as an exponent of blind relief,—as an ophthalmologist with similar skill, nor do I believe that he can ever turn out the same quality of work, but the work he does is valuable in India under present conditions. I suppose 50,000 would be a fair probable estimate of the number of cataract operations performed annually in India, which goes a long way to relieve the disability from this cause even if we discount those cases already relieved in one eye. Figures,—so called statistical figures,—quoted in support of one aspect or another of the blind problem, are however almost useless except for propaganda purposes to influence public opinion. The census returns for 1931 show that there were 601,370 persons blind in both eyes. If we assume, without any real justification other than guessing from our experience, that 50 per cent of these are blind of cataract, then we are relieving one-sixth of the blindness due to cataract every year, which is highly creditable in a country like India with relatively poor communications and a dense village population.

Rightly or wrongly, I gathered from reading the latter part of the address delivered by our immediate past President at the third Conference in December 1933, that in India we were in rather a bad way as regards the more academic side of ophthalmology. One got the impression that he felt grieved to think that we were so far dependent on the West for investigations into the solutions of our problems, that we were in the deplorable state of ranking as nonentities amongst the intellectuals of that ophthalmological world outside India. No doubt he drew this somewhat gloomy

picture in order to stimulate us to greater effort, but I know he will forgive me when I say that even at the present time I take a brighter view of our position. We cannot expect to bring the same forces to bear on the part of our science, which is closely bound up with the basic principles of medical science in general, as is done in the West; we simply have not got the machinery, the money, the organisation, the experience and the academic tradition which is behind their old medical schools. These are things which take time to grow, but I contend we are making progress in certain directions where the need of the background of the old established schools of Western science does not handicap us too heavily.

"No reason to take a back seat"

If so far as Indian ophthalmology is concerned I have tried to show that there is no reason for us to take a back seat in the practice of our art, nor are we doing so, and I have just now hinted that the same is true to a more limited extent with regard to the study and elucidation of some of the basic phenomena which we regard as included under the heading of the principles of ophthalmology. Even if we are handicapped by the fact that the bulk of the basic scientific departments in our various seats of learning are somewhat new and have yet to build up a background of experience and develop a tradition and a literature, this does not apply to at least one application of science to experimental medicine, namely Bacteriology and Parasitology, a relatively modern development in which India started more or less level with other parts of the world. The institutions which deal with these and kindred subjects and which are available to most of us for research purposes, have held their own with those in other parts of the world since their foundation and frequently given them a lead. The study of aetiology then, in so far as it is included within the scope of our great research laboratories is going forward well abreast of the times. There is still plenty of opportunity for the ophthalmologist in India along these lines, so there is no need to feel envious of those research workers in other parts of the world because the foundations to which they have access facilitate endeavours in other directions. Indian ophthalmologists, whose bent lies in such directions, can always find an outlet for their energies in seats of learning outside India strong in the particular branch which they wish to follow. However much the disciples of an old school or foundation may adopt a superior environmental attitude, they are always willing to share their advantages with the real scientific research worker. True research in medical science is incompatible with distinctions of nationalism, and ophthalmology is as truly international as any branch of medicine.

Finally, I would say to you that in so far as research, in connection with those conditions which are most pertinent to India at present, is concerned, for example, conditions with a nutritional, bacteriological, entomological or parasitological association, we can compete, and I hope are competing creditably, with our colleagues in other countries. If we lag behind we cannot lament that they are better equipped and have older establishments. In these particular fields our tradition is well nigh as old as theirs, and there is ample scope for our continued advance therein until, in the course of time, we receive the necessary quality of support from the various scientific departments of our schools and colleges, which is essential to ophthalmological research along other lines.

THE V SUBSIDIZED (RURAL) MEDICAL OFFICERS' CONFERENCE BEZWADA—1935

Welcome Address

By Dr. N. Rama Row, Gollapalli, Kistna District.

Brother delegates and gentlemen,

It is indeed a great privelege for me to extend a most cordial welcome to you all to this the 5th provincial conference of the Subsidised Rural medical practitioners and to this historic city of Bezwada with its glorious traditions in the past, its rapid growth in every direction during recent years, its association with the victorious plans of Vijiya or Arjuna, the great hero of the Mahabharata, the sacred river Krishna that flows by-all these make it a very appropriate centre for holding this conference for the first time in Andhradesa. It is a matter for rejoicing that representatives far and near of the entire province have found it convenient to attend the function. It is a proof of the enthusiasm that prevails in the matter of meeting on a common platform, exchanging our views and laying bare our grievances of which we have many.

We are singularly fortunate in having been able to secure such a distinguished member of the Independent Medical profession as Dr. D. S. Ramachendra Rao to preside over to days' function and guide us with his counsel and wisdom in the

deliberations before us. The benefit of his vast experience in the field, his great scholarship and his well known qualities of head and heart eminently fit him for the honour of presidentship of this conference.

We are also particularly happy to have in our midst to-day Dr. S. Ramasubbu, our provincial Secretary who is the fighting hero for our cause all these years and the presence of these two gentlemen here to-day is really a source of inspiration which cannot easily be estimated in words. I will attempt to outline some of the most outstanding disabilities under which we, the members of the organisation labour and discuss measures to be conjointly taken for the redress of our grievances.

The problems we have to face year to year are getting more and more serious and formidable, rendering it necessary for us to meet on occasions like this and devise measures for concerted action, to vindicate our rights and to safe-guard our interests. In the first place when the rural scheme was started, Government were prompted by a desire to bring medical aid within easy reach of every village by attracting duly qualified medical men from busy and congested towns to certain village centres, seeing that medical aid is one of the barest amenities of life to which the Provincial Government and the local bodies should first direct their attention. The Government came forward with subsidies from provincial funds and also advised local bodies to spend a reasonable portion of the resources in promoting the skilled medical aid in the villages. A greater measure of freedom in respect of private practice and other matters was assured to the rural medical practitioner than to the people in regular service. But of late restrictions have been imposed from time to time on the conditions of service of the subsidised practitioner so that freedom is curtailed but status and emoluments have not been proportionately raised by way of compensation. The G. O. No. 2480 P. H. dated 25-10-34, for instance fixes the hours of work of our dispensaries and it evidently proves detrimental to the interests of our patients residing outside our head-quarters which also entails a heavy loss to us in respect of our practice.

Likewise, in respect of supply of drugs etc., and in the rules governing casual leave, we have been slowly and steadily denied the original facilities, while our service is subjected to an ever increasing set of rigid rules and we are unfortunately denied the privileges which our brethren in regular service enjoy in regard to conditions of service.

Our resolutions passed from time to time at our district

gatherings urging upon the Government the need to alter their G. O. referred to above with a view to enable us to devote at least the latter half of the day to private practice have not so far met with the expected response.

Again, the practice that seems to be obtaining under certain local bodies of serving the subsidised practitioners with notices to quit is the most dangerous step calculated to blight our prospects and make us victims to the whims and caprices of the powers that be. To seek to terminate our agreements with the local bodies which have not only a legal binding but a moral one too, on considerations other than purely departmental ones, is neither justifiable nor equitable. It is our duty to agitate for adequate provision of measures to be adopted by the Government to keep us free from anxiety and dread in such matters. The insistence by the Government on renewal of our agreements every year adds to this danger of our situation and leaves our position to the tender mercies of fluctuating politics. While the Government prescribe such course, nay, even the introduction of bond system as a piece of mere formality, the local bodies are apt to misinterpret the orders of the Government, and turn them into weapons of uncalled for and unjust interference with the original spirit of the scheme.

Further the local bodies at times strike at the very root of the scheme by proposals to shift the subsidised dispensaries from place to place, to convert them into regular allopathic dispensaries or one of any other system or even to abolish them altogether without the least hesitation or fear as if the Government and the department of medicine need not be previously consulted and their approval obtained for any proposed change. In such matters, I am afraid, the exact position of the District Medical Officers and their responsibilities have not been clearly defined so as to enable them to intercede and check any arbitrary action on the part of local bodies.

The needless delay that some of us experience in the matter of drawing subsidies on account of the distance of our stations from the nearest Government Sub-Treasury, is another handicap which we pray to the Government to remove at an early date.

It is a matter for regret, as it is a reflection also of business habits of people that subsidies due from certain local bodies in certain cases should be allowed to fall into arrears for months together.

To add to these disabilities the clerical duties imposed upon us have been growing heavier and heavier in an indirect proportion

to the encouragement we receive in respect of security of tenure of office, and status and emoluments.

Another of our serious grievances is the unfortunate instructions which we are receiving regarding the transit and other charges for the medicines etc., supplied, leaving us only 2/3 of the allotment for actual medicines as well as the uniform supply of medicines to all dispensaries irrespective of the attendance at our dispensaries.

Gentlemen, I do not propose to detain you long with further details covered by the resolutions before the Conference, or to stand further between you and the presidential address. I thank you all heartily for the patience with which you have so kindly listened to my few words and I request, on behalf of you all, Dr. D. Ramachendra Rao to accept our thanks for his kind response to our invitation and deliver his presidential address. Before I resume my seat I will be failing in my duty if I do not tender our grateful thanks to the authorities of this High School who have so kindly placed this splendid building at our disposal for to-day's function.

Presidential Address

By Dr. D. S. Ramachandra Rao M.A., M.D., Bezwada

Gentlemen,

I feel grateful for the honour you have done me by asking me to preside on this occasion. This may be your first visit to Andhradesa, but I trust that it shall not be the last. Bezwada has been blazing hot for somedays now and you have come here while the summer has begun in right earnest, but had you come here a couple of months earlier you would have found this old city of ours not particularly unpleasant or unhealthy to live in. In spite of the seasonal discomfort, I trust you will have a good time here and I extend to you Bezwada's warm welcome in fact and in spirit.

We medical men and women have no doubt our share of trouble and disappointments whether we are in service or in independent practice. We wish to be what we are not and cry for the moon which we cannot get. But there is discontent which savours of the divine and our profession will be none the worse if it gets bitten by its sting. Of course we must realise whether we practise in urban areas or in rural areas, that we have to shoulder responsibilities while we see that we have our due share of privileges. We cannot possibly have the one without the other. The ideal would be where both are equally and harmoniously

co-ordinated. It is natural that you who live away in the remote villages, far away from modern civilisation, expect compensations, real and adequate, for the discomforts, of rural practice.

In the Western World, people have begun to be fed up with city life and the cry is back to the country. So you may be congratulating yourselves that you are pioneers of a movement the importance of which our country is just beginning to see. It is for you, gentlemen, to tell both the public and the powers that be, whether you are Independent Medical Practitioners taking jobs, in which the state is interested, for some consideration, or you are really state servants undertaking public service when you have the time for it. I believe that many of your difficulties would disappear when the world sees and realises what you really are. If you are the servants of the state it is for you to see whether it is worth while to accept service under your present conditions. If you are Independent Medical Men and Women, then is it worth while to barter with your freedom for the pittance that you get from the state.

But money is not everything in life, particularly in the profession which you and I have the honour to belong to. No doubt a labourer is worthy of his hire, but not less, nor more. The reward of any science is the achievement of the object it has in view—the service of humanity. That opportunity for service you have always with you in the village as in the city. In fact the opportunity is great in the village for as yet you are not too many. The need for scientific medical aid is very great at the present day, and it should be of comfort and joy to you to feel that you are occupying a much needed though neglected spot in the country.

Of course, you cannot afford to look after the philosophic aspect of the question till the inner man is sufficiently satisfied. Unless you came from the village it would not be easy for you to adapt yourselves to the ways and habits of the villagers. The latter are in the habit of paying their obligations in kind rather in coin. They may not have as yet taken kindly to the Western system of medicine. It would not be an easy task to humour the rustic in his rustic condition. Still I am sure that with some effort on both sides mutual accommodation would be possible and the amenities of rustic practice might not seem ultimately to be so negligible. No doubt you have to meet unhealthy competition from quacks of the deepest dye there. But such competition is to be met in the urban area as well. It will be several generations before the public would be sufficiently enlightened as to know

what is which, and till then we have to endure what we cannot cure.

There is a suggestion, that the state should put down quackery by legislation. I don't think that the time is ripe for it yet. Even in a well organised and compact little country like England quackery abound. Herbalists, bone setters, eye specialists and deafness curers abound by the score in a city like London. You connot prevent human beings from exercising the art of cure so long as there are some who are willing to submit themselves to it. But what the state could do is to penalise rash, negligent and unskilful attempt at the cure of disease so long as skilful aid is within reach. For instance an optician is not permitted to use atropine for retinoscopic work. If he does it, he risks being prosecuted for contributing to the onset of glaucoma if that happens to develop. An operator be he qualified or not, may be prosecuted for handicapping a patient by lack of sufficient skill.

In that way, you may create a holy fear in the hearts of men and women who have hitherto played havoc with human life and disease in the name of medical science. But unfortunately the masses of our country are not yet able to protect themselves. They are fatalistic, helpless and lazy and take things lying down. Unless you could organise defence societies all over the country there is not much chance of the common people being able to defend themselves against those who take advantage of their good nature.

It should be borne in mind that how many you cure, but not how many you treat, that ultimately tells. Ten patients cured in a month is very much better than a thousand treated in the same period. You are lucky, too, in coming in contact with disease in its early manifestations. So if you keep an open mind and an observant eye, and get early into the habit of keeping notes of your cases, I am sure you would be able to turn out work of considerable scientific value in the course of a decade. The doctor's home could be turned into a dispensary with a small Laboratory attached to it. Later on it may be developed into a hospital. We have the example of Jullandar and Mogha which have attained to All-India fame.

Of course I do not cry down competition. Even in the economic world, we are learning, though late, that co-operation works better than competition. If there should be competition among the practitioners, let it be for efficiency for work but not for lower renumeration, greater number of patients, and therefore bad workmanship.

Remember that the medical man is also a physiological organism and as such is liable to physiological laws as anybody-else. You cannot always be working without peril to yourselves and your patients. You must have a holiday once a year, once a month, and even once a week. The busiest practitioners in other countries manage it. Otherwise there would be a breakdown sooner than you expect. If you learn to co-operate with your neighbouring practitioner you will find you can do many things which you can never dream of doing by yourself.

"*Study leave*" is most essential in the interests of the profession itself. First visit the important hospitals of your own country. Then try to go abroad and do some post-graduate work. Try to get out of the old ruts and keep yourself abreast of the times. Try to be original, if not too original.

In the rural areas you will be the pioneers of public health service. In your spare time teach the people the simple things as, not committing nuisance in the streets, not to spit in the houses and not to blow their noses where people congregate. If you have a demonstration class once a week, it amounts to 52 classes in the year. No prejudice can stand in the way of pluck and perseverance. Se far as our Presidency is concerned, the Government does not seem to have understood the difficulties of the Independent Medical Profession. It pampers the Services. We need not grudge because we can stand on our own feet.

There are very few medical men in the local legislative council. No medical man has as yet undertaken ministerial responsibility. It is he who wears the shoe knows where it pinches. See that your profession is properly represented at the next elections.

State aid is necessary in the development of rural areas and medical men need not fight shy of it. But they must preserve their independence in spite of the subsidy they get. It should be considered only as a second string to the bow, and their freedom maintained.

Some of the finest medical men in the world have worked on starvation wages for several years just for the love of their work. All rise to real greatness is through a winding stair case. At the end of our life, it is not how much we have earned that matters much, but how many we have helped, cured, and tried to make them stand on their own legs.

Art is long and life is short, and let us do the little we can with good cheer and in co-operation with our professional brothers and sisters.

RESOLUTIONS PASSED AT THE V. PROVINCIAL CONFERENCE OF THE SUBSIDISED (RURAL) MEDICAL PRACTITIONERS OF THE MADRAS PRESIDENCY HELD AT BEZWADA ON 20—4—1935

I. This Conference thanks the Government for accepting the principle contained in I resolution of I Conference (and reiterated at successive sessions) by entrusting the working of the Scheme for Subsidised Medical Relief in rural areas to a district body, and requests Government to kindly concede to the subsidised practitioners in a district, the privilege of their being represented on the district boards, if the suggested District Medical Council were not feasible.

Proposed by Dr. S. Viswanathan of Koradacherri, seconded by Dr. K. J. Somayajulu of Borigumma and carried unanimously.

II. This Conference suggests that the Subsidised Practitioners' status, education, and influence would enable them to help a good deal and to great benefit in any programme of rural reconstruction and correct administration of the local bodies in their vicinity and therefore requests Government to provide subsidised practitioners with every facility therefor and remove any disability existing at present.

Proposed by Dr. S. Viswanathan of Koradacherri, seconded by Dr. K. J. Somayajulu of Borrigumma, supported by Dr. S. S. Rama Rao and carried unanimously.

III. (*a*) This Conference is of the unanimous opinion that Government Order No. 2480 P. H. dated 25—10—34, is (1) against the main principle of the Scheme for Subsidised Medical Relief in Rural Areas, (2) is against the rules in vogue on the subject (3) deprives the practitioners of a good deal of scope and facility for private practice and therefore requests Government to kindly modify their order and provide in the Agreement that (1) a subsidised Practitioner shall ordinarily attend to the necessitous poor in the morning only, and (2) that in case a practitioner is not or has not been able to do so in the morning of a particular day, he can attend to the poor in the evening of that day.

(*b*) This Conference also requests that the inspection of a subsidised practitioner's work at his dispensary shall be made by the 'competent authorities,' as far as possible during working hours and after previous intimation.

Proposed by Dr. C. V. Subba Rao of Bellankonda and seconded by Dr. Vidyasagar of Tadikonda, Guntur, and carried unanimously.

IV. This Conference regards the authorisation by the authorities, of vaccinators and health inspectors, not holding any diploma or degree in medicine etc., to inoculate people against cholera, plague or other epidemics (small pox excluded) and the utilization of the services of compounders and inoculators to give injections to cases of leprosy or other diseases, as an encroachment on the rights and privileges of registered and qualified Medical Men and so requests Government to prohibit such practice and requisition therefor the services of Medical Men only.

Proposed by Dr. C. V. Subba Rao of Bellamkoda, seconded by Dr. B. Subba Rao of Kanchicherla and carried unanimously.

V. This Conference desires to invite the kind attention of the Government to the fact that because of the present economic condition, keen struggle for existence and the increase in the number of qualified medical men in urban areas, many quacks have not only sprung up in, but also migrated to, rural areas, hindering thereby the effective popularisation and spread of skilled medical aid and adversely affecting the income of subsidised practitioners and so requests the Government to kindly remove such obstacle and enable the practitioners to practise to the advantage of all concerned, by penalising quackery, and providing through legislation that no individual whatever system of treatment he may like to practise in, will be allowed to practise in the art of healing unless he has been declared competent to do so by an authorised body of experts skilled in the respective systems.

Proposed by Dr. N. Rama Rao of Gollapalli, seconded by Dr. K. J. Somayajulu of Borigumma and carried unanimously.

VI. This Conference respectfully represents that as an effect of G. O. No. 2403 P. H. dated 15—10—34, the extra subsidy payable to subsidised practitioners from Local Board Funds has in many cases, either been greatly curtailed or completely withheld, reiterates resolution 15 of the IV Conference and requests Government therefore, to kindly (1) enhance the practitioners' subsidy payable from Provincial Funds, and to (2) reconsider G. O. No. P. H. 139 dated 21-1-35, relax para 5 of 2403 P. H. in respect of the existing incumbents and permit the District Boards to continue to give their subsidised practitioners with retrospective effect, every extra given prior to 1-11-34.

Proposed by Dr. B. Subba Rao, seconded by Dr. Sreerama Rao and carried unanimously.

VII. (*a*) This Conference gratefully welcomes the policy of

the Government to utilise the services of subsidised practitioners for Public Health work in rural areas and suggests that the experiment may be tried, as far as possible, in the end or remote villages of a district or villages not easily accessible to or frequented by the District Health Officers.

(*b*) This Conference submits that the honorarium sanctioned to a subsidised practitioner for such work, is very meagre and requests the Government to kindly enhance it to Rs. 30/- a month in addition to contingent charges and necessities.

(*c*) This Conference is of the opinion that the duties mentioned in the Director of Public Health's Circular D. No. 13 P. H. dated 17-1-35 are too many and too heavy and therefore requests that practitioners be not required to do vaccination work and that the other duties be curtailed to the barest minimum and confined to the most important and necessary items so as not to affect the practitioners' professional work.

(*d*) This Conference regards that the presence of a vaccinator in the village of a subsidised practitioner assigned with Public Health duties will be of great advantage to the practitioner and the department, and suggests therefore, that one vaccinator may be made to live in the village of such practitioner to work under the guidance of the subsidised practitioner instead of the health Inspector.

Proposed by Dr. V. Sitaramayya of Manikonda, seconded by Dr. A. V. Seshayya of Singarayakonda and carried unanimously.

VIII. (*a*) This Conference expresses its deep sense of gratitude to the Government and the Surgeon General for G O. No. 625 P. H. dated 19-3-35 thus complying with the request contained in resolution A vi of the I Conference and requests them to fix the age limit at 40 and order that (a) the claim of subsidised practitioners will be given preference not only to new candidates with no experience but also to other condidates with experience but with no service connections with the District Board (*b*) and that in the matter of such recruitment due regard shall be given to the period of a subsidised practitioner's connection with the District Boards.

Proposed by Dr. K. J. Somayajulu of Borigumma, seconded by N. Rama Rao of Gollapalle and carried unanimously.

IX. (*a*) This Conference brings to the notice of the Government that some subsidised Practitioners have not yet been equipped with the most necessary surgical, dental, and midwifery instruments in spite of G. O. No. 761 P. H., dated 7-4-35, reitrates

resolution VII of the II Conference and requests Government to direct, and the District Boards to make such, supply as one of the conditions of the agreement, the allotment for such supply and equipment to be separate from that for drugs.

(*b*) This Conference requests also that every subsidised practitioner shall be allowed every year a sum not exeeding Rs. 40/- in addition to the cost on drugs, for the repair or renewal of old and worn out instruments or purchase of new ones.

(*c*) also, in view of the heavy discount, excise, packing and transit charges, this Conference requests that every practitioner should be supplied with drugs to the actual value of Rs. 360/- a year and that the other such incidental charges should be borne separately by the District Boards.

(*d*) This conference also requests that the requirements of subsidised practitioners with L. I. M. qualifications should be supplied from the most reliable and reputed individuals or stores.

Proposed by Dr. M. Veerabadrayya of Pedakurapadu, seconded by Dr. C. V. Subba Rao of Bellamkonda and carried unanimously.

X. As it is the experience of many practitioners that the drugs supplied to them at District Board cost, are not even sufficient to meet the requirements of the ordinary poor, that seek relief at the practitioner's residence and as those practitioners with midwives attached, find it a great handicap to be obliged to supply from such stock the midwive's requirements for her use outside the dispensary, this Conference earnestly requests Government to direct that all the requirements of the midwife shall be separately budgetted for, and supplied on separate indents, by the District Boards.

Proposed by Dr. S. Viswanathan of Koradacheri, seconded by Sree Rama Rao of Kanumolu and carried unanimously.

XI. As some District Boards have held that house rent and contingent allowance to subsidised practitioners are inadmissible under G. O. No. 2403 P. H. dated 15-10-34 and have withheld the same from 1-11-34, this Conference requests Government to kindly permit the District Boards to pay to the subsidised practitioners, such charges as heretofore and with retrospective effect

Proposed by Dr. S. Ramasubbu of Viraganur, seconded by V. Sitaramayya of Manikonda and carried unanimously.

XII. This Conference reitrates its unanimous opinion that the present leave conditions are very hard and stringent, and

requests Government to allow every subsidised practitioner leave on full subsidy for 25 days in a year, exclusive of public holidays, to be availed of at one single time or on a number of occasions according to requirements; that the previous permission of the President, District Board be not insisted upon, that the procedure laid down in G. O. No. 1701 P. H. of 1925 shall generally be observed by the practitioners in regard to such absence and that any deduction of subsidy shall be made only for days over and above 25 days in the year irrespective of the fact whether such absence was at one single time or on many occasions.

(*b*) This Conference represents that subsidised practitioners living as they do in villages, have greater need than others for keeping themselves in touch with the latest advancements in Medical science and treatment, and therefore requests Government to allow subsidised practitioners of more than 5 years standing study leave on a decent subsistance allowance and with lien on their holding.

(*c*) This Conference requests Government to kindly allow the payment of the provincial subsidy to subsidised practitioners, obliged to be away from their stations for long periods due to reasons of ill-health, as, when confined to bed or otherwise incapacitated to attend to their work, and permit the local boards also to pay such practitioners, the subsidy for the period, payable from local board Funds.

Proposed by Dr. T. Gangaraju of Thotavalluru, seconded by Dr. A. V. Subba Rao of Kondapalli and carried unanimously.

XIII. This Conference desires to point out that notwithstanding G. O. No. 2753 P. H. dated 6-12-33 there is a great delay in receiving the bill after pre-audit, and difficulty in realising the subsidy and therefore requests the Government that except in cases where there is a sub-treasury at the place of the practitioners the Government subsidy be drawn by the District Medical Officer from the District Treasury and remitted to the practitioner at Government cost.

Proposed by Dr. K. J. Somayajulu of Borigumma, seconded by N. Rama Rao of Gollapalle and carried unanimously.

XIV. This Conference requests that in cases of any alleged breach of any of the terms of the Agreement on the part of a practitioner, the President of a District Board shall not depute any member to enquire into the matter.

Proposed by Dr. A. V. Seshayya of Kondapalle, seconded by Dr. M. V. Subba Rao of Mutlur and carried unanimously.

XV. This Conference submits that Government Memorandum

No. 15815—2—D. 2 P. H. dated 10-5-34 deprives the Secretary of the Provincial Association of the constitutional right of bringing any case of hardship to practitioners to the notice of the Government and therefore requests Government to kindly rescind it.

Proposed by Dr. N. Rama Rao of Gollapalle, seconded by Dr. A. Venkateswara Rao of Agripalle and carried unanimously.

XVI. This Conference brings to the notice of the Government that the practice obtaining in some places of renewing every year the Agreement of the same individual as being against the object and intention of the scheme and therefore requests the Government to direct that the Agreement between a subsidised practitioner and the local board shall be executed once only at the start and need *not* be renewed any time thereafter for the same practitioner but will continue so long as he works in his village abiding by the terms and conditions of the Agreement.

Proposed by Dr. U. V. Subba Rao of Bellamkonda, seconded by Dr. Veerabadriah of Peddakurapadu and carried unanimously.

XVII. This Conference learns with surprise that the proposal of the Kistna District Board to terminate, for reasons of financial stringency, the agreement of the subsidised practitioner at Gollapalle, especially in view of the Board's resolution last year to have a regular dispensary there, and therefore requests Government to kindly enquire into the matter and render justice.

Proposed by Dr. Kuchela Rao of Muddanuru, seconded by Dr. V. Sitaramayya of Manikonda and carried unanimously.

XVIII. This Conference thanks the authorities for giving effect to some of the resolutions passed at the previous conferences reitrates other resolutions and requests the Government and the concerned authorities to kindly comply with the requests contained therein as early as possible.

Proposed by Dr. K. Kesavarao of Inkolyu, seconded by Dr. P. Vidyasagar of Tadikonda and carried unanimously.

XIX. This Conference places on record its deep sense of sorrow at the demise of Drs. M. S. Krishnamoorthy Iyer, T. Krishna Menon, B. S. Mallayya, and Dr. A. Hanumantha Rao of Chimalapadu who have helped the Association and its members to a great extent. Moved by Dr. S. Ramasubbu and carried unanimously.

THE TINNEVELLY DISTRICT MEDICAL ASSOCIATION, PALAMCOTTAH

The Tinnevelly District Medical Association had its monthly meeting at Tuticorin along with the Anniversary of the Tuticorin Medical Union on the 27th April 1935. Members numbering above fifty including some lady doctors gathered from all parts of the District. All the members assembled at the C. H. School, Tuticorin, at 2 P. M. The party started to the Hare Island at 3 P. M. for an excursion. Refreshments were served there and all of them returned to the mainland by 6-30 p.m.

The meeting began at 7 p. m. under the presidentship of Lieut. Col. T. S. Shastry, I. M. S. Some of the local officials and visitors including the Commissioner and the Chairman of the Tuticorin Municipality were also present. The Annual Report of the Tuticorin Medical Union was read by the Secretary of the Union and were passed. The Secretary of the Tinnevelly District Medical Association read the minutes of the last meeting which were passed. Then the question of fixing the day of the month for meetings hereafter was discussed in view of the Surgeon-General's suggestion to hold it on Government Holidays.

The President moved that the following members be made Honorary members of the Association subject to the unanimous vote at the next meeting :—

1. Lieut. Col. T. W. Harley, I. M. S. (Retired D. M. O.)
2. Dr. B. Ramabaliga, B.A., M.B. & C.M., (Retired D. M. O.)
3. Dr. D. Krishnayya, B.A., M.B. & C.M., (Retired D. M. O.)

Interesting clinical cases such as Hemiplegia, Cholera, Hydrocephalus were demonstrated followed by very interesting discussion. Dr. Acharya, M.B., B.S., showed an asthma patient of his and read interesting notes of the case. Dr. Srinivasaraghava Iyengar, L.M. & S., and some other members, spoke suggesting the various lines of treatment during all stages. Alternating with the clinical cases, members were entertained to splendid music, Indian and European. Dr. Manuel and his family gave music on the piano accompanied by violin and violincello. Dr. K. Ramachandran of the Local Fund Dispensary Ettayapuram and Nurse Miss. Phillipsz of the Government Hospital, Tuticorin, gave vocal music.

Lieut. Col. T. S. Shastry, I.M.S., brought the meeting to a close by offering his interesting and elucidative remarks on the subjects spoken on by the members.

Lieut. Col. T. S. Shastry, I.M.S., greatly appreciated the elaborate

arrangements made by the Tuticorin Medical Union for the convenience of all-for the enjoyable trip to Hare Island and back, for the fine tea-party, and the excellent accommodation. He also thanked the Commissioner and the Chairman of the Tuticorin Municipality and the other visitors for having attended the meeting. Then a cordial vote of thanks was proposed by Dr. Manuel, the Secretary of the Tuticorin Medical Union. He specially thanked the Head Master of the C. H. School for having placed the school building at their disposal and Mr. Fernandez for having given all convenience for the trip to the Hare Island. Cheers all round brought the grand meeting to a close at 10 p. m.

A grand dinner was then served to all present which was also very much appreciated.

THE TRICHINOPOLY DISTRICT MEDICAL ASSOCIATION, (Registered)

I

A monthly meeting of the above Association was held at 4 p. m., on Saturday the 16th February 1935 in the Government Head Quarter Hospital, Trichinopoly when about 35 members were present. Dr. R. Gopalan, Hon. House Surgeon of the Government Hospital Trichy, was "At Home". In the absence of Dr. Norman the President of the Association, the Secretary proposed Dr. James, Retired Civil Surgeon of Madras, to the chair and requested him to give his views on the newly started Journal of the Association. Dr. James thanked the Association for honouring him to take the chair on the occasion, and said that he read the small Journal with pleasure and was impressed with the neat get up and the very useful information it contained. There were some informations in the Journal which were of latest developments in medicine and news to him. He also said that the Journal is unique in South India and wished it all success. He also congratulated the Association for its activities for the past six years which he had been watching with pleasure. He then called upon Capt. Sangham Lal, I.M.S., F.R.C.S., to deliver his lecture on "Infections of the Hand".

Capt. Sangham Lal delivered an interesting lecture for one hour after which there was a discussion. He then showed a brain with a huge abscess therein which was diagnosed during life and operated upon. Dr. R. Sambasivan who presided in the later part of the meeting made a few concluding remarks and the

meeting terminated with a vote of thanks to the chair-men, lecturer and the host of the evening proposed by Dr. R. Kalamegham, B.A., M.B., B.S.

II

A monthly meeting of the above Association was held at 4-30 p. m., on Saturday the 20th April '35 at Government Head Quarter's Hospital, Trichinopoly when about 35 members were present. Dr. R. Doraiswamy was 'At Home'. Capt. Sangham Lal, I.M.S., F.R.C.S., District Medical Officer, presided.

Dr. T. S. S. Rajan demonstrated a case of stricture of the Oesaphagus. The patient an average built young man of 30 complained of difficulty in swallowing for the last seven years, the trouble arising without any apparent cause. He developed acute obstruction 4 days back. Stomach tube could be passed up to the obstruction, when an opening would be patent enough to admit fluids. X-Rays showed a bag shaped dilatation above the stricture. One or two members suspected it might be a case of 'Diverticulum' and a few others suspected 'Spasmadic stricture'.

Dr. Kalamegham then demonstrated a case from the Head Quarter's Hospital, operated upon for Sub-phrenic abscess and which later on was found to communicate with the stomach as evidenced by colouring matter given by mouth coming from the operated wound.

Dr. M. R. Subramanyam of Valliyanai read a short and interesting paper on 'Brachial Block Anæsthesia' explaining the anatomy of the Brachial region and said that this form of Anæsthesia was very useful and simple with a little care. He gave details of a case he had operated recently.

In his concluding remarks Capt. Sangham Lal, congratulated Dr. M. R. Subramanyam on the neat paper read before the Association and the courage with which he undertook the operation in a rural area with limited facilities.

In proposing a vote of thanks to the host, the lecturer and the chairman of the evening the secretary wished that more Rural Practitioners would come forward with case notes and cases. The meeting then terminated at a late hour.

CHETTINAD MEDICAL ASSOCIATION

The regular monthly meeting of the above Association was held at Dr. Shetty's Eye, Ear Nose, Throat clinic at Kanadukathan,

on the 28th April '35 under the presidency of Dr. Ramanathan, A.D.M.O., Ramnad. 20 members were present. After light tea, Dr. Shetty demonstrated cases of clinical interest from his ward. One was a case of suspected pituitary tumour, another hydrocephalus in a child of 9 months, the third was a neglected case of mastoiditis with sinus thrombosis.

An interesting lecture on "Facilities for Post graduate work for Medicoes in the Western Clinics" was delivered by Dr. Shetty. He impressed on the audience that Vienna was the best. After the meeting terminated, the doctors were taken round the wards.

THE ALL-INDIA MEDICAL LICENTIATES' ASSOCIATION, MADRAS

At a clinical meeting held under auspices of the above Association at "Gana Mandir", No. 10, Thambu Chetty Street, Madras at 6 p. m. on Tuesday the 30th April 1935. Dr. K. Rama Rao, L.M.P., delivered a lecture on "GONORRHOEA IN THE MALE". Dr. M. Ratnavelu, L.M. & S., Hony. Asst. Surgeon, Venereal Dept., Govt. General Hospital, Madras, presided on the occasion. A large number of members of the association and other Medical Practitioners also were present.

The lecturer while tracing the history, symptoms, complications, prophylaxis and treatment of Gonorrhoea laid stress on the necessity of preventive measures to combat venereal infections in this country by starting Anti-Venereal campaigns on the lines similar to Anti-Tuberculosis campaign.

After a brief discussion on the subject at which the members took keen part, the learned president described in detail the dangers of venereal infection to public health. He also dealt at length on the immediate necessity for starting suitable Anti-Venereal Associations and journals in order to educate the masses. He pointed out that when compared to the active measures taken in this line by the Ministry of Health in the foreign countries, India is far behind. He emphasised the usefulness of such associations to combat various diseases such as blindness, sterility, rheumatism etc., which to a large percentage are due to venereal infections. The meeting terminated with a vote of thanks proposed by Dr. D. V. Venkappa to the president, the lecturer, members present and the authorities of the hall.

Book Reviews

Year Book of General Surgery 1934—*By Evans A. Graham M. D.* Published by the Year Book Publishers, Chicago. Price $ 3.00

This book, the epitome of the surgical literature of the year 1934, gives us unlike many other annual publications a text book arrangement of the whole of surgery and then treats under each heading about the recent advances in each subject—a method very useful from the point of view of rapid reference. The Editor's remarks on the abstracts of articles are found throughout the book in small type. In many places, the Editor's opinions are very forcibly expressed as in the section devoted to gall bladder surgery. Referring to the claims of an author in favour of cholecystendesis as against cholecystectomy, he remarks, "one cannot help wondering what the author of this article had to drink..... The author's statement that cholecystendesis gives 100% of successful results becomes significant when it is recalled that he lives in Bologna". Again, in connection with the article on the inefficiency and insecurity of ordinary face masks in preventing serious wound infections (especially, when the surgeon has a sore throat, caused by transfer of organisms from the throat to the wound), he says, "It is far more dangerous for a surgeon to perform a laparatomy when he has a sore throat than for him to omit scrubbing his hands." But one is rather disappointed to find that no word of warning has been mentioned, when reviewing the highly laudatory articles on the use of intravenous evipan analgesia, about the care to be taken with regard to the prevention of the falling back of the tongue and the fatal results which are likely to occur and in one or two cases have actually occurred from its neglect.

Some of the interesting articles in this Year Book are on the question of comparative merits of spinal anaesthesia, the opinion being that spinal anaesthesia is as safe as $CHCl_3$ although not as safe as ether and that peripheral is a not uncommon complication after the spinal analgesia, on the indications for electro-surgery, a detailed account being given of its disadvantages and advantages, on the diminishing tendency to drain in acute appendicitis and other acute abdominal conditions, on the closed treatment of mammary abscess, on a new technique for the performance of gastro-enterostomy in which the union is done in the lesser sac without any pull on the stomach or jejunum, and

on the surgical treatment of pulmonary tuberculosis, this last being described very fully.

The above are only a few of the large number of highly educative and interesting articles on various subjects which have a direct bearing on the daily practice of a surgeon and one might say that this book will be a distinct asset to any surgeon who wishes to keep abreast of the times and improve his knowledge and usefulness.—P. G. R.

Materia Medica and Therapeutics—*By Walter J. Dilling*, M.B., CHB., 1933. 14th edition. Cassell & Co., Ltd., London. Price 10/6–net.

The present edition of this book has undergone a complete revision and provides for the general practitioners and students adequate modern accounts of the pharmacological actions and relative therapeutical values of drugs which are considered to be useful for the treatment of diseases.

The Materia Medica has been very much condensed and an attempt has been made successfully to stress the relationship between the pharmacological actions and therapeutic uses of drugs.

Most of the important official remedies are fully discussed, new drugs and methods which promise to advance therapeutics have been introduced. Among the discussions may be mentioned that on Bulbocapine and Harmine in encephalitis, Plasmoquine, Atebrin, Fonadin, Thallium in ringworm, Salyrgan in dropsy etc.

The recent observations on the use of endocrine medication, pituitrin, parathyroid and ovarian harmone, vitamins, basal or pre-anaesthetic hypnotics, local anaesthetics and anti-toxic sera have been included. The section on general therapeutics provides systemic and modern statements of pharmacological agents which influence the various systems in the body and of the practical methods by which they are used in therapeutics to treat diseases. The volume is sure to be serviceable as a practical reference book on therapeutics. We recommend it to all our readers.

Diseases of the Skin.—(A Hand Book of Dermatology for Practitioners and Students)—*By Ernest Dore*, F. R. C. P., (LOND.) *and John L. Franklin*, M.R.C.P., (LOND.), 1934. pp. 410 with 46 Plates. London ; Cassell & Co., Ltd., Price 10/6 net.

This book is the outcome of an attempted revision of the well

known text book on "Diseases of the Skin" by late Sir Malcolm Morris which had been allowed to go out of print for some years. Although the original structure and arrangement of the pattern has been maintained, owing to the enormous progress of Dermatology in recent years it has forced the authors to introduce a new treatise on Dermatology.

There are twenty six chapters in the book. The first two chapters deal with Anatomy, Physiology and Pathology of Skin and Principles of Diagnosis.

Nerve dermatosis and prurigo, the articaria, the erythematosis, papular, vesicular and bulbous eruptions, drugs and serum eruptions, eczema, affections caused by parasites, specific infections like tuberculosis, lupus, syphilis, leprosy, and yaws are a few of the many subjects dealt with in the book.

Each disease is discussed under symptoms, etiology, histo—pathology, diagnosis, prognosis, and treatment. There is an appendix containing some useful prescriptions. It is a complete yet concise hand book on Dermatology and we are sure it will be found very useful by all General Practitioners.

Handbook of Anaesthetics—*By J. Stuart Ross*, M.B., CH.B., F.R.C.S.E., and H. P. Fairlie, M.D., 1935, 4th edition pp. 299, illustrated, Edinburgh, E. & S. Livingstone. India Agents, Messrs. Butterworth & Co., (India) Ltd., P. B. 251, Calcutta. Price Rs. 7/14-

This edition is based on the original Dr. Ross's book on anaesthesia. About 62 pages have been devoted to a general consideration of the anaesthesia and anaesthetics. A few pages following this contain a short account of Basal narcotics, Avertin, Paraldehyde, Nembutul, 'evipan' etc. The chapter on local anaesthetics has been completely revised and made up-to-date.

Many of the new and approved methods and apparatus that have been found of value in the administration of anaesthesia are included. The book abounds in illustrations and will be found very useful. This book is bound to be a very useful addition to every general practitioner's consulting library and invaluble for those interested in the study of anaesthesia.

Hygiene for Nurses.—*By John Guy* and *G. S. Linklater*, 1935 3rd edition pp. 211. E. and S. Livingstone, Edinburgh. India

Agents. Messrs. Butterworth & Co., (India) Ltd., P B. 251, Calcutta. Price Rs. 3/12.

This hand book is intended for the benefit of the Nurse concerned in assisting the sick to recover health. The book is divided into II parts. Parts I deals with personal hygiene, food and metabolism, vegetable foods and animal foods, internal and external parasites and communicable diseases.

In Part II, all about house, air and ventilation, lighting heating, water, sewage disposal and Nurse in relation to Public Health are given. The appendix II gives a list of Notifiable diseases in Great Britain.

Appendix III and appendix IV treat about Incubation and quarantine periods of certain infectious diseases and food values—both animal and vegetable. The book is lucidly written and nurses under training should find it very instructive.

Preparations and Inventions

Amphotropin Solution:—Manufactured and issued from Bayer's Laboratories in Elberfeld. It is an antiseptic suitable for intravenous injection of massive doses of hexa-methylene-tetramine. The chief indication for 'Amphotropin' is in the field of urology *viz.*, bacteriuria, chronic and sub-acute cystitis, pyelitis, nephritis and non-tuberculous pyelonephritis. In urethritis and gonorrhoeal urethro cystitis, Amphotropin rapidly alleviates micturition and symptoms of irritation at the neck of the bladder. Messrs. Havero Trading Co., Ltd., Bombay, will gladly furnish further particulars and literature on the subject, on application.

Devegan:—Manufactured and issued from Bayers' Hoechet Laboratories. It is a specific for the treatment of leucorrhoea, especially, trichomanas colpitis and all other forms, due to the hypofunction of the vaginal mucous membrane. Full particulars and literature can be had of Messrs. Havero Trading Co. Ltd., Bombay.

Notice

THE INDIAN INSTITUTE FOR MEDICAL RESEARCH

The Indian Institute for Medical Research, for which an appeal for funds was issued sometime ago, was started at 41, Dharamtala Street on the 1st of January last. The Institute could only open the Departments of Bacteriology and Protozoology and the Diagnostic section with the funds available at present. Besides the paid staff a few honorary workers are also engaged in researches on the determination of Vitamin C values of Indian foodstuffs; the immunological studies on Typhoid and Cholera, and the therapeutic value of Leishmania vaccine. It is contemplated that research work on Tuberculosis, Indigenous Drugs, Immunochemistry, and Biochemistry will be taken up as soon as adequate funds are available.

Dr. H. Ghosh, M.B., M.S.P.E. (Paris) and Dr. J. C. Ray, M.D., (Berlin) have been placed in charge of the Departments of Bacteriology and Protozoology respectively and, they have been giving their wholetime services to the Institute in an honorary capacity since the starting of the Institute.

The Diagnostic department affords facilities for standardisation of laboratory techniques as well as for obtaining materials for research work. The present staff consists of 2 Directors (honorary), 8 medical men (two honorary), 2 Biochemists (one honorary), 3 laboratory assistants and 5 menials. The nett income from the Diagnostic Laboratories is wholly spent in meeting the expenses of the research departments.

The following papers have already been published *viz.*—A preliminary note on the treatment of cholera with a new anti-cholera serum (published in the British Medical Journal), and Oriental Sore Vaccine (Indian Journal of Pediatrics). One paper on the Vitamin C content of some Indian foodstuffs has been sent for publication to the Indian Journal of Medical Research.

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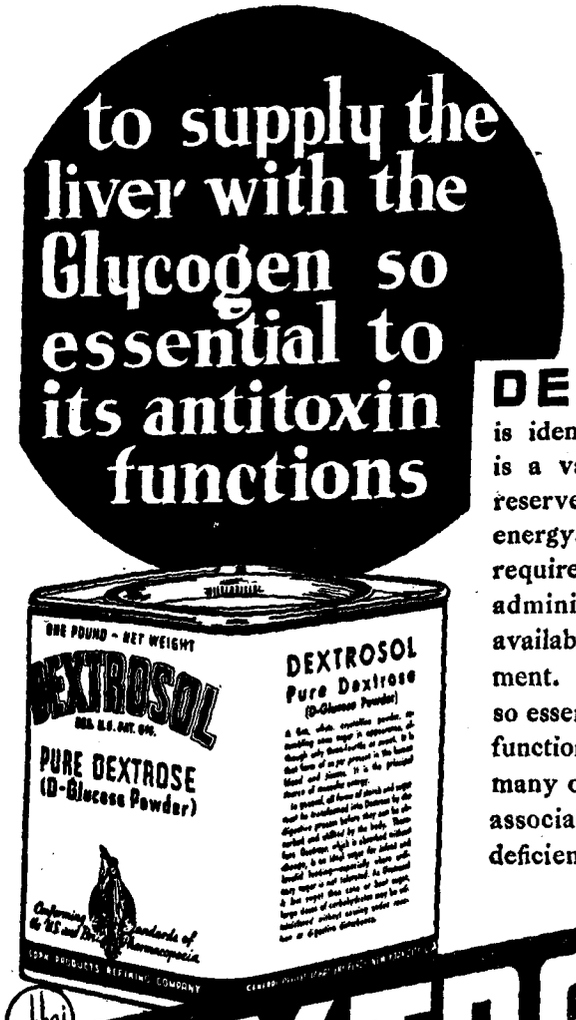

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Original Articles

ACUTE POST-OPERATIVE PAROTITIS*

BY

JOHN SCUDDER, B.Sc., M.D., F.A.C.S.,

AND

C. K. KURUP, L. M. P., L. C. P. & S.

Scudder Memorial Hospital, Ranipet.

Surgical Anatomy of the Parotid gland

PAROTID glands, are two in number. They are situated one on either cheek, behind the jaw and below the ears. The limits of the gland are important, because suppuration may occur in any portion of its structure. Its extent is as follows; *above* to the zygoma, lying below its posterior two thirds, *posteriorly* to the external auditory canal, the mastoid process and digastric and stemo-mastoid muscles; *below* to a line joining the angle of the jaw and mastoid process, *in front* about half the width of the masseter muscle.

Each gland consists of two portions, superficial and deep. The superficial portion is larger and is located between the subcutaneous tissue, and the fascia forming the external wall of the masticater space. The submaxillary gland lies inferior and slightly anterior to the superficial portion of the parotid gland, but separated from it by two layers of fascia which is always sufficient to prevent infection from passing from one gland to the

* Specially contributed to the 'Antiseptic'.

other. The facial nerve lies in between the superficial and deep portions of the gland.

The parotid duct, rather Stenson's duct, leaves the upper and anterior portion of the gland about a centimeter below the zygoma and runs on a line joining the lower edge of the cartilaginous portion of the ear with the middle of the upper lip. It opens on a papilla on the inside of the cheek opposite the second upper molar tooth. The duct as well as the superficial portion of the gland may spread anteriorly along the parotid duct to reach the face, conversely, infection of the anterior aspect of the face may follow the same path to reach the parotid space.

The gland has three lobes, the glenoid the pterygoid and the carotid. The swelling of the glenoid lobe produces pain in the ear and also in the tempero-maxillary joint. Swelling of the carotid and pterygoid lobes cause pain and fullness of the throat. Opening the lower jaw reduces the space posterior to it in which the gland lies and pinches it against the bony meatus and mastoid process, so that it is impossible to open the jaw widely.

Acute post-operative Parotitis

Of the non-epidemic pyogenic inflammation associated with the parotid gland, acute post-operative parotitis is the commonest. In none other there is the direct menace to life, which is so frequently met with in this form of acute diffuse infection. In a recent study of 13 cases of this disturbing post-operative sequelae, certain observations are made bearing on the relationship of this condition to the effect of radiation. These patients whose ages range from 17 to 75, were admitted to the A. P. Mission Hospital, Miraj, for various complaints from 1930 to 1933. They were operated by different surgeons. In this study particular interest is taken, in the etiology, treatment and the results.

Etiology.—Majority of the post operative Parotitis is due to oral sepsis. Infection travels along the lining mucosa of the excretory duct, and sets up the inflammation. In the series of the 13 cases, almost all had severe oral sepsis, either in the form of pyorrhoea or chronic tonsillitis. No pre or post-operative measures were taken to limit or reduce this oral sepsis. The abrupt change in the body brought about by the operation, lowers the resisting power of the patient which helps the organisms to invade the gland. Extension of infection may also take place by direct spread from the temperomandibular joint or from any infected lymph node near by.

The nature and severity of the operation have much influence

in the incidence of this condition. It is more frequently met with after laparotomy for such conditions, as suppurative appendicitis, ovarian cyst, pyosalpinx, and perforated gastric ulcer. Among the 13 cases, 8 were after laparotomy, for ovarian cyst, perforated appendix cholecystitis, and perinephritic abscess etc. (60% in abdominal operations).

Age ; it appears to have some influence in the etiology. About 70 % of the cases were between 20 and 45. Sex does not seem to have any etiological influence. Among the 13 cases, 7 were males and 6 were females.

In some cases the general blood infection is also the cause of this condition.

Bacteriology.—Staphylococcus is the invading organism in most of the cases, though sometimes streptococcus also takes part in these processes.

Clinical course.—The early symptoms may be over-shadowed by the general disease. They may be mild, with little fever—discomfort and slight pain and swelling limited to the gland itself. In many cases the onset will be abrupt with all severity, high temperature, chills, great pain in the gland, and marked swelling, first in the gland, later a rapidly spreading cellulitis of neck, head and face. The movements of the jaw and neck may be affected and limited. Patient may have difficulty in swallowing and even taking fluids. Patient becomes weak, exhausted and toxaemic, and in severe cases death may soon supervene due to the toxaemia. The gland becomes swollen, odematous, hard and tender. Fluctuation may develop later. It may be bilateral or unilateral. In our series 62 % were bilateral. In some cases, it starts on one side, and later on, involves the other. 3 of the cases were unilateral to start with, though they became bilateral later on. 75% of the cases occurred within the first week of the operation and none occurred beyond the second week of the operation. Two cases developed on the second day of the operation.

Diagnosis.—Diagnosis can be made by watching for the following symptoms, rise of temperature followed by discomfort, pain, swelling and tenderness over area, corresponding to the parotid gland, with other constitutional symptoms. Sometimes, a minute red spot representing the meatus of the excretory duct, will be found just opposite the second molar tooth, and purulent saliva may be expressed from it.

Prognosis.—In this series of 13 cases the death rate is 38%. One died before any treatment is given. In other three cases the primary disease was the cause of death. In Blair and Padgetts

series of 35 cases, the mortality rate was 12.8 per cent. Anyhow the prognosis is very favourable were the diagnosis and the radiation made early. Therefore the early radiation is very important with regard to prognosis.

Prophylaxis.—By instituting adequate pre and-post operative treatment for oral sepsis, the incidence of post-operative parotitis can be reduced, to a minimum.

Treatment.—Out of the 13 cases, 9 were treated by radium, in two cases incision and free drainage was done, one subsided without much treatment, and the remaining one died before any treatment was given. On the whole, the response of this condition to radiation is very satisfactory. The effect of radiation was rapid and sufficient in limiting as well as bringing the condition to a cure. Though four cases who had raidation died, the death was not due to the parotitis but due to the primary systemic disease. In these cases also the parotitis improved markedly under radiation. One side application even in bilateral cases effected into a cure. Where the early radiation was given the response was good. Where there is definite fluctuation, and abscess formation, incision and drainage is the treatment of choice. Very early radiation gives the best results.

Conclusions

1. Post-operative parotitis is one of the fatal complications after operation, especially after laparotomy.
2. Oral sepsis is the cause in majority of the cases of this condition. By treating adequately this oral sepsis, both before and after operation, post-operative parotitis can be reduced to a minimum.
3. Early diagnosis and early radiation give the best results.

Case Reports

Case 1. Mr. G. male aged 59 was admitted to the hospital on 3rd June 1932 for the complaint of repeated attacks of pain in the right upper abdomen with a past history of jaundice, and highly coloured urine. Examination revealed marked tenderness over the gall bladder region. His tonsils were enlarged, and he had pyorrhoea in the gums. A diagnosis of cholecystitis was made, and cholecystectomy was done on the following day. On the 9th, patient complained of pain over the right parotid gland. The gland was tender but no enlargement was present. His temperature was 99°. Next day, swelling appeared over the region. On the 16th, the left parotid became painful and tender. Swelling followed

Examination.—The swelling is not very extensive on either side.

It is confined to the region of the parotid located under the lobe of the ear. This is hard and tender. No fluctuation. Examination of the mouth, and jaws : no redness of the opening of the duct on each side. On the 8th June, 104 milligrams of radium applied (Ext. application) to the right side, and kept for 23.4 hours, the total dose being 2433.60 m. h.

Remarks.—The radium had been effectual in that the swelling on each side has been subsided, the left sooner than the right. Patient got well and was discharged in good condition.

Case 2. Mrs. G. female, aged 75, was admitted to the hospital on 10th June 1932, for the complaint of pain and mass in the abdomen of 20 days duration. Examination revealed no definite lump, but there was tenderness over the right ileac fossa. A diagnosis of perinephritis abscess was made. Next day patient was operated, the abscess aspirated, and formalin and glycerine injected into the abscess. Appendix was also taken out. After 4 days of the operation, patient developed parotitis on the left side. On the 21st, right parotid also was inflamed, and enlarged.

Examination.—Parotid area swollen and tender. The swelling was abrupt

Treatment. Radium.—On the 15th, 55.2 milligrams of radium applied (Ext) and kept for 23.7 hours, total dose being 1308. 24 m.h.

Remarks.—Radium applied only to the left side, and the other side subsided without radium. The effect of radium was marked ; the condition cleared up and the patient was discharged in a good condition.

Case 3. Mr. I. male aged 50, was admitted, for pain in the abdomen 3 hours after food, with acid eructations and vomiting.

Examination revealed slight tenderness over the duodenal area. He had chronic tonsillitis, and pyorrhoea in the gums. A diagnosis of duodenal ulcer was made. On the next day (5-9-33) of admission, patient was operated and posterior gastro-enterostomy was done. There was an ulcer in the duodenum. Patient developed parotitis on the left side (unilateral) on 13-9-33 *i.e.*, on the 9th day of the operation. On the same day radium has been applied. (External application) 40.6 milligram of radium applied externally and kept for 16.7, hours the total dose being 678.02.

Remarks.—The response of the condition to radiation was good ; the condition subsided and patient, was discharged in good condition.

Case 4. Mr. K. male, aged 25, was admitted to the hospital on 16-10-31, for the complaint of fever of 8 days duration, and constipation for 3 days.

Examination.—Revealed distension of the abdomen with fluid, and tenderness over left colon. His mouth and teeth were dirty. The patient was operated on the same day. The colon was distended with fibrinous exudation and free fluid was present in the abdominal cavity. The odour was very foul. On the second day of the operation patient developed suddenly bilateral parotitis. His temperature was 101°. A contact application of 50 millligram of radium applied to each side and kept for 6 hours. Total dose being 600 m.h.

Remarks.—Patient died after 4 days of the radium application *i.e.*, on the 6th day of the operation. Peritonitis due to ruptured appendix may be the cause of the death.

Case 5. Mrs. Y. female, aged 30, was admitted to the hospital on 22-8-33 for the complaint of fever for one month, anæmia, and pregnancy of 5 month with a history of hæmoptysis. Examination revealed marked anæmia in the patient, and few rales on both apices. Post cervical glands were palpable, extremities were œdematous. Patient had pyorrohoea in the gums. Diagnosis of anæmia and tuberculosis (pulmonary) with complication of pregnancy was made. Operation *i.e.*, induction of labour was done on 29-8-33. Patient developed parotitis on the right side on 10-9-33.

18.4 milligrams of radium applied externally and kept for 13 hours.

Remarks.—Patient died on the 4th day of radium application.

Case 6. Mrs. Y. female, aged 45, was admitted to the hospital on 19th February 1932, for the complaint of pain and a mass in the abdomen with swelling over the legs. On examination, patient looked pale, anæmic, and had a palpable mass in the pelvis. Pyorrhoea was present and the tonsils were enlarged. A diagnosis of cancer cervix was made. She was operated on the following day. Operative findings: both ovaries were cystic, and left was cancerous; small masses of the size of a pea were present on the bladder. One small mass was found on the liver. On the 27th *i.e.*, after 7 days, patient developed acute bilateral parotitis. Radium applied to each side on the same day. 48.8 milligrams of radium applied left side and kept for 19.6 hours the total dose being 917.28 m.h; and 56.8 milligrams of radium applied to the right and kept for 19.6 hours, the total dose being 1113.28 m.h.

Remarks.—Patient died suddenly with the radium on.

Autopsy was done. *Report*: Right ovary free cystic, size of a large mango, coloured fluid present in the cysts. Left ovary cancerous involving the wall of the uterus, and bladder. Bowels are not involved, mesentery glands are not involved. Liver free

from metastasis. Bilateral parotitis present. Microscopic diagnosis of section of the ovary-cancer ovary.

Case 7. Female 45 was admitted to the hospital with a diagnosis of intraligamentous cyst on 11-12-31 and operated on 11-12-31. Patient developed unilateral parotitis (left side) on 17-12-31. Radium applied on the same day. 50 milligrams kept for 23 hours, total dose being 1150 m. h.

Remarks.—Improved and patient eloped.

Case 8. Age 17, male, admitted to the hospital for pulmonary tuberculosis and empyema. Patient developed bilateral parotitis after pneumothorax. (9-12-31) .80 milligrams of radium applied, total dose 720 m.h., to the left and 320 to the right.

Remarks.—Patient died of empyema.

Case 9. B, female aged 45, admitted to the hospital for complaint of ulcer of the breast. Examination revealed a fungating tumour on the right breast and palpable glands on the neck. The ulcer bleeds on touching. A diagnosis of cancer breast was made. On the 3—10—33 amputation of the breast was done. Parotitis developed on the right side two days after the operation. 16-10-33, developed parotitis on the left side.

27.6 milligrams of radium applied to the right side and left for 70 hours, total dosage being 1890. 6 m. h. On the left side 71 milligrams for 23. 5 hours; total 1668. 5 m. h.

Remarks.—Patient got well and was discharged.

Case 10. Male aged 28 was admitted to the hospital on 18th January 1932 for duodenal ulcer. Operated on 19-1-32 (post, gastro-enterostomy).

Patient developed parotitis on 23-1-32. (Bilateral). No oral sepsis. No radium applied and the condition subsided.

Case 11. M. aged 26 admitted, diagnosis and the operation are not charted.

Developed post-operative parotitis (unilateral) right side.

Patient died before the application of radium.

Case 12. F, aged 35, admitted on 11th March 1931 for intestinal obstruction with ascariasis.

History not taken.

Operated on 12-3-32—exploratory laparotomy. Patient developed bilateral parotitis on 15-3-31. Temperature, 105.4.

Treatment.—Mag. Sulph. dressing and incision of the glands.

Remarks.—Patient got alright and discharged.

RADIUM RECORD.

Case No.	Age.	Side affect.	Appl. of Radium. Date.	Time & Side.	Appl.	Dose Milligram.	Duration Hours.	Total Dosage Milligram hours.	SCREENING. Pt. Ir.	Monel Metal.	Alumin.	Brass.	Dental Wax.	Results.	Remarks.
1	59	2	8/6/32	A.M. 10-35 Rt.	Cont.	104	23.4	2433·6	0.3 M.M.	0·4 M.M.	—	—	5M.M.	Cured.	Effect of radium was good; condition subsided.
2	75	2	15/6/32	A.M. 10-35 Left.	4	55.2	23.7	1308.24	—	0.4 M.M.	—	—	5	Cured.	Effect of radiation was good. Condition cured. Only one side applied.
3	50	1	13/9/33	3-35 P.M.	19 Ext A	40.6	16.7	678.02	0·3 M.M.		5 M.M.		20 M.M.	Cured.	Condition responded to radium well.
4	25	2	18/10/31	A.M. 10-30	11 Cont.	100		600 (300+300)	0.3 M.M. .25 M.M.	0.4 M.M.	—	—	¼ "	died.	Response of the condition to Radiation was good: patient died of peritonitis.
5	30	1	10/9/33		4 Ext.	18·4	13	289.2	0.3 M.M. 0.25 M.M.	0.4 M.M.		5 M.M.		died.	Patient died on the 4th day of radiations.
6	45	2	27/2/32	12-30	Cont.	46.8 (L) 56.8 (R)	19.6 19.6	917.28 (Left.) 1113.28 (Rt.)	0.3 M.M. 0.2 M.M.	0.4 M.M.			1 "	died.	
7	45	2	17/12/31		4 Ext.	50	23	1150		0.4 M.M.		1.3 M.M.	5 M.M.	Improved	Response was good.
8	17	1	9/12/31		7	80		720 (L) 320 (R)	0.3 M.M.	0.4 M.M.		1.33 M.M.	½ "	died.	Patient died of empyema. P. subsided.
9	45	2	7/10/33 24/10/33			27.6 71	70	189.6 1068.5						cured.	Response good.

Case 13. Male aged 30, admitted in the hospital for vesical calculus on 10th November 1930. History not taken.

Patient was operated on 11—11—30.

Patient developed parotitis on the left side on 23-11-30.

Treament.—Incision and drainage.

Remarks.—Patient got alright and was discharged.

VALVULAR CHOLECYST—GASTROSTOMY*

BY

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IN the anastomosis of the fundus of the gall-bladder to the digestive tract, drawbacks have been pointed out, such as an ascending infection of the bladder wall, or the reflux of the gastro-intestinal contents into the bladder. In the gastric anastomosis, bilious vomiting has been objected to.

The above post operative effects are due to an error in the technique of the operation and not to the choice of the operation. In a careful selection of the steps of surgery, consideration has to be given to various minor facts if success is to be complete.

The anastomosis of the gall bladder to any particular portion of the digestive tract should be based on the existing pathology all considered together. Where the operation is performed for biliary lithiasis, the ideal site would be the duodenum, to imitate nature's cure of the condition. A similar choice is suitable for any disease limited to the gall bladder, provided the latter is suitable as to be properly apposed and free from severe adhesions. Anastomosis to the duodenum would be preferable, other things being in order. As the normal bile and the duodenal contents are normally sterile, ascending infection is very unlikely if the stoma be of the correct size. Creeping infection towards the gall bladder has no more chance than any infection along the common bile duct as the latter too is never absolutely immune to intestinal infection. Massive backward flow is not likely against the natural gravity, but even if it did occur, it would not be fair to assume retention of the material, as it would with the aid of gravity, be exuded just as well as, or even faster, than coming in.

* Specially contributed to the "Antiseptic".

Still conceding that such a back flow takes place, the normal bladder membrane has the resistance to combat the infection if the exit be free and dependent. In fact it has more advantage in that direction with an artificial exit than even a normally defective outlet along the natural passages. There is no doubt that massive doses of organisms are conveyed from the digestive canal along the portal circulation and then brought through the liver secretions towards the gall bladder. These are by natural immunity futile in infecting the gall bladder wall, which has the resistance so long as there is no damage to its walls by foreign bodies or unless the outlet is blocked. The sphincter of Odi has no more power of shutting out germs than any other sphincter in the body. The natural sterility of the duodenum is maintained by the bile, which could also keep the bladder wall clean while bathing it.

Where the choice falls on the anastomosis of the gall-bladder to the stomach a similar argument against ascending infection would apply. That the stomach too is normally not infected by virulent organisms is true. Any germs conveyed from the mouth are rapidly destroyed in the acid. Where there is damage of the gastric wall as by gastritis, organisms are found in the gastric contents. Here again the inflammation is secondary to other factors, as obstruction as in late ulcers etc., and it is not usual to find virulent germs with hyperacidity as is to be found in early peptic ulcers for in that anastomosis is required. Here too the ascending infection can be controlled by limiting the stoma as to permit a small stream of the bile, which being continuous would flush out the passage of any germs. The roomy stomach and the high position of the gall bladder would be against back flow.

The contention of bilious vomiting after the operation is due to the defective choice of the operation. The gall bladder should never be joined to the stomach if there is any organic or functional obstruction at the pyloric door. With a stricture there, a posterior gastro-jejunostomy, either in itself, where the ulceration has healed or combined with the gall bladder anastomosis where the ulcer is present, is indicated. If the spasm be functional, as is often the case in mistaken diagnosis due to reflex causes, it should be eliminated by suitable steps. The rejection of bile is always due to the obstruction to outward flow, as bile fed to the patient is not brought up in health. In a hypermotile and hyperacid stomach where the diagnosis is correct and causing the peptic ulcer, there is then definitely no obstruction, and

bilious vomiting never need be feared. If the stomach is normal or the functional obstruction doubtful, the gall bladder is better joined to the duodenum.

Where there is definite gastric infection, and an ascending infection is feared through the reflux of gastric contents, valvular anastomosis as an alternative, is indicated. The following is the technique :—

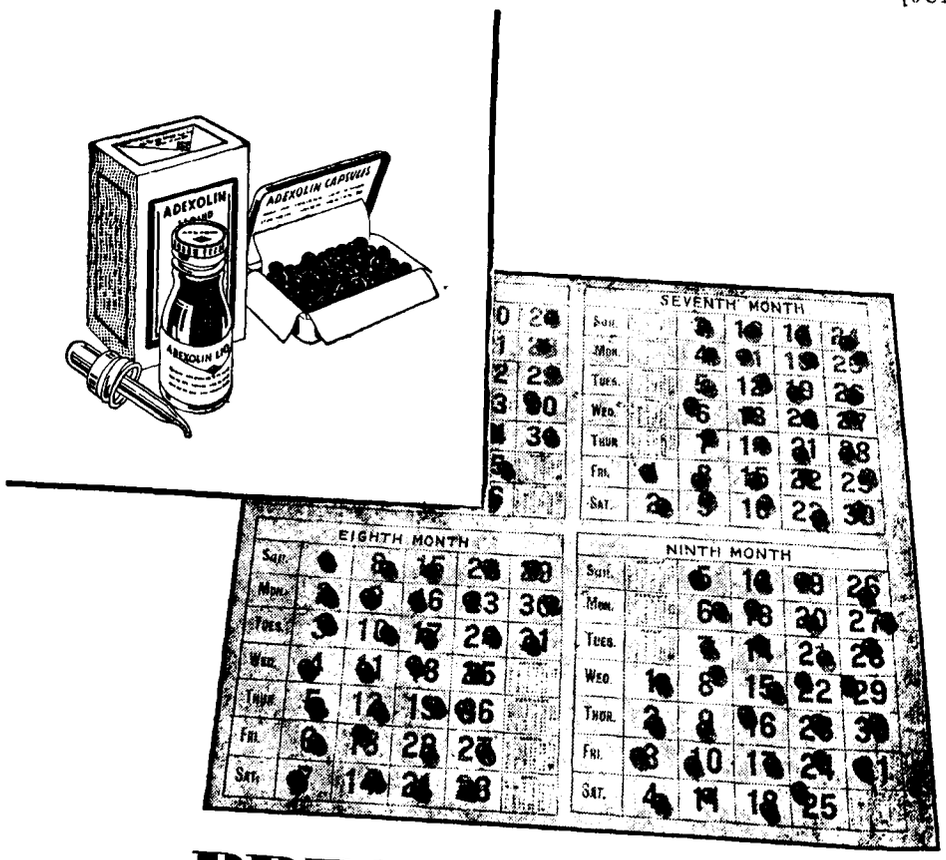
An oblique incision half to three quarters of an inch long and about 2 to 2½ or 3 inches from the proposed site of anastomosis, depending as to where the ulcer exists, is made. If it is near the sphincter a shorter distance is enough. Where the ulcer is towards the fundus of the stomach it is made just distal to the ulcer, the object being to bring down the flow of the bile to lead it over the ulcer area, to smear it with the bile as it flows out along the new passage. If the ulcer is to be excised it is done by a cautery or by the knife, and the aperture left after excision closed to leave an opening half or three quarters of an inch. A circular cat-gut suture is put in like a purse-string as deep as the muscular wall around that remnant of the aperture. A rubber tube about three inches long or more or less (depending on the distance of ulcer from proposed site of junction) and the size of number 12 or more catheter is fixed at the middle with a chromic gut ligature passed through its lumen with the ends of the ligature threaded on to two needles, which are then passed from the peritoneal to the mucosal side of the stomach wall through all the coats, and tied with the knot projecting on the inner surface of the stomach. The suture is trimmed short and fixes the rubber tube to the stomach. The purse-string suture is then tied. The gastric wall is then invaginated by tucking it with a rubber tube which has been tied in, and another purse-string suture put over. The portion of the rubber tube projecting on the peritoneal side is then buried in the tunnel made by approximating the two ridges of the gastric wall pinched on either side of the tube by cat-gut sutures passed at right angles to the tube picking up the peritoneal and the muscular coats of the ridges. This is carried out till about half an inch of the tube is left projecting on the peritoneal side. This projecting part is also transfixed by another suture across its lumen just near the end. A purse-string suture is then inserted on the fundus of the gall bladder, leaving a space about ¾" inside where a stab incision is made to admit the projecting tube into it. The ends of the suture holding the end of the tube are threaded on to two needles, which are passed only through the peritoneal and the

muscular coats of the bladder fundus and tied, so fixing the tube to the bladder. The surrounding purse-string suture is then picked up and one end of it stitched through the tube and tied, so fixing the tube further and closing the aperture in the gall bladder. This is super-imposed with another purse-string suture and tied if necessary. One stitch is then inserted through the peritoneum covering stomach and that covering the gall bladder just behind the tube and tied. Two more are inserted on either side of the tube to draw together the walls of the two organs. Another is inserted in front of the tube to cover the anterior junction, so that when all these 4 are in, the gall bladder and the stomach are closely apposed. A stitch or two tacks on the omentum over the junction. A dental drainage may be led up from the anastomosis for a day or two, as a precaution against leakage.

The tube drains the bile along the tunneled passage through a length which acts as a valve against any back flow from the stomach to the gall bladder. That tunnel may be made to lead up to the ulcer, even up to the cardiac portion if necessary. The bile then flows continuously. When the junction is secure the rubber tube comes away into the stomach and passed out.

As an alternative the rubber tube may be passed through the nose after the patient has been made unconscious, and taken into the stomach. The stomach is washed out through this, and the internal end of it felt for and brought out through the incision in the stomach, to be used in place of the shorter tube above mentioned. The outer end is stuck on to the skin and used to drain cut the bile through the nose, or if it is desired to pass the bile into the stomach, a hole is cut in the tube projecting just inside the stomach. Later the tube is pulled out of the nose. The object of temporary external drainage of the bile is to prevent any fear of vomit when the patient is in a poor condition. With the return to normal of the patient's health in a couple of weeks, the internal flow of bile is then unharmful.

Though the artificial internal fistula be smaller it would not close later, as the internal tension in the gall bladder caused by the closed sphincter of Odi, which is so for the greater part of the day, would force a stream along the internal fistula, (prevent the former fistula) from shrinking. The latter has a one valve flow towards the stomach without an actual sphincter.



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EPIDEMIC CEREBRO-SPINAL MENINGITIS AND ITS SPECIFIC TREATMENT*

BY

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In view of the fact that cerebro-spinal meningitis is in an epidemic form in some parts of India at the present moment and as in some cases of fulminating type death occurs within five to twenty hours since onset, and in no other virulent fevers generally the death occurs so suddenly in apparently quite well, and above all with every likelihood of its extending in other places, I give the following salient points about the disease, which, I hope, will be read with interest by my fellow brothers.

Cerebro-spinal fever rightly known as petechial fever, spotted fever, malignant purpuric fever and epidemic cerebro-spinal meningitis is an infectious disease,caused by Meningococcus, the Diplococcus intracellularis meningitidis of Weichselbaum with a clinical course of great irregularity. Though it is known since 1805, the disease has taken serious proportion and is appearing in an epidemic form in comparatively recent years and to our side this year only.

The incubation period is usually from 3 to 5 days, though a period of 8 to 10 days or 24 hours is not rare.

The disease has no notable relation to occupation. Over-crowding, lack of ventilation, excessive humidity, inclement weather, over-exertion, fatigue, depression of mind, misery and squalour of large tenement houses in cities are some of the predis-posing causes. The disease is not highly infectious and the causative organism is of low vitality and is easily killed by exposure to 56 °F. temperature for one hour or to sunshine, drying and by freezing.

Distribution of cases was found to be very irregular over all parts in our city like its clinical course of great irregularity.

The infection takes place through tonsil or nasopharynx. Opinion varies about the mode of transmission of cocci from the nasal cavities to the brain while many hold that they are tansmit-ted by the blood stream, others are of opinion that they pass directly into the subarachnoid space through the perineural sheaths of olfactory nerves, thus explaining the suddenness of onset in apparently quite well.

* Specially contributed to the Antiseptic.

It appears that the infection is carried from man to man by rapid and direct transference of infection from mucous surface of mouth and nose as result of sneezing, coughing, loud speaking and other means of "droplet infection".

Cases differ markedly in their character. Many different forms have been described. These are perhaps best grouped into following three classes. (i) Malignant (ii) Ordinary and (iii) Abortive.

A Case of Malignant type.—Patient—my own son—very strong and stout who had carried first prize in Baby Show in his childhood and who was never ill till 10 years of his age, naturally school going boy, went to school quite hale and hearty in the morning at 11 A. M. on 6th March 1935 and returned in the recess period at 2 P. M. on foot, a distance of quarter of a mile saying:—"I am getting shivering, headache and pains all over body".

He was immediately put to bed and examined; temp. 103°F. There was severe epidemic of Malaria in our city raging during the last six months. He was given ordinary fever mixture but he vomited profusely. Then he was not disturbed till night. Temperature was taken again at 10 P. M. and was found to be 100. 8° F. I thought it to be a case of Malaria and slept. At 12 P. M. he began raving talking about jubilee and his examinations. I asked him to be quiet and did not find it necessary to give any medicine.

I got up in the morning at 5 A. M. and found small pinhead in size blackish red dots on his face 3-4 in number. I saw his pulse but found it to be imperceptible. So I called my fellow brothers 3 to 4 in number for consultation. Diagnosis was made to the extent of acute septicaemia and accordingly he was given Polyvalent Antistreptococcic serum. Stimulant injections were given but none responded. After an hour these dots increased in size forming patches all over the body. These were petechial haemorrhages so much so that the boy had gone blackish red and could not be recognised by 9 A.M. He must have bled internally under mucus membrane in the night and that is why he lost his pulse. Temperature was 99° and pulse could not be felt.

He could recognize us all faintly and said, "it is funny that ice is felt hot by me". At 9-30 A.M. he said he was going to die at 12 noon—Wonderful internal instinct! Accordingly, the boy died at 12 noon without practically any pangs of death.

This case must have been a case of fulminating type of meningitis in its premeningitic stage without developing any of the frank signs of meningitis proper and as the boy died within 20 hours since onset.

After a fortnight a case typical in character of true meningitis was seen and then began right form of epidemic as 1 to 3 cases could be seen by us daily.

A similar case like my child's was found in Philadelphia in 1888 (Osler's 'Practice of Medicine' book.)

Ordinary type.—First case:—The patient, a cinema operator age 25 years, by name Bal Athavale suddenly got fever on 17th of March with shivering: temperature was 104° with pulse 100 p.m. He was seen on the next day by us in the following condition:—prostrated, stuporous and complained of headache. First thought to be a case of "cerebral malaria" (as some cases were seen and treated locally) on fifth day he developed typical symptoms of the meningitis as painful rigidity of neck, hyper-sensitive spine and later retraction of neck, spasm in muscles, great depression, Kernig's sign—when thigh is flexed at right angles to the abdomen leg cannot be fully extended on the thigh due to strong contractures of flex or muscles.

Brud Zinski's sign—flexing the head on chest causes flexion of legs at the hip and knee joints and flexing one leg on the trunk produces the same movement in other leg. Pressure symptoms as strabismus, conjuctional irritation, purpuric rash, general rigidity so much so that the whole body could be moved on hard like a statue. In this case cerebrospinal fluid was drawn and examined microscopically. It was positive.

In this case headache was most dominant and persisted for a long time since onset. This case took about three weeks for the temperature to come down to normal. But it was continuous throughout the illness. Temperature remained normal for some days and again every 4th or 5th day there were spike like rises of temperature ranging from 100 to 102 particularly on getting up in bed. Thus it became a case of chronic meningitis. During fever he used to get again typical symptoms of retraction of neck, Kernig's sign, Brudzinski's sign etc.

This case was treated as under:—Cerebrospinal fluid was withdrawn which was 35 c.c. in quantity, turbid in character. Polyvalent Anti meningococcic serum 10 c.c., could be given only. Next day 30 c.c. was withdrawn and 19 c.c. could be given. At 3rd sitting 10 c.c. was withdrawn and only 2 c.c. could be safely given as blood pressure began to fall and hence could not be given more. 4th sitting 50 c.c. fluid much clearer was drawn and 10 c.c. could be safely injected intra-spinally. In all he was given 50 c.c. intraspinally, 40 c.c.—subcutaneously and 20 c.c. intravenously and urotropine 40 % intravenously 5 c.c. and

mercurochrome 2 % intravenously 2 c.c. With this treatment the temperature came to normal after three weeks.

In this case for its chronic character autogenous vaccine is ideal but is not possible to prepare it. Nor stock vaccine we could get here. This case passed through all its stages and is trying to make slow recovery. Convalescence is delayed.

Abortive Type.--Patient, a young lady, 20 years of age by name Kashi-Bai worked quite well till 10 in the morning and took to bed at 11 for head ache and fever. When seen by us at 2 P.M., temperature was 102°, pulse 90 slow in character. Her general facies, photophobia, early tendency towards being delirious in spite of not having high fever made us suspicious that it is a case of meningitis. During epidemics, however, the physician should be on the look out for the disease, particularly during its early phase of Bacteriæmia. This patient appeard to be more seriously ill than her moderate temperature and slow pulse would indicate.

Painful stiffness of muscles of neck was an early symptom while retraction came later. In this case nodding motion of neck was more painful than rotation. Kernig's sign was absent. It is, as books say, present in 85 % of cases and develops late when infection localizes in meninges at the base of brain.

Intraspinal puncture was made and 35 c.c. slightly turbid fluid under pressure was withdrawn and burnt as otherwise it would spread the infection. We were doing this in every case, every time. We gave her 20 c.c. of Anti meningococcic serum intraspinally safely. Next day the most valuable signs of response to serum treatment was seen upon sepsis which disappeared. The effect upon fever was especially striking that it came to normal. The pulse became 110, rather fast. This case definitely aborted in recovery on account of early treatment. Convalescence was rapid and patient began to attend to her usual work after 4 or 5 days.

So we can conclude from these cases that during epidemics, the disease can be seen distinctly in two phases :—

(i) General sepsis (ii) Hydrocephalus.

General sepsis.--This phase lasts from 8 to 36 hours and may terminate in one of several ways.

It may terminate in one of recovery as seen in the so called aborted cases (case of Mrs. Kashi Bai).

It may result in death as in cases of terrific general sepsis often accompanied by very profuse petechial and purpuric eruptious which show slight or no signs of meningitis but which

terminate in death very shortly after the onset of the disease. These are the true fulminating cases (case of my child). Most often, however, general bacteriæmia after a certain number of hours is succeeded by localization of infection in the meninges followed by classical infection of the epidemic meningitis. The general bacteriæmia in these cases dies out to a very great extent a short time after the onset of meningitis proper. A moderate bacteriæmia persists, however, in a fair proportion of cases.

The first condition to be met therefore is the premeningitic stage. The rapid fatal outcome of fulminating cases may be prevented in some instances and the average cases which run the usual course of meningitis may be considerably improved so that when meningitis proper sets in the infection will be much milder and to a degree under control if diagnosed early.

Correct, accurate diagnosis during the important period of premeningitic stage is so very difficult that unfortunately this stage is often overlooked.

So the principal symptoms of this stage may be grouped under two headings:—

General sepsis and its symptoms:—The symptoms of general sepsis are evidenced by chill, fever, extensive prostration and an early tendency towards being delirious within 2 to 6 hours,generally not seen in any other kind of fever, anuria in some cases (my son's case). Most significant manifestations, however, are severe general petechial eruptious (seen only in 1 case out of 20), purpura (in 6 cases),crops of herpes on face (1 case),conjunctivites (2 cases), together with laboratory findings.

Symptoms of Hydrocephalus.—The significant clinical symptoms in meningitis are violent persistent headache which cannot be explained by usual causes, the early repeated explorive vomiting which is not accompanied by evidence of gastro intestinal disorder and cannot be controlled by local treatment, the early hyperaesthesia, irritability, photophobia, dilated sluggishly responding pupils, the tenderness at angles of the mandible, the presence of bulging fontanelle in children or Mace Won's sign in older, most important, the irrigular pulse and respiration.

Treatment.—Treatment of bacteriæmia even on suspicion (give benefit of doubt to the patient.) consists of lumbar puncture with removal of large quantity of exudate followed by injection of a small quantity intrathecally. A large dose of serum up to 100-150. c.c. should be given intravenously or subcutaneously. The general bacteriæmia will in a measure be controlled

by injection of serum into the general circulation and hydrocephalus will be relieved by removal of cerebro spinal fluid.

Treatment of meningitis:—The present recognized treatment of meningitis is one of great scientific achievements of twentieth century. The polyvalent anti-meningococcic serum must be both anti-bacterial and antitoxic.

It has been found that when this serum is injected subcutaneously or intravenously it is eliminated into cerebrospinal fluid in very minute quantities. On the other hand, the injection in subarachnoid's space is followed by very rapid elimination of serum into general circulation.

It has been seen that epidemic meningitis once fully established is essentially a localized process and accompanying general bacteriæmia during this stage is less important.

That is why the failure with antimeningococcus serum when injected subcutaneously or intravenously.

So, to attain good results (as we have attained 92 % in our cases), the serum must be injected by lumbar puncture directly into cerebrospinal sub-arachnoid space where it is brought into contact with infected area.

It has been written in many text books and also in pamphlets supplied with serum tubes, that serum equal in quantity to or less than cerebrospinal fluid withdrawn in any quantity be safely injected. This arbitrary quantitative method of determining the dose is not unsafe but at times it is very dangerous and occasionally may result in death. In short, the technique of giving the serum intraspinally is very difficult and if not followed correctly, the "treatment may become worse than the disease." The following case will illustrate it :—The patient, a young lady of 18 years of age, taken to be a case of meningitis by an experienced big old man and one on verge of retirement from service, was given the serum intraspinally 10 c.c. in quantity (natural 10 c.c. dose meaning 20 c.c. ordinary dose) in spite of fluid being clear and running at normal rate of one drop every 3 to 5 seconds and 29 drops only withdrawn. The serum was given with considerable pressure and rather very rapidly, say, within 2 to 3 minutes without watching the pulse or any sphygmomanometer being used.

The result after sometime was that the patient was beyond slim hope of recovery due to great fall in blood pressure on account of bad technique. As a last resort, inspite of wishes and sentiments of her relatives, the patient was given 5% glucose in saline 1 pint subcutaneously on two consecutive days. She responded so nicely that she is living to-day to the surprise of

every one of us. In her case the cerebrospinal fluid was examined under microscope and no diplococci were found.

It was a case of "Malaria only with extreme degree of toxaemia".

Epidemic meningitis in some cases is very difficult to diagnose from cerebral malaria.

In epidemic meningitis, the spinal symptoms predominate.

Classical Method of Intraspinal Puncture and Injection

Anaesthesia.—General anaesthesia is dangerous. Local anæsthesia of Novocaine with adrenalin was used in 3—4 cases. It is worthless. A quick skilful puncture is really anaesthetic itself.

Position and Site of Operation.—The patient should lie well on his side over the edge of the table. Right handed operator should have him on his left hand and vice versa for a left handed operator. The back should be well bowed; the head should be bent as much as possible on chest. The legs should be flexed on the thighs and thighs on abdomen by two different trained assistants. The puncture should never be performed in erect posture as it may cause collapse or death.

Select proper needle such as a large, strong, pliable 4—4½ inches in length with 1½ to 2 m. m. in diameter. It will give good results. The site should be sterilized with Tr. iodine and draped off by sterile towels. Pass the index finger of left hand from the highest level of Iliac crest of Ilium which will pass through fourth lumbar space. Place the finger firmly in intervertebral space. The least complicated and most direct way is median line. Pressing well between the spines and holding it there as a guide for the needle which is directed at 45 degrees angle. The needle should be directed upwards and inwards and rather closer to upper border of lower spinal process, in this way avoiding the tubercles which project downwards from lower margin of Lumbar Spinal process. Holding the needle in the whole palm of your right hand with index finger at tip of needle try to pass in one dash. As intervertebral fibro cartilage is perforated you feel as if you are cutting something hard and as membranes are punctured the patient frequently screams and you get a sensation of falling in a ditch when you are in canal. Lateral route is far less desirable than median route as even in skilful hands it may become more painful.

Accidents likely to happen are haemorrhage if it be due to injury of epidural veins which can be known rather by large

stream of pure blood through the needle in which case the needle should be withdrawn and reinserted. If haemorrhage is due to puncture of subdural veins which can be known by tinging of cerebrospinal fluid which becomes clear soon. Breakage of needle should not happen if proper needle is taken. The usual finding in a typical case of meningitis is a large quantity of turbid fluid under pressure. We got fluid 60 c.c. in quantity varying from turbid to purulent with greenish tinge in some cases. As a rule the fluid should be allowed to escape in sterile test tube until the cerebrospinal fluid comes to normal which can be roughly known by flow of fluid averaging about one drop every three to five seconds. When the flow is normal, the serum should be warmed to body temperature drawn in a record-syringe and fixed into the lumen of needle. Before injecting you have to remember two important factors regarding the rapidity and pressure of injection. That a small quantity of fluid injected rapidly and under considerable pressure will cause relatively much greater fall in blood pressure than a large quantity of fluid injected slowly and with considerable pressure. Sometimes piston in a syringe sticks due to stickiness of serum and in exerting force to push in a little serum may be suddenly injected under very great and considerable pressure which must be avoided.

In short if you inject 1 c.c. of fluid in every half to one minute which can be learnt in the beginning, if your assistant tells you time by watch, you must take at least fifteen minutes time to inject 20 c.c. of fluid. There must be a special assistant doctor to watch the pulse and report from time to time. If it becomes soft, or weak in volume you have to stop giving injection, till it regains volume which it gains generally in three to four minutes and if not you have to give adrenalin chloride injection hypodermically. If no return of volume, don't inject further.

It has been seen that a dose of serum is a variable one and must be carefully controlled in each case and at each separate injection. It has been seen that B. P. falls during injection of Antimeningococcic serum and that degree of fall or rate and character of pulse may be safely used as a guide to the quantity of serum that can be safely injected. It is still more safe and scientific to use, sphygmo-manometer and have the B. P. reported by special assistant. The fall of 3 to 10 degrees is normal and if it goes down to initial fall of 20 m.m., then you have to stop. If in spite of this fall the fluid is injected, the fall of B. P. may be sudden and symptoms of shock, collapse and death will ensue. The doses of serum we followed were as under:

5 to 10 years	...	5 to 10 c.c.
10 to 20 years	...	10 to 20 c.c.
20 and upwards	...	10 to 25 c.c.

These doses though look smaller have given much better results than larger doses injected without adequate control.

Symptoms of fall in B.P.—Principally they are stupor, respiratory embarrassment. First, breathing becomes irregular, slow, and stertorous. The colour is livid and occasionally cyanotic. Pupils dilate and there is incontinence of faeces and urine. Pulse weak, rapid and irregular and occasionally imperceptible. If these symptoms spervene, stop giving injection and immediately raise the head of the patient. Draw out some fluid by syringe. If breathing is poor, embarrassed give cocaine $\frac{1}{8}$ to $\frac{1}{4}$ gr. and atropine 1/80 to 1/50 gr. for cardiac inhibition hypodermically.

The beneficial effect of serum is indicated within twenty-four hours by the disappearance of general sepsis and cerebral symptoms such as disappearance of delirium, improved Kernig's sign, rigidity of neck, fall in temperature, sometimes normal. Treatment should be actively kept up, until, either all meningococci have disappeared in cerebro spinal fluid or until there are only a few meningococci that are intra-cellular. Even the existence of a few extra cellular meningococci should signify that dose of serum should be repeated although clinically patient is good. If cerebro-spinal fluid shows no meningococci and clinical condition is unsatisfactory doses should be repeated. The average case requires daily injections for 3 to 4 days. In some of our cases we required 6 to 7 injections as in the case below:—

Patient a boy of 12 years of age, a typical case of meningitis, all signs and symptoms present, the most typical being retraction of head, so much so, that the neck was at right angle to the back for a prolonged period. The case was worth having a photo. He was treated as follows:—

	C. S. fluid withdrawn and its character.	Serum injected intraspinally.
On 28th March, 1935	30 c.c. turbid	10 c.c. Injec.
„ 29 „ „	20 c.c. „	10 c.c. „
„ 30 „ „	25 c.c. „	10 c.c. „
„ 31 „ „	He was left untreated	
„ 1st April „	10 c.c. serum subcutaneously	
„ 2 „ „	50 c.c. drawn	20 c.c. „
„ 3 „ „	40 c.c. „	10 c.c. „
„ 4 „ „	20 c.c.	10 c.c. „
		70 c.c.

Still the neck was retracted at right angle to the body and temperature continued for some time forming a case of chronic meningitis. This case is recovering rather slowly.

We had one case of true dry puncture where fluid was thick, plastic and fibrinous as we could see long threads of fibrin in the needle when drawn out. To wash out the canal we put another needle in third lumbar space and began washing with serum, but unfortunately serum could not be injected even under pressure. This case died. I think in this case cerebro-spinal fluid was localized and encapsulated throughout the subarachnoid space. This case, unfortunately could not be injected intrathecally from the beginning.

General Treatment.—Patient to be kept in a cool, well ventilated dark room, properly fed and nursed, continuous ice bag to head, mustard poultice to nape of neck till it smarts. Ung. Hydrargyri ʒ 1 a day to be massaged in neck muscles. Internally the following prescription answered well :—

℞

Liq. hydrargyri perchlor	...	dr. iii
Potassium Iodide	...	gr. xv
Urotropine	...	dr. i
Mag. sulph	...	dr. iii
Syrup simple	...	dr. iii
Aqua chloroform ad	...	ʒ iii
1/3 rd.	...	T. I. D.

Complications.—Arthritis—we got in one case only. Septic Pneumonia—in one case only which might have been a case of meningo-coccal pneumonia probably. This patient died of it. She was 8 months pregnant and came under treatment on sixth day rather very late.

Serum Sickness.—Symptoms may appear from within a few minutes to 4 or 5 days after the injection of serum. The writer has seen one case of sudden eruption while he was injecting the serum intravenously. Sometimes it comes so suddenly. The symptoms are annoying but not alarming and consists of urticaria, erythema or angioneurotic œdema. There is nausea, vomiting, fever, itching, arthralgia and not arthritis, sometimes chill and high temperature. In one case which was very serious from beginning was given 20 c.c. of serum intrathecally while 60 c.c. turbid and purulent fluid was withdrawn. Next day the patient developed serum disease, arthralgia of the wrist joint and pulmonary oedema. The relatives did not allow cupping of the chest

for œdema as she was very bad. This patient, unfortunately died. We saw one case of serum disease late on 8th day since last injection in which excessive itching, arthralgia of all the joints, urticaria and swelling under the eyes were complained of.

During the course of treatment it is sometimes very confusing whether severe general symptoms, and high fever are due to serum sickness, complications or relapse. If patient be suffering still from meningitis, there may appear aggravation of some of the meningeal symptoms, as stupor, headache, rigidity and Kernig's exaggerated.

On suspicion of serum sickness, it is well to leave the patient alone and treat him generally. Under no circumstances, however should serum be given under the impression that patient is having relapse. In our cases which were twenty, we got serum sickness in 5 cases *i.e.*, 25 % as against 60 % of books. Since serum is to be given intra-spinally there is great frequency of serum sickness due to this serum. You have to remember about anaphylaxis, if you are required to give next injection after seven days. Rosanow has advised to give preliminary injections of serum subcutaneously, intra-muscularly, intravenously, or intra-spinally in doses of 4 to 2 c.c. as a protection against anaphylaxis. Instead of one, there should be repeated doses 2 to 3 in number of serum at an interval of one hour each with adrenaline or atropine injections hypodermically. This method of desensitization appeared to be more effective. The complication of true anaphylaxis terminating fatally is so rare that one is not justified in withholding the therapeutic dose of serum on that account.

Prophylaxis.—During epidemics as many as 58 % of healthy individuals become healthy meningococcal carriers. They are a serious menace and are the immediate cause of the spread of the epidemics. The carriers propagate the organism, producing other carriers, a small percentage of whom develop disease.

Prophylactic measures must be concerned with quarantine of both the carriers and the patients. This could not be possible in our city.

Measures to destroy organisms in the nose and throat by antiseptic gargles of weak zinc sulphate, potassium permanganate, mistol boro-thymoline, saline, lysol etc.

People were informed by printed pamphlets of the nature of infection and advised not to congregate in crowds such as cinemas, schools, (which were closed), place of recreation, marriages, meetings; to keep houses properly clean and ventilated, to burn sulphur, benzoin and Neem leaves in houses daily.

In one cobbler's house 4 to 5 cases died of the disease before, and after following the instructions though there were 3 to 4 attacks which were properly treated. All were saved.

Urotropine 10 grains thrice a day was advised.

This serum is prescribed as preventive also and is to be given in 5 c.c., doses every time three times each after a week. The immunity lasts only for 2-3 weeks. Vaccine is also recommended.

Analysis:—Almost all those cases both locally and in villages round about who did not get the specific treatment by specific route died and vice versa almost all those who did get the serum intrathecally survived So it can be said that a number of patients were justifiably considered as having been saved by the serum treatment.

Out of our 20 cases which were treated intrathecally by specific serum, 18 cases survived thus giving us the percentage of 92. Though this small number of cases do not permit of any calculation, the results have been striking. Both the cases who died were females of them one was 8 month's pregnant and who had developed already a complication of pneumonia probably meningococcal and who came under treatment on 6th day rather very late.

The second was real death in whom serum sickness and pulmonary œdema developed and hence could not be injected but had to be treated generally.

The mortality in cases in which treatment begins before 3rd day has been found to be less than half than in those treated only after seven days.

On an average, the average case required three injections each of 10 to 25 c.c. on three consecutive days.

The success was due to kind co-operation of some of the local professional brothers and also of municipality in supplying us the free serum, the cost of which is really prohibitive for the poor or even middle class people.

SOME RECENT ADVANCES IN MEDICINE*

BY

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DR. Joseph Loebel has written an enjoyable book with the title "WHITHER MEDICINE" in which he opines that people complain medicine is not progressing, simply because it has progressed so rapidly that they themselves have been unable to keep pace. The public have no doubt about the progress made by medicine during the last few decades. When we take into consideration the enormous amount of worthless printed material which go under the caption of 'Recent Advances in Medicine,' the actual advance is comparatively small in amount. Many of these so called advances are merely antiquated ideas which did not stand the test of time but were excavated by enterprising individuals who "labouring for invention, bear amiss the second burthen of a former child". For instance, with the introduction of cellular pathology, humours and diathesis were relegated to the museum of archaic ideas, not to speak of the limbo of superstition. Virchow declared that "there is no such thing as a sick body that is disordered in all its parts. I maintain that no doctor can systematically think of a morbid process unless he is able to assign to it a place in the body". But with the discoveries of serology and endocrinology, humoral pathology and diathesis came creeping back, though with new and more scientific attributes. The individual, as Dr. Bernard Hart put it, is no longer regarded "as the uninteresting vehicle of a fascinating disease process". Another instance of the rebirth of an old idea in an illuminated garb is the influence of mind over matter. Osler was a firm believer in the optimism of the doctor in working miracles of cure. The Psychiatrist and the biochemist can find a common meeting ground in the fact long suspected but now, as a result of Sir Henry Dale's work capable of being enunciated as a general law—that all nervous mechanisms produce their effect through the intermediary of chemical substances. This new symbiosis of mind and body, this conception of the individual as a dynamic entity is an important advance in medicine of the present century capable of far reaching influence on its future. Yet another brilliant excavation of an old idea for which of course no credit is

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taken by the excavator who is no other than the Scholar Physician, Sir Humphry Rolleston, is that diseases change their character from time to time. Sydenham, the British Hippocrates, maintained that acute diseases had seasonal variations with waves measured in months and due, as Hippocrates believed, to Meteorological conditions, so that their character and response to treatment differed within a short period, a feature now so well seen in epidemics of influenza. This idea of changes was vigorously opposed by doctors in the last century like J. H. Bernet and Markham. But now Rolleston has shown by statistical evidence that many diseases, especially, acute infectious diseases like scarlet fever, change their character. He says that they are not rigid entities like precious stones or an issue of postage stamps but are the reactions of the living body when it fails to adapt itself to an adverse environment, internal or external. The practical disappearance of Chlorosis, the absence of once prevailing complications like Pneumonia and Hyper-Pyrexia of acute Rheumatism, the increasing rarity of Tophaceous Gout, the obviously less malignant nature of contemporary Syphilis, the increasing incidence of appendicitis after the return in 1889 of influenza, the growing rarity of typical lobar Pneumonia are some of the illustrations to show the change in the character of diseases.

The doctrines of the latrochemists, Paracelus and Sylvius of Leyden in the 16th and 17th century have now assumed an entirely different character in bio-chemistry and metabolism. Blood Transfusion practised by Gean Denys of Montpellir and Richard Lower was practically abandoned until very recently when the technique was rendered comparatively safe by the discovery of blood groups.

Apart from these happy and interesting rebirth of ideas and conceptions which have received the hoaridom of antiquity, the 20th century has been exceptionally fortunate in witnessing the birth of entirely new ideas in almost all the departments of medical science, particularly, Physiology, Pathology and Therapeutics, which have come to stay and which have reasonable chance of surviving and coming out unsinged from the fire of unrelenting adverse criticisms. With the limited time I have before me, it will be impossible to survey the whole field of modern medicine. I shall therefore confine myself only to the most outstanding of advances in some of the departments of Physic.

Tropical medicine with the help of bacteriology and protozoology under the leadership of Sir Patrick Manson, the father of modern tropical medicine, has developed enormously. Sir Ronald Ross's proof of the mosquito born infection of malaria in 1897 is only one of the first but an outstanding example of the part played by insect vectors and human carriers in infection. The almost settled problem of the vector of Kala-azar is an additional argument for pursuing research in Entomology so far as tropical medicine is concerned, as I am almost certain, that insects are criminally responsible for many diseases prevalent in the tropics. A review of the work of the Calcutta School of Tropical Medicine by Knowles shows a record of useful and important activities in all branches of tropical medicine. Remarkable therapeutic advances have been made in recent years particularly with regard to the treatment of Kala-Azar, a very common cause of splenomegaly in Madras though not in this District. The use of organic pentavelant antimonials like the Ureastibamine of Bramhachari and Neostibosan of Napier has brought about a sensational cure for a disease which was at once a bugbear to the public and a despair to medical men. Mass treatment with these drugs properly carried out leads to the eradication of the disease in an infected area. In case of malaria, the advances though not sensational have been extremely important. An additional proof for the statement of Rolleston that diseases change their character is supplied by malaria which does not seem to conform always to type. Atypical forms of Malaria with atypical temperature charts are commoner than before. The advances in malarial therapy though not sensational have been extremely important. In 1920, Quinine was considered to be the sole and sovereign remedy for malaria. Since then, the Calcutta School demonstrated that the total alkaloids of Cinchona bark constitute an equally efficient and cheaper remedy. The value of plasmoquine in sexual forms thus rendering the patient non-infective to mosquitoes has also been established. The synthetic compound atebrin has now proved to be a successful rival to quinine and is decidedly superior to it in case of malignant Malaria. It is particularly useful in special conditions as quinine idiosyncrasy, blackwater fever and pregnancy. The discovery of monkey malaria is sure to prove of much value in the experimental study of malarial therapy. As regards hookworm infections, carbon tetrachloride is now-a-days discarded as being toxic, particularly to Indian populations. Experimental work has shown that a combination of carbon, tetrachlor-ethlene, with Olium Chinnapodium is perhaps the best treatment for ankylostomiasis. Chronic Amæbiasis has

long been and still is troublesome and recalcitrant. The Alkaloids of Kuruchi bark were boomed up as giving excellent results, but later reports are much less satisfactory. Last year, however, the drug carbarsone was found to be of great value in this condition. Col. Knowles believes that its introduction may prove one of the most notable of recent advances in tropical medicine.

Bacteriology through the efforts of Louis Pasteur and Robert Koch began to progress from the middle of the last century even though the diehard section of the medical public in the early eighties referred to it with a condescending smile as 'the germ theory', thus intimating that it was the obsession of a crank. But with the discovery of the tubercle bacillus by Koch in 1882, the Cholera vibrio in 1883, the Typhoid Bacillus by Jaffky in 1884, the diphtheria bacillus in 1884, the bacillus of Tetanus in 1889 by Kitasato and the Plague Bacillus in 1894, Bacteriology began to make such rapid strides that, during the early years of this century, people were in serious expectations about the realisation of a long cherished vision of a panacea for all ills. The enormous production of vaccines and seras and their usage in season and out of season have not met with the same success as to justify the Utopian hopes of some of the over-optimistic members of our profession. It is true that they are useful in many diseases but only to a limited extent. But I do believe that bacteriology is a potential field for further research as the last word has not been said in most of the diseases caused by organisms. I am of opinion that further improvement in technic and increase of knowledge about the organisms themselves will help in the production of more successful seras and vaccines. The recent success of two London doctors in producing influenza in Ferrets by inoculating the virus is going to be of far reaching importance as it would greatly facilitate the prevention and cure of that disease. Lot of recent work has been done in filterable viruses, which would form the basis for further investigations in bacteriology.

An entirely new cardiology has resulted from the work of of Sir James Mackenzie and Sir Thomas Lewis who have made us look at diseases of the heart from an entirely new angle of vision mainly as a result of the use of the polygraph and the electro-cardiograph. In the latter half of the 19th century, the era of morbid anatomy, physical signs of the underlying structural changes were enthusiastically cultivated and in the case of the heart, murmurs were the data on which diagnosis depended. Even today many Life Insurance Companies and Medical Boards in India do not pass a man as a first class life if he happens to have a

murmur over the præcardium, but in the more advanced countries of the world medical men have rightly transferred their attention from the condition of the valves to the functional efficiency of the cardiac muscle. Whether it be a stenosis of the mitral valve or regurgitation through Aortic opening, the heart is capable of compensating for any mechanical deficiency so long as the myocardium is normal. Heart function will be impaired only when the heart muscle is damaged. Hence murmurs and other auscultatory sounds over præcardium are of minor importance in the diagnosis of heart failure. Functional efficiency of the heart is to be guaged by the degree of breathlessness on exertion and by the exercise tolerance tests. The Electro-cardiograph helps us to find out the condition of the myocardium. Radiography has definitely superseded the percussion methods in ascertaining the size and shape of the heart. No less a person than John Parkinson has definitely discarded percussion of the heart as fallacious in preference to orthodiagraphy. Besides it makes possible the inspection of the Thoracic Aorta and the Pulmonary Arteries. Cardiac irregularities like flutter and fibrillation have been classified by the use of the Polygraph and the Electro-Cardiograph. Coronary Thrombosis has now come to be recognised as a separate entity as differentiated from Angina Pectoris. Incidentally, the Coronary theory about the causation of Angina has gained ground considerably owing to the existence of similarity in some of the symptoms in the two conditions. Coronary occlusion is no longer regarded as a necessarily fatal lesion and can often be diagnosed during life. In fact some cases of almost complete recovery have recently been reported. Neurocirculatory asthenia which attracted much attention during the war is now recognised in civil life as a result of acute infections and focal sepsis. It should be treated by graduated exercise and not by rest. I know of one or two instances of Neurocirculatory asthenia as a result of influenza being treated as acute myocarditis with absolute rest in bed and heroic doses of Digifortis. In the province of therapeutics, the massive dose method of administration of Digitalis, Iodine therapy in thyro-toxic hearts before operation, the use of Salyrgan intravenously for the production of copious diuresis in cases of congestive heart failure, the closed mask and nasal catheter methods for the administration of oxygen and complete thyroidectomy with a view to reduce the metabolic rate in people with heart failure are some of the outstanding advances of the day.

The knowledge of blood diseases has considerably advanced

largely as a result of the introduction by Ehrlich of new and special staining methods which have enabled to bring the recticulo-endo-thelial system into great prominence. In fact anaemias and leukaemias are no longer considered as blood diseases but as diseases of the recticulo-endo-thelial system. Primary pernicious anaemia is a misnomer, as it is neither primary nor pernicious. To avoid all misconceptions it is to be called after the name of Dr. Addison of Guy's Hospital, who described it for the first time in the middle of the last century. Some of the American research workers, call it by the more scientific but rather cumbersome name as Hyperchromic megalo-blastic anaemia as opposed to hypochromic Microcytic anaemia described by Witts recently. I reported two cases of the latter condition before the Indian Science Congress in 1932. Whereas Addisonian Anaemia is the result of the absence of secretion of a haematogenous substance by the stomach cells. Hypochrome Anaemia is caused by want of sufficient amount of iron and copper in the system. The former improves by treatment with liver extract and Hog's Stomach, while the latter rapidly improves by the administration of iron and small doses of copper by mouth.

Gastro-enterology has advanced rapidly owing to the assiduous work of Dr. A. F. Hurst, and his colleagues at Guy's hospital. In his Alvarez Lecture on "the Unity of Gastric disorders" he attributes almost all the diseases of the stomach to two factors, one constitutional and the other gastritis. Thirty years ago Prof. Knudfaber emphasised the importance of gastritis in the production of Achlorhydria. Hurst who previously attributed all gastric disorders to diathesis has now come round to believe that gastritis is an equally important factor. Without gastritis there is no Achlorhydria, but gastritis does not cause Achlorhydria unless the patient is predisposed to having the hyposthenic gastric constitution. Gastritis in the presence of the hypersthenic diathesis may lead to duodenal and gastric ulcers. It is the conjunction of gastritis with predisposition to cancer that leads to carcinoma of the stomach. It is gastritis that causes Achlorhydria and it is gastritis, not Achlorhydria, that causes Addisonian Anæmia and Subacute combined degeneration of the cord. Hence the prophylaxis of gastritis is the prophylaxis of these diseases. It follows therefore that these diseases could be prevented by the adoption of simple hygienic methods required to avoid the exciting process of gastritis like mechanical, chemical and thermal irritants, infection from teeth, tonsils and sinuses and bacterial toxins from acute infections. But it must be admitted that a

universal prophylaxis of this kind is an ideal of perfection, not easily adoptable. It can however be provided for those people who can be recognised from their physical characteristic and family histories as being constitutionally pre-disposed to develop organic diseases of the stomach. Early recognition of gastritis and gastric ulcer amongst the population of this Presidency will keep gastro-enterology mainly within the province of the physician and thereby lessen the work of operating surgeons in Madras whose abilities are now-a-days guaged by the number of gastroenterostomies, they have to their credit. The Practitioners by treating gastric diseases in their early stages medically will be doing a service not only to the patients by avoiding a serious abdominal operation but also to the surgeons who will have more time at their disposal to devote to really surgical conditions.

Addison's disease of the Supra-renals and diseases of the Thyroid were the only endocrine diseases recognised a few decades ago. But during recent years endocrinology has advanced by leaps and bounds. Grave's disease or Exophthalmic Goitre which was once considered to be a disease of the nervous system has now been proved by Greenfield to have its origin in Thyroid disfunction. The discussion as to whether it is due to excess of normal secretion or due to an abnormal secretion is still going on without any prospect of settlement. Prof. Drouet of Nansy has recently published an account of his work which concludes that over-activity of anterior pituitary is responsible for changes in the Thyroid and that Grave's disease is a combination of primary Hyperpituitirism with secondary hyperthyroidism. He therefore recommends treatment of both pituitary and thyroid by X-rays and of the Thyro-toxicosis by Lugol's solution and Hematothyroidine.

Hyperadrenalism is considered by D'Courcy and co-workers as the cause of essential hypertension. Working on this hypothesis they removed 2/3rds of each supra-renals in many cases with very satisfactory results. Other workers like Oliver and Meilkeie also take a similar view as to the value of Adrinalectomy in essential hypertension. If the above view is correct I wonder whether subjecting the supra-renals to deep X-ray exposures will be practicable and beneficial. The Pituitary body has been the subject of enormous amount of experimental as well as clinical research. The isolation of Vasopressin and Oxitosin from the posterior lobe, the preparation by Vandyke of separate concentrated extracts of both growth promoting and gonad stimulating principles from the anterior lobe called respectively Phyone and

Hebin, the description of a new Syndrome by Cushing due to a basophiladenoma of the anterior lobe are some of the recent advances so far as Pituitary is concerned.

The influence of parathyroid on Calcium Metabolism and its hyper-secretion in the production of bone changes like Ostietis-fibrosa Cystica have been much discussed recently by Hunter and others. The recent preparation, Gortin, from the Adrinal Cortex promises to be of real value in Addison's disease.

Dr. James Collier's Harvian oration on "INVENTIONS AND OUTLOOK IN NEUROLOGY" while exhibiting the author's powers of description, imagination and philosophic insight, surveys the knowledge of the past as well as the present and seeks for those principles which should guide the development of Neurology in the future. Collier is of opinion that psychical functions of the cerebral hemisphere are not amenable to localization. In fact the speech centre and auditory centre and further subtle sub-divisions into idosensory and idomotor centres regarding deafness and blindness can no longer be put into water tight compartments as it used to be before. We have only the vast expansion of the brain, in the words of Sherrington "as an output and input signalling system which is newly arisen as a gigantic combining mechanism for signals from the outside world and as a dominant part of the nervous system which tends to deal with the requirements of the animal as a whole more than does any other part". A new orientation of neurology is occurring. Anatomy and physiology are rapidly becoming exhausted fields for research in neuorology which appears to be in imminent danger of being absorbed into other departments of medicine. It is encroached on by general medicine, by biochemistry and by Bacteriology as the recent development in the treatment of posterolateral Sclerosis and of Polyomytitis illustrate. Psychiatry is no longer such a close preserve for physicians in charge of asylums, as it is more closely related to general medicine—for example the casual influence of toxaemias and local infections. Malarial and other thermotherapy in G. P. I., removal of toxaemias and focal sepsis in mental conditions, treatment with vitamins in some forms of nerve degeneration, adoption of psycoanalytical methods based on Freud's hypothesis are some of the advances in neurological therapeutics.

Amongst the specific infectious diseases, tuberculosis deserves our special attention. Koch's discovery of the tubercle bacillus in 1882 is one of the milestones in the history of medicine. The original belief that a non-fatal infection with tubercle bacilli

produced immunity against subsequent infection cannot hold water because though this immunity prevents rapid generalisation, tuberculosis assumes a malignant form in chronic phthisical adults as a result of tuberculin hypersensitivity associated with it. The American National Tuberculosis Association differentiated two types one the childhood type said to be primary and the adult type as a result of re-infection generally. A positive tuberculin test means only that there is hypersensitivity in the individual caused either by a previous infection or by an existing active infection. Rich has shown recently that hypersensitivity and immunity can exist independently and that hypersensitivity may be abolished while immunity persists. A tuberculin Negative individual when exposed to massive contagion will almost certainly develop a symptomless or mild primary tuberculosis which may become generalised in a child. The positive individual will perhaps develop chronic Phthisis. B. C. G. vaccination which is one of the recent introductions for the prevention of tuberculosis is said to produce tuberculin hypersensitivity as well as immunity. Hence, while a child may be benefited by the prevention of generalised forms of tuberculosis, the protected adult, might after vaccination be at a disadvantage when meeting his first infection owing to this destructive hypersensitivity. B. C. G. vaccination though adopted generally in the continent is not welcomed in Great Britain. It is still too early to say whether B. C. G. vaccination is entirely beneficial. Though constitutional and sanatorium treatment with fresh air, plenty of fare and freedom from care are the main stay in the therapeutics of tuberculosis, artificial Pneumothorax, Phrenic Evulsion and Gold Therapy are found to be very useful adjuncts in combating this fell disease.

A review of therapeutic progress during recent years must from consideration of space alone be incomplete since time and wide experience are necessary to prove the value of new remedies and methods. In the third quarter of the last century devotion to morbid anatomy had bred an honestly pessimistic attitude of therapeutic nihilism which lasted into the eighties and nineties. Hence the main advances in treatment have comparatively been recent. In the annual oration on "New Treatments for old," Lord Horder wants us to remember the harmony that exists and must be preserved between the various organs and tissues when we seek to restore a state of equilibrium which has been temporarily upset. Early years of this century has seen a perilous rush towards extreme specialisations, but how the pendulum is beginning to swing back and the wiser amongst us are beginning

to realise that a good doctor though he may call himself Physician, Surgeon or Immunologist must in spirit be all of these.

The discovery of insulin and the adoption of liver therapy are outstanding achievements of long and patient research and strict adherence to the principles of physiology and the established facts of histology and chemistry. The application of technique to therapeutics has led to new methods of treatment as Artificial Pneumothorax, Phrenic Evulsion and Thoracoplastry in securing physiological rest to the lung in tuberculosis, blood transfusion in many critical situations, the application of X-Ray and Radium in cases of malignant growths, and such forms of Physiotherapy as ionization, diathermy, ultraviolet rays, high frequency, auto-condensation current, Finsen Light etc.

In the matter of dosage of drug the pendulum of practice has swung on towards the use of massive doses, a few instances being the doses of Salicylates in Rheumatic fever, of Potassium Iodide in Streptothrix infections, of Hexamine in Cholycystitis, of Alkalies in Peptic Ulcer and Digitalis in heart failure.

Up till now, perhaps even now, with the exception of a few drugs like Quinine and Ipecacuanha, practically every other drug aims at the relief of symptoms rather than the eradication of the cause. Sir Henry Dale however expects the future to see "a clearer distinction between remedies acting in relief of symptoms or by stimulating bodily functions to higher activity and those which specifically suppress an infection, arrest its progress or directly neutralise the morbific products of the invading organism".

Nutritional research has not only brought about the identification of Vitamins but also isolation of some of them in a state of purity. Vitamins D & C have definitely been isolated and their dosages have also been accurately established.

Recent reports of the results of active immunisation against diphtheria go to show that the success of this method is becoming year by year more striking. The increasing efficacy of serotherapy in streptococcal infections is generally admitted. B. Coli infections apparently yield excellent results under treatment by the serum of Vincent. Two new methods have been introduced for the control of serum reactions, namely, the oral administration of pancreatine both as a prophylactic and for relief of symptoms developed and the combined administration of Sodium Benzoate and Salicylate. Tetanus has been treated with remarkable success by intravenous injection of Serum combined with Urotropine, the latter facilitating the entrance of Antitoxin into the cerebrospinal

fluid. The recent introduction of Cobra Venom in the local treatment of Haemophylia is a remarkable achievement. French Physicians claim to have employed intravenous injection of alcohol (66 c.c.m. of absolute alcohol in 140 c.c.m. of physiological serum) with success in peurperal sepsis, pneumonia, abscess of lung and streptococcal endocarditis. Intra-abdominal injection of Salyrgan has been used with success in cases of ascites. New remedies and measures have been introduced for dealing with hypertension such as hypodermel injection of .05 grs. of Sodium Cholate, intravenous hypertonic glucose solution and division of the left splanchnic nerve. Angina pectoris has been ameliorated by intravenous iodine and subcutaneous injection of CO_2. Migraine and tabitic pains are said to be relieved by injections of antirabic vaccine or intravenous atropine which is particularly useful in gastric cases. An interesting addition has been made to the treatment of gastric ulcer and hyperchlorhydria with the injection of posterior pituitary extract.

The confusing jumble of therapeutic advances enumerated above must make us pause and reflect on the advisability of the adoption of these newfangled methods and remedies. Lord Horder gives a necessary word of warning against the incursion of what he calls the "Mass Man"—the apostle of direct action into medicine. We must be sceptical of tendencies that dissociate themselves from known physiological principles and therefore of remedies that are thrust upon us from outside, the result of ill-digested hypothesis and which never have been submitted to proper control. If we are to consider all the patent medicines that have flooded the Indian Market as advances in treatment, I am afraid, I will be compiling a rival to Encyclopedia Britannica. The samples of medicines thrust into my hands by the pestilential multitude of persistent salesmen who are as dogged as the other—perhaps more offensive—plague of mankind, the insurance agent, are sufficient to fill a chemist's shop. The manufacturing chemists and their loyal representatives flourish because even though we are deluged with new ideas and new medicines we clamour for still more. In the words of Lord Horder "Though we are already dyspeptic, we want more food to bolt." We suffer from a sort of mental achylia. There seems no time to chew, and thought which is the juice by which facts may be prepared for assimilation has become denude."

I believe whole heartedly in research: Harvey the great founder of scientific medicine said "seek out nature by observation and experiment". Even though we medical men of this

Presidency, whether they be in service or in private practice are considerably handicapped by want of facilities, it is up to us to create opportunities and use them as much as possible for scientific research. Exigencies of service require and rightly too constant rotation of its members throughout the Presidency, so as to provide equal opportunities to all. Hence, unless a research cadre with permanency of tenure is established, service members of our profession cannot be expected to do much by way of research. The independent medical practitioner on the other hand has greater opportunities atleast for clinical research though not laboratory research as his position as the family Physician facilitates study of cases by observation extending over longer periods. But his field also is limited. I therefore strongly advocate an early establishment of a research institute in Madras either by Government or by Public donations so as to enable us to keep pace with other countries of the world in the matter of medical research.

I wish to be permitted to say a final word about advances in the teaching of medicine. I can speak with some authority as I had opportunities to study the methods of teaching both in England as well as in the Continent. I consider the individualistic method of teaching in Vienna to be perhaps the best as it enables the student to come in intimate contact with the professor who seems to have the peculiar knack of understanding the psychological deficiency of each and every student put in his charge. In other countries, the foundation of medical knowledge is laid not by the professors but by the junior members of the staff. Here on the other hand the duty of the assistants however capable they might be stops either with the taking of rollcall or with the copying of prescriptions or cutting catguts out of the hands of surgeons. Medical Education in this Presidency, will not improve unless separate teaching cadres are established for each and every subject and unless the enthusiasm of the young is commandered without allowing it to fade in the desert air.

My survey of advances in medicine is far from complete but it is sufficient to show that the present period was one of rapid progress. The mist that had hidden the ætiology of many diseases are breaking and dispersing and the prospect is beginning to take form and detail. I shall only pause to wonder with Sir Henry Dale, "Who could say that from this new vision of our enemies, the fire of some imaginative genius might not kindle for the forging of weapons of a type yet unforeseen to give victory atlast on yet another field in the battle for life and health."

DIET IN HEALTH AND DISEASE *

BY

DR. R.C. MOTWANI, M.S.,

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OSLER aptly remarked that 70 % of human illness was preventable. This according to him was due to either faulty diet or indiscretions of the individual. I shall briefly state the accepted principles on diet in health and then discuss their modification in disease. An ideal diet replaces the body waste, supplies stimulus to the digestive and other systems, furnishes adequate amounts of proteins, fats carbohydrates, water, salts, and vitamins. Its calorific value should be 2500 c.c. To put it in plain language, a healthful diet ought to include 2-3 ozs. of Proteins, 2 ozs. of fats and about 15 ozs. of Carbohydrates, to properly build up a dietary. I may remark that protein contained in wheat is about 10 %, in meat 13 %, in fish 10%, in eggs 12%, in dried peas 24%. Protein chosen ought to contain essential Amino-Acids. Fats supply the energy required. They take longer to digest and thus sensation of hunger is delayed and thus too the sense of fatigue. Animal fat like butter is more valuable than vegetable fat. The fats must be associated with appropriate amount of carbohydrates, as these regulate proper oxidation of fats. As regards the salts, these are obtained in nature as, for instance, calcium phosphate in milk, phosphates in germinated food, iron in bone marrow and iodine in water. Sodium chloride is of course added to the food stuffs. As regards much discussed subject of Vitamins, inclusion of fresh fruits, green vegetables. whole meal bread, tomatoes, carrots, banana, properly husked rice, milk and eggs supply all these in full measure. Preparation and presentation of food in attractive and appetising form is a necessity and not a luxury, and variation should be attempted from day to day to help the appetite. Pavlove's, experiments clearly show the good effect of sight and smell of food on secretion of stomach juice. Start the day with simple breakfast like Quaker oats, rice or wheat flakes or toast with butter. Too rich or spicy breakfast spoils the appetite for the day. During principal meals a selection is to be made from (i) Vegetables. (ii) In vegetarian, dietary, proteins are best obtained from milk and wheat or germinated pulses. In non-vegetarians eggs, fish and meats, will do for the purpose. (iii) Fats from butter and

* Specially contributed to the Antiseptic.

ghee will be best. This plain diet, should be supplemented by soups, pickles in moderation, salads and fresh fruits. Tea and coffee, are good in moderation. Milk brought to the boil is better than one kept on fire for long.

1. **Diabetes.**—In chronic Diabetics, restrictions in quantity and quality of carbohydrates with insulin give better results than either of these alone.

The following are allowed:—Fish meat, chicken, sweetbread, boiled eggs, cream, butter, curds, jawari or bajari flour instead of wheat, almonds nuts, soya beans, cabbage, lettuce, spinach, tomatoes, acid fruits, grapes, honey and alkaline waters. In addition to restricted diet, patient should have regular exercise, hot bath, and periods of rest, (suitable to his restricted diet), fair amount of sleep, less worries the better. Boiled preparations are preferable, as digestion as a rule is not good.

2 **Constipation.**—Sticky and concentrated diet is the common cause. Inadequacy of digestive juices makes the system sluggish,

Leafy vegetables like cabbage, spinach, salads, celery, carrots, tomatoes, turnips among vegetables, papaya, figs, prunes among fresh fruits, nuts, wholemeal bread, and honey are indicated. Regular exercise, plenty of drinking water between meals, outdoor life, fair amount of milk, butter and cream are very helpful. Laxatives do more harm than good.

Regular habits and observance of "of early to bed and early to rise", gets a favourable response. Food with roughage sweeps the inside like a broom. Rendel Short considers sticky and concentrated diet as a cause of appendicitis.

3. **Gout and high blood pressure.**—Moderation is the keynote, both as regards quality and quantity. Live a simple life in thought and deed. More of vegetable diet, should be taken. Avoid meat, proteins in the form of milk, eggs and fish allowed. Avoid rich spicy dishes and pastry. Use of alkaline natural waters like Evian, very helpful, village and open air life more conducive to health.

4. **Inflammatory diseases of digestive system, like dysentery, diarrhoea, colitis.**—Begin with a dose of castor oil or liquid Paraffin.

Fruit juices of sweet limes or oranges pomegrane juices. cocoanut water, glucose. Gradually add milk to the dietary modified by addition of lime water, Citrate of Soda, Horlicks, Bengers, plasmon, albumin water, rice water, barley water, and gradually come to arrowroot, sago, tapioca, curds, whey, fruit jellies. Remember what is irritant on the surface, is irritant within.

5. **Typhoid.**—Fruit juices, glucose and sponge baths do the needful. Gradually add as under 4. Bloated stomach warrants restricted diet. Pump in as much as is utilised.

6. **Pneumonia.**—Supporting diet, soups egg fillip, liquid peptonoids, Brands essences, milk in various modified forms as under 4. Support strength from first day, Rest in bed conserves strength.

7. **Phthisis or wasting disease.**—Easily digested food selected from above, Virol, Robolene, milk in its various modified forms as above.

Accompanied by fruits, creams, butter in small feeds at short intervals. Fresh air, cool surroundings and ample rest are very beneficial.

Cases and Comments

ELECTRIC TREATMENT OF SCORPION BITES

BY

DR. N. C. APPAYYA, L.R.C.P., M.R.C.S., L.M.

A. M. M. Hospital, Pallatur, Ramnad Dist.

THE only excuse in publishing these notes is that, the text-book treatment of scorpion bites is very unsatisfactory and there is very little taught about this in Medical Schools and Colleges and the net result is that the suffering public have greater faith in "Mantrams" and other quack remedies.

For the last three years or more, I have treated over fifty cases of scorpion bites in the following way and the results have been very satisfactory.

Equipments.—1. A motor car having a battery not more than 6 volts.

2. A silk electric wire of about 6 ft long.

Treatment.—Connect two valve plugs of the motor car to the two ends of the twisted silk wire. The other two ends of the silk wire should be stripped off the silk and rubber covering to a length of one inch and the fine copper wire should be exposed in the form of a fan by means of a pen knife

Now start the engine and let it run at a slow even speed. While the engine is running, pass the two ends of the electric wire over the site of injury from above downwards starting from one inch above, and ending one inch below the injured point. Continue

this process of brushing from above downwards and from side to side and all round, for a period of five to ten minutes or until all the pain has disappeared. If only one strand of the twisted silk wire is used, connect one end to one plug of the engine and the other end to be used for giving shocks.

If the patient is nervous or cannot bear the electric shocks, switch off the engine for a few minutes and start again and continue this method for a period of 20 to 30 minutes or until all the pain has disappeared.

I generally give these electric shocks for a period of 5 to 10 minutes and the results have been wonderful. In my hands all the patients have had 75% immediate relief, and the little pain that may remain disappears in a few hours. I have never had occasion to repeat this treatment, and there have been no failures.

Since motor cars are now available in every nook and corner of the world this treatment can be undertaken by anybody at any time and at any place.

In this connection I would like to know whether there is any harm in using cars having batteries with higher voltages than 6. (I have never tried one for fear of giving too severe shocks). I would also like to hear from your numerous readers who are Radiologists how this treatment works. It has been suggested to me by a timid patient that an injection of Novacaine may be given at the seat of injury before the beginning of treatment. Injection of Novocain alone does not give permanent relief. Personally, I have had no experience of the above method.

I hope readers of this article will try my treatment on their patients and give their experience for the benefit of the suffering.

AN INTERESTING CASE OF INTESTINAL AUTO-INTOXICATION AFTER DELIVERY

BY

DR. MOHINDRANATH CHATTERJEE,

Patooli Mathbari, Balagarh P. O., (Hooghly).

ON the 7th November 1933, a female patient aged about 21 delivered a male child in the eighth month of her gestation. During labour she had no trouble and gave birth to the child very smoothly (*i. e.*, within three hours from the commencement of the pain)

On the tenth day of her delivery she had frontal headache of a very severe type and vertigo. When she went to the

latrine she fainted. Nobody knew what happened to her until her child cried. She was then searched for and was found inside the latrine in a semi-conscious state, smeared with faeces and urine. She was taken out and after changing her clothes was put to bed. Her consciousness was not regained up to that time. Her mother enquired what happened to her, and in reply she could not say anything except some irrelevant talks which were meaningless. Her father came to me for some medicine. I enquired whether she had still any trouble with the uterus or whether she had any previous history of fainting. Her father replied in the negative stating that she was perfectly well during her puerperium and that she had no previous history of fainting. It struck me at first whether that might be the initial symptom of "puerperal mania". Without seeing the patient and without putting much stress upon the diagnosis, I simply prescribed some diffusible stimulant for that day.

On the next day and at the same hour (10 a. m.) she had headache and vertigo and she wanted to go to the latrine, but she was made to defaecate in her bed room. After having a motion she fainted. I was at once called to see the patient for the first time. I found her anaemic and lying in a sub-conscious state; her eyes rolling from above downwards. On examination, uterus was palpable just at the level of the symphysis pubis, there was no pain and tenderness, and abdomen was slightly tymphanitic. I asked the patient what was the trouble with her. She could not state anything. I gave a few drops of Adrenalin chloride solution, 1—1000, under her tongue and asked her father about her diet. I was told that she was given cooked rice in the day time and "Luchhi" at night. I advised them to give a light diet at night, and prescribed the following medicine :—

℞

Sodi Bromide	...	gr.	xv.
Tr. Valerian am.	...	♏	x.
Tr. Belladonna	...	♏	iv.
Spt. amm. aromat	...	♏	xv.
Tr. Hyoscyamus	...	♏	xx.
Tr. Digitalis (P. D.)	...	♏	v.
Syrup Aurantii	...	ʒ	i.
Aqua ad	...	℥	i.

mft. mist one, 4 such, one to be taken every 3 hours. She was alright during the whole day and night. Next morning she felt very weak and there was no other trouble. The same medicine

was repeated. In the evening she felt very hungry and was given "Luchhi" again, in spite of my instruction about light diet.

Next morning at the same hour, she was complaining of headache and vertigo, and I was called to see everything from the beginning. On reaching there, I found the patient lying on her right side covering her whole body with a piece of bed sheet and complaining of severe headache and vertigo : her pulse was weak, soft and compressible. She had to keep her eyes closed owing to the aggravation of the vertigo when opened. I put a few drops of Adrenalin into her mouth, with no improvement. After 15 or 20 minutes, she began to throw her hands here and there and suddenly caught hold of my hand with great force ; her head bent backwards and face sideways. She began to grind her teeth, foams and mucus came out of her mouth ; her left leg raised about 2 feet and her whole body became tonically contracted. She involuntarily passed a flatus which had a very foul smell ; her eyes were rolling above downwards and perfect unconsciousness supervened. I gave some flashes of cold water on her face. After 3 or 4 minutes, her whole body relaxed ; pulse became weak, quick and irregular. On enquiry, I was told that she had scanty urine; her bowels not moved freely and she had no good sleep during the night.

As there was no trouble with the uterus and no previous history of fit being traceable and owing to the presence of the bowel complaint, it struck me that it must be a case of gastro-intestinal intoxication due to the imperfect assimilation of flour and "ghee". I advised the parents of the patient to give her cooked rice in the day time and 'sagoo gruel' at night and prescribed the following :—

℞

(1) Hydrag Subchlore	...	gr.	ii
Sodi Bicarb	...	gr.	xii
divide into 3 pulvs			
(2) Sodi Bromide	...	gr.	xii
Tr. Valerian Ammoniata	...	♏	x
Tr. Nux vom	...	♏	v
Sodi Sulph	...	ʒ	1½
Tr. digitalis (P. D.)	...	♏	v
Spt. Chloroform	...	♏	vi
Infusion Buchu ad	...	ʒ	i

mft mist one 3 such, one to be taken every three hours alternately with the pulvs.

(3) Toxinol ... ʒ i

2 pulvs, one to be taken by dissolving in a tumblerful of water one hour before principal meals.

Next morning she had 3 watery motions of yellow colour and felt hungry ; no vertigo, only slight headache. Diet was the same as advised before. The following medicines were prescribed :—

℞

Sodi Bicarb		gr.	xv
Sodi Bromide	...	gr.	x
Tr. Valerian ammoniata	...	♏	x
Tr. Stropanthus	...	♏	ii
Tr. Card Co	...	♏	xx
Spt. Chloroform	...	♏	vi
Tr. Encatiphs	...	♏	vii
Infusion Buchu ad	...	ʒ	i

mft mist one 4 such, one to be taken every 3 hours.

(2) Toxinol 3i per dose twice daily before meals.

The same medicines were prescribed for two days more and there was no further trouble of any sort.

As vitamin prevents the absorption of toxin from the intestine and to overcome the anæmia and weakness she was prescribed to take two tablespoonfuls of "Ferradol" (P. D.) twice daily. Since then she has been improving with her baby.

OSTEOMYELITIS AFTER SMALL-POX

BY

DR. A. R. LODHI, M.B., B.S., B.M.S.,

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ONE often wonders how preventable diseases have not yet been prevented especially on account of the ignorance of the people who do not value suggestions made for their own good. There is a class of educated men also who do not practise preventive measures though being aware of the same.

It is accepted beyond any shadow of doubt that smallpox vaccination is a great preventive against an attack of smallpox. Still, I find from my experience of two years in this above Ghat-Taluka of the N. Kanara District, that many people are not prepared to take advantage of the facilities for vaccination and it

is not uncommon to find children and some elderly men who had a natural attack and who have lost their eyesight because of corneal complications or maimed their extremities because of osteomyelitis. Pitting of the face with disfigurement is of course the commonest result.

I came across three cases of osteomyelitis after smallpox. Two of them refused to undergo any operative treatment as usual and they could not be traced. But the third patient though he refused to be operated upon in the beginning was compelled by circumstances to undergo operative treatment after about six weeks.

"A boy named A. A. aged 10 years (who gave a history of an attack of smallpox about three months ago and who was examined by me about six weeks back for a sinus of the left arm) was admitted on the forenoon of 28th May 1934 for a very foul smelling wound full of maggots and protrusion of conical and ragged end of sequestrum of the left Humerus. The maggots were present in numbers and were most probably the result of the house-fly depositing its eggs on the unprotected sinus. The boy had no father but his uncle was frightened at the sight of the 'insects' running up and down and the agonising pain which the boy was undergoing besides the restless nights and the consequent ill effects

"For the first two days the wound was cleaned and plugged with Ol. Terebinthina and luckily on the third day it was free from all maggots and foul smell. Sequestrostomy was performed and it was observed that the sequestrum was kept in position by the soft parts only. After incision of the soft parts, the sequestrum came out easily with a little rotatory movement but without any chiselling of the bone. It was almost tubular in shape and about 3 inches in length. There was very little matter to be scraped from the cavity which was packed with antiseptic gauze after putting in two stitches in the soft parts and paring off the edges of the sinus. The wound healed up without any complications and the boy was discharged cured on 16th June '34."

The case is reported just to show the result of Nature's treatment by maggots in a neglected case of osteomyelitis in Humerus after an attack of smallpox.

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Editorial

SKIN AFFECTIONS AND THEIR LATEST TREATMENT

It is proposed to give in these few pages a short account of the progress made in the treatment of skin affections during the past few years, particular attention being paid to the conditions prevalent and common in our country. Before going to the subject proper, it is worthwhile to note some observations made on the physiological aspect of skin during health and disease.

Observations of many workers show that chemistry of the skin has some importance, in the healthy action of the skin and in disease conditions ; thus, reduced pressure, darkness, ultra-violet rays, and administration of irradiated ergosterol have a great influence on the chlorine, potassium, calcium, and magnesium content of the skin. It has been observed that metabolism of the skin is greatly disturbed during disease, particularly its sugar content. By a carefully devised method to estimate quantitatively the sugar content of skin, it is seen that in many skin affections there is a higher skin sugar content than that of the blood, in the same individual after administration of intravenous glucose and in uncontrolled diabetes mellitus. The skin sugar is well above normal level. It is suggested that the skin sugar content increases much earlier in an individual with diabetic diathesis than the blood sugar and as such, cases of diabetes may be diagnosed by this method. In the truth of these statements, it is profitable to make a study of the skin sugar content in all cases of Dermatitis and disorders of metabolism.

Some observations on the self sterilizing power of the skin

show, that dry skin has an inherent property to destroy bacteria implanted on its surface and this action is intensified by sunlight or ultra-violet rays—(MALLMAN, Lansing, Mich.)

CORNBLEET (University of Illionois) in a study has found out that this property is not due to the surface acid and concludes that the skin manifests this inherent property even when it is neutral.

In view of the wide popularity of artificial sun treatment without medical advice, BECHET (New York), has made some studies which disclose the harmful effects of successive irradiation. This worker cites several cases of epithelioma, disseminate lupus erythematosus due to excessive actinic medication. In a series of 262 cases conducted by MEUDELSOHN (New York) on the value of intradermal allergic test in skin affections (*e. g.*) eczema, urticaria, and dermatitis venerrata, with a few cases of prurigo, erythma multiforme, angioneurotic oedema, and neurodermatitis, where an allergic cause was suspected, this observer was forced to the conclusion "that intra dermal tests are of little value as indicating the cause of skin affections", and, if positive, are of no practical importance so far as the treatment is concerned. Dermal manifestations of vitamin deficiency have been noted by various observers all over the world, notable among those being LOEWENTHAL (Kampala, East Africa). In his observations of over 130 cases at the Uganda prison, he describes a condition of pure 'cutaneous or avitaminosis.' These cases presented an appearance of a picture of acne vulgaris combined with a dermatosis involving dryness of the skin, itching, papular eruption and folliculitis. Examination of the eyes revealed in most of them night blindness and xerophthalmia and on these symptoms a deficiency of vitamin A was diagnosed. Daily administration of Cod Liver oil cured the eye condition and dermatitis in many cases. NICHOLLS (Ceylon) reports a similar outbreak in a prison. This worker suggests the name phrynoderma, (load skin) and defines it is a papular dry skin eruption, frequently accompanied by neuritis and/or eye symptoms. Vitamin A deficiency was diagnosed in all these cases. GOODWIN (London) reports the case of a boy aged 10 years with symptoms of a dry harsh skin, 'Goose skin,' with a papular eruption. These symptoms disappeared under a good mixed diet, with addition of cod liver oil.

Among the newer therapeutic agents in dermatology, the following deserve some mention:—Triethanolamine, Carbondioxide Snow, and Pyogenic Therapy.

Triethanolamine.—This is a substituted ammonia $(C_2H_{4\,0}H)_3N$: it is a colourless glycerine-like fluid, miscible with water, to which it imparts a strongly alkaline reaction. The crude product contains approximately 75 %. triethanolamine with 20% of diethanolamine and 5 % of monothanolamine, and is a colourless or pale yellow hygroscopic fluid with a slight ammonical odour. It combines with fatty acids to form soaps with good detergent properties, and is most useful in the preparation of emulsions. Skin applications made with this are more penetrative, act more rapidly, and are more easily removed.

Acne.—JACOBSON, while discussing its aetiology asserts that it is closely associated with kerose, where there is an yellowish discolouration of the skin, an accentuation of pilo sebaceous orifices etc. He classifies acne as: Acne valgaris (sub groups: acne simplex, with no scarring, and acne undurata, with scarring), acne medicamentosa, or drug eruption: acne urticaria, or excoriated acne, traumatic in origin; acne necrotica; miliary acne nurotica; acne rosacea.

WHITFIELD (London) is of opinion that acne vulgaris is mostly a disease of adolescence and rarely presents itself in infants. More common in males than females. Heredity is said to play an important part in the causation of the disease. Severe indigestion with indicanuria is invariably present in adult type.

Rosacea.—SHONE WHITWELL (Guy's Hospital.): In a study of about 40 cases he finds it more common in women with associated low blood pressure—cold extremities. Gastric analysis showed no increase of acidity. (By the Fr. test meal and Histamine test.) The Rosaceons reflex was positive whenever the stomach wall tension was increased, which may be caused by any of the following conditions (1) delay in emptying, (2) feeble peristalsis (3) an easily determinable stomach wall. (4) over-rapid peristalsis and (5) gastric spasm. The gastric neurosis may be aggravated by psychological influences, poor muscular tone, or reflex effects from disturbances in an abdominal viscus or from a gastric lesion like gastric ulcer.

Alopecia.—This condition is very common, its aetiology is still unsettled and a subject of much discussion. MONACELLI AND MONTE SANO working with various pharmacodynamic tests as scarification, adrenalin, caffein and response to pain and changes of temperature in alopecia ærata find the affected part is comparatively in a state of ischæmia and diminished pain sensibility and conclude that the condition may be due to a local want of tone of the sympathetic nervous system. Nothing very much has

been done in the treatment of these conditions although BENGSTON finds that anterior pituitary extract may be of some use. LORD of Baltimore in his experience with cases treated with anti-pituitary finds nothing conclusive to prove the effect of pituitary extract.

Burns.—WILKER removes all blisters, tags of skin etc., by rubbing with gauze soaked in normal saline and all thick blistered portion of the skin cut. He uses 20 % coagulatory solution of tannic acid with 1 in 1000 acriflavine. The parts are painted with solution and dried by a current of hot air from an electric drier.

In cases of diffuse superficial burns, according to WELLS, the patient is kept in a tub containing tannic acid solution made comfortably hot. No particular strength of the bath is described. The solution in the tub is drained now and again and fresh water and tannic acid added. He claims an analgesic effect of the solution. The patient is heated in such a bath for about three hours and then removed to a warm room and placed on a dry bed receiving a continuous supply of hot air from an electric blower. The affected areas are treated with tannic acid 5% spray.

LOHR claims the beneficial effect of dressing with cod liver oil. The advantages are that the oil is sterile and has a bactericidal action on staphylococci and streptococci.

Dermatitis.—Under this heading, drug eruptions deserve some mention. Of these most common often missed are those caused by barbiturates. These compounds are most extensively used by the laity with or without medical advice.

LOVEMAN (University of Michigan) has shown that the barbiturate component of allonol is capable of producing eruption of the skin. BI and Gold extracts produce reactions simulating Pityriasis Rosea—(RATTNER, CHICAGO.)

Codeine.—SCHER AND KEIZ (New York) report exanthema caused by codeine.

The next common affection met with is **Eczema**. This has been found to be due to supersensitiveness of the skin to external irritation, and therefore, predisposing and exciting factors must be taken into consideration for a successful treatment. The aim of all treatment of eczema must be to relieve the intense itching, for which X-ray or shock therapy may be tried when other measures fail. In cases of children, diet is often the offender, and change of milk and avoidance of over feeding may bring on quick relief.

Protein skin tests are often of value in infantile eczema. HILL (Boston) in an experience of 300 cases finds skin reaction positive in 59 %, a large number giving positive reaction to egg,

and milk next in order. BROWNE (British Columbia) finds local application of adrenalin successful in the treatment of eczema where local application of calamine lotion and zinc ointment effected slight improvement, and quartz lamp application aggravated.

Fungus infections.—STRICKLER (Philadelphia) in a series of experiments to test the efficacy of iodine in various combinations finds the following useful in the fungus infection:—

Iodine	... grm.	1.3.
Pot. iodide	... grm.	1.9.
Salicylic acid	... grm.	1.9.
Boric acid	... grm.	3.8.

Alcohol 50% to make up to 59.1 ml.

This is painted over the affected area once or twice a day.

LEVINE (Cleveland) tried the effect of phenyl-mercuric nitrate in 262 cases including tinea and yeast infections. Of these, 205 showed definite cure. He advocates an ointment containing 1 part in 1500 in an oxycholesterin base.

Herpes.—The virus nature of the disease has been established. MAC FARLAND (Rochester, N. Y.) stroking on the suspected area with a pencil or finger tip produces 'goose pimples' as a reflex. This may be of diagnostic value in pre-eruptive cases. The use of pituitary extract has been found to benefit pain in most cases. Its administration is contra-indicated in pregnancy.

Lupus vulgaris.—Finsen light treatment has good effect on the lesion and cosmetic effects. SCHREUS and ENGELHARDT report good results with Grenz Rays. They suggest that for a successful treatment, exposure must be continued for a long period.

DUNDAS GRANT (London) reports favourably of Gerson Diet as modified by Sauerbrach and Herzmannsdorfer combined with vitamin D in the form of ergosterol. The composition of S.H.G. diet are: (1) The all but complete exclusion of sodium chloride, using a substitute as mentioned below; (2) plenty of vegetables, fresh and cooked; (3) restriction of meat; (4) restricted water intake, substituting fruit and vegetable juices; (5) Spices or flavouring; (6) a mineral compound containing chiefly calcium and magnesium; a compound of strontium, aluminium, and silica, cod liver oil; each of these being given three times a day (7) Rich fat and protein and low carbohydrate foods. 15 m. of irradiated ergosterol may be substituted instead of cod liver oil but this dose should on no account be exceeded.

Tuberculin.—Infection of tuberculin gives a certain amount of amelioration of symptoms in a few percentage of cases where other measures have failed.

Oriental Sore.—CHATTERJEE (Calcutta) reports treatment of this condition by local infiltration of the sores with 2% solution of berberine acid sulphate in the form of '*Orisol*'. The dose used was 1 ml for each sore. 12 sittings are required. No untoward symptoms were seen. Local treatment with an ointment containing 2% of bereberine sulph is also done.

Pemphigus.—ESLER (East Africa) reports a case of rapid cure by means of tryparsmide. Previous treatment with neoarsphenamine and acetarsone had been without effect.

The first injection arrested the further bullae. 9 injections in all were given, 3 intravenously, 6 intramuscularly.

We acknowledge our indebtedness to the *Prescriber* (Oct. '34) for the materials contained in this article.

Gleanings from Medical Press

MEDICINE AND THERAPEUTICS

On the relation between the Quinine concentration in the circulation blood and Parasite count in Monkey Malaria. (By Lt. Col. R. N. Chopra, S. B. Ganguli and A. C. Roy.)

In a previous paper, Chopra, Roy and Das Gupta (1934, Oct. I. M. G.) reported the results of their investigation on the concentration of quinine attained in the blood at different intervals of time after administration of the drug by the oral, intramuscular and intravenous routes. Taking the average of all estimations, the maximum concentration in the blood was found after 15 minutes, both following intramuscular and intravenous injections, the average figures for blood drawn after half an hour and one hour respectively were about the same, and the concentration in specimens of blood drawn after two hours and onwards showed a gradual fall, the intramuscular figures being somewhat higher at this stage than the intravenous ones; the concentration reached within the first two to three hours after administration by the oral route was in some cases distinctly lower.

The next point in their investigation was to determine whether any relationship existed between the concentration of quinine in the circulating blood and the parasite count at any particular moment. James (1931) observed that in induced malaria there

was a tendency on the part of every individual to clear his system of malarial parasites when given slight assistance *e. g.*, with quinine. He stated that large doses of quinine (30 grs.) given during the incubation period had no effect; one of 5 grs. given in the middle of the course stopped the fever at once and reduced the number of parasites, but the same dose given at the end of the course and repeated once a day for a few days cured 50 % of the cases.

In view of these observations a series of experiments were performed on monkeys to determine whether the maximum concentration of quinine obtained in the blood, the parasites exhibited any tendency to increase or decrease in number, or to show degenerative changes. Silems rhesus monkeys were infected with strains of Plasmodium Knowlese from another infected monkey, and the erythrocyte and the corresponding parasite counts were determined. Quinine was then administered by the intramuscular or the intravenous route, and the concentration of the alkaloid in the blood and parasite counts were simultaneously determined at stated intervals.

It will be seen from the tables given with the paper that both in cases of intramuscular and intravenous injections no relationship was found to exist between the maximum concentration of quinine in the blood and the number of parasites therein. The infection, as a rule, was not controlled before two or three injections given at daily intervals, no matter what was the concentration of quinine in the blood. If any change in parasites was observed, it was an increase in their number immediately after the injection, but never a marked decrease. The first effect of administration of quinine is often a definite increase in the number of parasites in the blood.

Mode of action of Quinine.—If quinine has a direct toxic effect on the malarial parasites, then our aim in treatment would be to obtain as high a concentration of quinine in the blood as possible, and to maintain it for a sufficient length of time but evidence at our disposal does not warrant the view that a high concentration of quinine will have an immediate and direct lethal action on the malarial parasites. Kirschbaum (1923) succeeded in producing malaria by injection of blood containing parasites, which had been set aside for 24 hrs. after mixing with quinine in concentration of 1 in 10,000, a concentration far greater than it is possible to attain in the circulation. Acton (1921) expressed the opinion that a quinine concentration between the limits of 1 in 150,000 and 1 in 250,000 is lethal to the malarial parasites only

when maintained for a sufficient length of time, and less concentrations have no effect. These experiments show that quinine, even in high concentration, has no direct lethal action on P. Knowlesi in monkeys. Moreover, a high concentration of quinine cannot be maintained for a considerable length of time in clinical practice because of the rapid excretion of the drug. Some evidence has been brought forward here to show that the concentration of quinine in the blood is not the only factor in bringing about a cure, as no direct relationship has been found to exist between the quinine concentration in the blood and the parasite count in these experiments. Even when the concentration of quinine in the blood was the maximum attainable after administering the largest possible therapeutic dose, the parasite did not show any tendency to reduction in number nor was there any evidence of degenerative changes in them. On the other hand, there was a definite increase in number in most cases. It has also been observed that once the number of parasites approximates to one million per c. m. m. no amount of quinine, however administered, if of any avail.

The question naturally arises what other factors are concerned in the action of quinine besides the concentration of the alkaloid. Chopra and Choudhury (1929) showed that in the circulating blood quinine causes a lowering of the surface tension resulting in greater concentration of quinine at the various interspaces of the cell wall. The enhanced activity depends on this lowering of the surface tension and also in part on the increase of the negative charge of the cells. As a result an alteration in the electric condition of the parasites occurs which leads to their ultimate destruction. Krishnan (1933) states that the usefulness of quinine is chiefly dependent upon the degree to which the natural process of immunity is stimulated, *e.g.*, by accelerating the mobilisation, proliferation and functional activation of the phagocytic large mononuclear cells of the reticulo-endothelial system, and not upon the quantity of the drug or its direct lethal action on the malarial parasites. The action of quinine is probably synergistic to other defensive mechanism set up in the body. The administration of quinine in therapeutic doses would appear to augment these processes, or possibly it acts on the parasites in such a way as to render them more vulnerable or unable to propagate.—(*Indian Medical Gazette, Feb. 1935.*)

Emetine in Peptic Ulceration.—A. E. Olpp. (*Med. Record*, November 7th, 1934, p. 472) treated over 400 cases of gastric and duodenal ulceration by intravenous injections of emetine hydrochloride. In each case relief was complete in periods ranging from three days to one week. There were thirty recurrences, and in each there was a history of alcoholic excess. The dose is about 1 grain of the salt, which is dissolved in 6 c. cm. of trebly distilled water. Saline solution seemed to cause irritation. One injection into the median basilic or cephalic vein is given on alternate days, until six have been administered. Then follows an intermission of a week, when the injections can be repeated. Olpp has never found it necessary to go beyond nine. The patient should always have an empty stomach at the time of injection, since otherwise he will be very likely to vomit. Occasionally there may be slight dizziness or nausea, but this can usually be prevented in subsequent injections by the prior administration of half a drachm of sodium bicarbonate in a little water. There have not been any severe reactions, despite this method having been employed in at least three instances where cardiac trouble was present. While the injections are being given the patient is kept on a bland salt-free diet of milk, eggs, cream, cheese, custards, white bread, and cream soups. Alcohol in any form is strictly prohibited.—(*B. M. J.*)

Chronic Nasal Discharge in Children.—Dr. M. O. Abdeen (Oto-laryngologist, Government Hospital, Alexandria, Egypt) writes in reply to "G. P." (March 16th, p. 568): The treatment of such children should be general and local. *General treatment*: (1) Carbohydrates and salt should be limited in their food. (2) Clothing should be just sufficient to keep them warm, as these children are usually over-clothed. (3) To be in the open air as much as possible. (4) General ultra-violet treatment to be given. (5) The following to be taken t. d. s. tinct. iod., 2 minims, syrup pruni, 1 drachm. Iodine, if tolerated, could be increased, and haliverol, 2 minims, taken after meals. *Local treatment*—(*a*) By the physician: Painting upper lip (as such patients usually have excoriations of their upper lips), also inside of nose, with 5 per cent. silver nitrate, followed by white precipitate ointment every second day. (*b*) By the parents: The nose is to be tickled to induce sneezing to clear the nose, as most children do not clear their noses properly. After the nose is cleared, use the following drops twice daily, with head low down for the drops to reach the adenoids: adrenaline, 2 drachms, argyrol, 5 grains, aq., ad 1 ounce. Four drops in each nostril morning and evening. If tonsils or sinuses are diseased they should, of course, be treated, and the possibility of diphtheria should not be overlooked.

Ergotamine Tartrate in Migraine.—W. G. Lennox (*New England Journal of Medicine*, 210:1061-1065, May 17, 1934) reports the use of ergotamine tartrate in the treatment of 45 cases of migraine. The drug was given by intravenous or subcutaneous injection during the attacks of headache. In 40 of the 45 cases the initial attack treated was abruptly terminated. After the pain had disappeared there was usually a feeling of lassitude. Eight patients who had had frequent severe attacks of migraine for many years not relieved by other methods of treatment have used ergotamine tartrate for the relief of the attacks for six months or longer; 7 of these patients have obtained relief almost uniformly in individual attacks. Of the 7 patients, 4 are having attacks at more frequent and 3 at less frequent intervals than before the use of ergotamine tartrate was begun. The author recommends single doses of 0.5 mg. subcutaneously as a rule; but when the drug is first used in any case, it is well to give a half dose (0.25 mg.) and if this is well tolerated but not effective, give the full dose later. The dose can be repeated in two to three hours if necessary. For a prompt and sustained effect, it has been found advantageous to give an intravenous injection of 0.25 mg. (0.5 c.c.), and at the same time a subcutaneous dose of 0.25 mg.

S. Brock, M. O'Sullivan and D. Young (*American Journal of Medical Sciences*, 188:253-260, August, 1934) report the use of various drugs in the treatment of migraine. They found ergotamine tartrate the most effective in relieving individual attacks; out of 22 patients treated, 18 were relieved in each attack. It was found that if the first attack treated with ergotamine tartrate was relieved, all subsequent attacks in the same patient were similarly relieved; if the first trial failed, subsequent use of the drug was also ineffective. Subcutaneous injection was found to be the most effective method of administration in doses of 0.25 to 0.5 mg. In a few instances oral administration of the drug in the interval lessened the frequency and severity of attacks.

A. H. Logan and E. V. Allen (*Proceedings of the Staff Meetings of the Mayo Clinic*, 9:585-588, Sept. 26, 1934) report the treatment of 9 cases of migraine with ergotamine tartrate for the relief of the attacks of headache. In 71 such attacks, relief was obtained in 67 instances; in 3 of the 4 instances in which relief was not obtained, the drug was given by mouth. In most instances it was given by subcutaneous or intramuscular injection. Occasionally the injection produced "distressing" reactions. Such reactions can be usually avoided by care in dosage. The authors recommend a preliminary subcutaneous injection of

0.25 mg. ergotamine tartrate at the onset of the headache; if there is no untoward reaction, and if the headache is not relieved in two to three hours, a second injection of 0.5 mg. is given. The largest amount up to 0.5 mg. that can be injected without causing reactions should be determined and repeated every three or four hours as needed to control the headache. If given by mouth, the first dose should be 2 mg. While ergotamine tartrate is often a satisfactory means of relieving the headache in cases of migraine the authors do not recommend its use in the interval as a means of preventing the attacks:—*Medical Times*.

Bleeding peptic ulcer.—Hæmorrhage is a common complication of peptic ulcer, and one which not only adversely affects the prognosis of the ulcer, but which is frequently severe enough in itself to require active treatment. No attempt has been made to review thoroughly the literature on the frequency of hæmorrhage and only a few of the more important articles in the recent literature will be mentioned. Allen, in a series of 1,017 cases of peptic ulcer found 387 (38 per cent) with a history of macroscopic bleeding and in a second group of 762 out-patient cases, there were 52 who had bled. He found that there was a 40 per cent chance of repeated hæmorrhages and since the probability of spontaneous cessation of the bleeding diminished with each attack, felt that all were potentially surgical patients. Allen and Benedict later reported on 1,804 cases of peptic ulcer in which 628 (34 per cent) had macroscopic hæmorrhages. There were twenty fatalities in this group, eight of which had been subjected to surgery as a last resort to control the bleeding. Lathey found 139 cases of massive hæmorrhage among 759 ulcer patients (eighteen per cent), Chiesman reported 191 admissions for gross hæmorrhage among 1,812 cases (ten per cent) and Lynch, with 944 cases of ulcer, reported that 293 (thirty-one per cent) had hæmorrhaged. Balfour states that twenty-five per cent of patients with peptic ulcer will hæmorrhage if followed for a ten year period. The significance of hæmorrhage on the subsequent course of peptic ulcer is shown by Jordan and Kiefer who found that only fifteen per cent of the successfully treated cases had bled, whereas in the unsuccessful group 55 per cent had hæmorrhaged. Of the patients who had bled only once, twenty-seven per cent had a recurrence of their ulcer symptoms while 82 per cent of those with repeated hæmorrhages had a recurrence of symptoms. Burger and Hartfall, in 2,145 cases of ulcer, found 137 (six per cent) had had severe hematemesis with thirty-one fatalities from the

loss of blood. They quote statistics of other writers to show that the mortality of hæmorrhage in peptic ulcer ranges from .9 to 6.5 per cent.

There is no agreement as to the proper method of treating this complication. The more conservative method consists of leaving the patient strictly alone with even the weight of an ice bag relieved by suspending it from a frame above the bed. No blood pressure readings are taken because of the possibility of this procedure increasing the pressure and no enemas are given because of the reflex effect on gastric motility.

Gastric lavage has been utilized for many years and was used by Kussmaul as early as 1885. Kaufmann believed that lavage was of great importance since it relieved gastric distention, eliminated irritating products and removed a partially occluding thrombus when this was present in the eroded vessel. He believed that such a thrombus when only partially occluding the vessel was an important factor in many cases of prolonged bleeding. Soper has more recently advised gastric lavage and continuous drainage through a nasal catheter with the administration of thromboplastic substances through the tube. By this means gastric distention is relieved, the gastric acidity continuously controlled and recurrent bleeding can be detected at once. On the fourth or fifth day the tube is passed into the duodenum and a high caloric liquid diet given by this route. Hurst advises aspiration and gastric lavage with four ounces of ice water or 1 to 1,000 solution of iced ferric chloride followed by the administration of 1 to 1,000 adrenalin chloride solution. He feels that these measures result in a firm contraction of the stomach with arrest of the bleeding and are effective even though the ulcer is located in the duodenum.

Transfusions are frequently indicated either as an emergency measure or to hasten the patient's recovery following the cessation of bleeding. When possible, these are best given slowly and in small amounts at a time when there is no active bleeding. Care should be taken that the blood pressure is not raised too rapidly. Although it is generally considered inadvisable to tranfuse a patient who is still bleeding, it seems that the results are more frequently beneficial than harmful, even under such conditions. Patients can frequently be roused from coma by this means and in many cases it is a life saving measure. It becomes dangerous to withhold this procedure too long in the presence of a markedly lowered blood pressure, as death may occur suddenly under such circumstances.

In those patients in whom the hæmorrhage has ceased but the blood pressure remains at a satisfactory level, a transfusion may not be necessary in spite of a very severe anæmia. This is illustrated by our patient with eight per cent hæmoglobin who recovered without tranfusions. If the hæmorrhage has been slow and continued over a long period of time the iron stores of the body may become depleted, and in these the administration of ferric ammonium citrate causes a surprisingly rapid regeneration of blood.

Surgical intervention is frequently advocated as a means of controlling the hæmorrhage. There are serious objections to this procedure, however, as the patient who has lost large amounts of blood is a poor surgical risk in spite of preoperative transfusions and the surgical procedure is of necessity an extensive one, consisting of ligation of the vessel or resection of the ulcer bearing area. Many of these patients cannot be subjected to roentgenologic examination prior to operation so that the location and extent of the ulcer is not known preoperatively. Furthermore, it is impossible to predict at the onset of a hæmorrhage how severe or prolonged this will be so that the surgical patients cannot be selected at that time. A rather high percentage of the patients will have repeated hæmorrhages and since the chances of spontaneous cessation become less with each successive attack, this may be an indication for surgery, provided it is attempted in a quiescent period between attacks of bleeding.

The most severe hæmorrhages are apt to occur in older individuals in whom arteriosclerosis is present and the vessel walls have lost their elasticity and do not contract to control the bleeding. The ulcer is more likely to be chronic in these individuals so that the scar tissue in the ulcer wall also tends to prevent spontaneous cessation. There is less chance of controlling the hæmorrhage in these patients with erosion of a large sclerotic vessel than in younger individuals.

Conclusions

An analysis was made of 1,046 cases of peptic ulcer and 257 were found with gross hæmorrhage. The methods of treatment employed in such cases are discussed with special reference to the effects of transfusions. These are frequently a life saving procedure and should not be withheld because of the fear of elevating the blood pressure and increasing the hæmorrhage. The reports in the literature on gastric lavage are very encouraging. Surgery is advisable during active bleeding only in exceptional instances:—*Journal of Iowa State Medical Society.*

OBSTETRICS AND GYNAECOLOGY

Treatment of Puerperal Infections.—When a puerperal patient shows an oral temperature of 100.4° F. or higher on two readings at intervals of four hours, she is transferred to the isolation unit and individualised in all details of nursing care in one of the glass-screened cubicles in a ten-bed ward. A thorough general examination of the throat, lungs, heart and kidneys is made. The uterus is palpated abdominally, the lochia is examined, a culture is taken from the vagina and a blood culture is made. If the uterus is tender and larger than it ought to be, an ice-bag is placed over it and the patient is given three oral doses of 5 grains (0.3 gm.) of quinine sulphate daily. If the lochia is profuse or foul, the shoulders are elevated in the Gatch frame. The diet is light and nourishing ; a small enema is given daily and, if necessary, a mild cathartic such as magnesia magma, is used. In the majority of cases beginning in this way the condition is an endometritis, which may be due to a variety of organisms with a probable preponderance of the anærobic streptococcus. Most of these patients make a rapid recovery with no other treatment, so that in a few days the temperature falls to normal, the uterus begins to involute normally, and the lochia becomes less profuse and loses its odour. With this probable outcome we are careful to do nothing that might favour an extension of the infection beyond the uterus. No pelvic examination is made other than to inspect any perineal lacerations and take a culture from just within the vaginal introitus. The uterus is not manipulated from the abdomen.

If the temperature does not fall, one of four things is happening: (1) The infection in the uterus is continuing but remaining localised. (2) Extension has taken place to the pelvic cellular tissue. (3) Infection has extended to the pelvic veins (septic thrombophlebitis); (4) There is invasion of the blood stream. Cultures of the blood are made regularly so long as fever persists. If the patient shows a progressive anæmia, or is losing ground, a blood transfusion of 500 c.c. is given by the direct method. This may be repeated every three or four days, the amount given each time being from 250 to 400 c. c. No vaginal or bimanual examination is made, unless the culture from the vagina has been indeterminate, in which case, with the utmost gentleness, a culture is taken from within the cervix.

If it appears from the negative blood culture and from the absence of the signs of thrombophlebitis, that the infection is still

limited to the uterus, we continue to pursue a course of masterly inactivity. We do not use glycerin injections into the uterus nor the introduction of drains with irrigation, as advocated by some, because we believe that in most cases they may do more harm than good. I can still recall the frequency of chills following intra-uterine irrigations during my intern days.

A thrombophlebitis will be medicated by costovertebral tenderness and tenderness over one or both sides of the pelvic brim, a fluctuating temperature, high leucocytic count and sometimes definite chills. Many cases of thrombophlebitis, however, show only a low grade temperature, perhaps not over 100° F., over a period of a week or ten days, and at the end of that time declare themselves by the occurrence of an embolus and a pulmonary infarct. We have observed this so often that we are highly suspicious of all such low grade temperatures unless something definite can be found to account for them. Therefore, we keep such patients in bed until the temperature has been normal for several days.

In cases in which an embolus occurs there is usually marked dyspnea and orthopnea. The patient is propped up and given a hypodermic injection of morphine. In severe cases an oxygen tent may be necessary. Enemas are stopped and she is kept quiet with codeine, from one-half to 1 grain (from 0.03 to 0.065 gm.), every four hours. Small meals are given every two hours. The patient is kept in bed until the white cell count of the blood is normal and the temperature has been normal for a week.

The majority of these patients with thrombophlebitis, even with an embolus, recover. So far I have not undertaken any of the formidable operative procedures recommended and practised by obstetricians in this and other countries, such as transperitoneal or extra-peritoneal ligation of the pelvic veins, excision of the thrombosed veins and removal of the uterus with drainage through the vagina. In two cases I was very much tempted to operate but forebore, and the patients recovered.

Our operative treatment of puerperal infections at Sloane Hospital is limited. A pelvic abscess is opened, but we are never in a hurry to explore those massive cellulitic exudates which are sometimes found, until there is definite evidence of softening and fluctuation. Most of these exudates absorb without suppuration. We drain the peritoneum through the posterior fornix or through a small incision above the pubes in cases of early peritonitis following septic abortion, and in the rare early case following full term delivery. The peritonitis developing late in a

case of puerperal sepsis is usually just one expression of the wide haematogenous and lymphatic extension, and operation is useless. We never explore or curette the uterus in cases of septic incomplete abortion until the temperature has been normal for three days and we know that the organism is not a haemolytic streptococcus. Cases in which there is excessive haemorrhage, the control of which may necessitate taking the risk of emptying the uterus, constitute the one exception to this rule. I perform a hysterectomy in the rare cases of uterine abscess and of necrosis of a uterine fibroid encountered during the puerperium.

When a definite haematogenous infection is present the case is by no means hopeless. Many patients with a bacteraemia recover. It is this fact that makes it so difficult to assess the value of any therapeutic measure employed. We have used various intravenous medications, many types of streptococcus serum, both supposedly antibacterial and antitoxic, and I have not been able to satisfy myself that any one has been of real value in saving a life that would otherwise have been lost.

Hope for the future lies in trying to produce a specific antitoxic serum.

Meantime, blood transfusion has come to be our standby, used in the way already mentioned. I have had no experience with immunotransfusion, but those who have used it believe that it may be more efficacious than transfusion from the untreated donor."—*B. P. Watson, Jour. A. M. A., Dec.* 8, 1934, *p.* 1748 *through Medical World.*

Correspondence

TREATMENT OF SMALL-POX WITH LIVER.

Dr. V. Govindan Nair, M.R.C.P., F.R.F.P.S., King George Hospital, Vizagapatam, writes :—

"I have found injectable liver extract useful in the treatment of small-pox. It modifies the course of the disease, shortens the duration, aborts the eruption at all stages and avoids the consequent disfiguration from deep scarring and pitting. It also controls the toxic symptoms, improves the general health and well-being of the patient and prevents the development of the usual complications of untreated cases of small-pox as boils, subcutaneous abscesses, toxic rash, phlebitis, thrombosis etc.

The treatment proper consists of daily intramuscular (intragluteal) injections of liver extract till the eruptions desiccate

and incrust. Five c. c. s of the extract should be given for the first two or three days according to the severity of the case, followed up by two c. c. s daily for the remaining period. The extracts used by me were (1) Compolon of Messrs. Bayer-Meister-Lucius and (2) Injectable liver extract of Messrs. Bengal Chemical and Pharmaceutical Works Ltd.

For full particulars please refer to the article entitled "Treatment of small-pox with Liver" in the journal of the Indian Medical Association, July 1935".

Proceedings of Societies, Associations, etc.,

THE TINNEVELLY DISTRICT MEDICAL ASSOCIATION, PALAMCOTTAH

The Tinnevelly District Medical Association had its monthly meeting at Tiruchendur one of the most sacred and salubrious seaside resorts of the Presidency on Sunday the 26th May 1935. Members numbering 38 including some lady doctors gathered from all parts of the District. Some of the local officials and visitors were also present. Refreshments were served to all present at 5 p. m. One of the local residents gave sweet music on the Harmonium.

The meeting began at 6-30 p. m. under the Presidentship of Lieut. Col. T. S. Shastry, I.M.S. The Secretary read the minutes of the last meeting which were passed.

The following resolution was moved from the chair which was carried unanimously :—

The last Sunday of every month will be the meeting day of the Association hereafter in view of the Surgeon-General's suggestion to hold it on Government Holidays.

The President moved that the following be made Honorary Members of the Association and were elected unanimously :—

1. Lieut. Col. T. W. Harley, I.M.S., (Retired).
2. Dr. B. Rama Baliga, B.A., M.B & C.M., (Retired D. M. O).
3. Dr. D. Krishnayyah, B.A., M.B. & C.M., now D. M. O., Chittoor.

A small booklet entitled "Notes on Cholera and its treatment", compiled by Lt. Col. T. S. Shastry, I.M.S., was distributed to every one of the members. Lt. Col. T. S. Shastry, I.M.S., explained the use of the notes for every medical practitioner as a pocket guide for the treatment of Cholera.

Dr. S. Kolappa Pillai, L. M. & S., District Health Officer Tinnevelly, presented certain posters on Malaria, Tuberculosis etc., to the Association for which the President thanked him.

Dr. N. Isaac, L.M.P., read interesting clinical notes on two cases of Caesarean Section performed by Lt. Col. T. S. Shastry, I.M.S., at the Government Women and Children Hospital, Vannarpet. Then Lt. Col. T. S. Shastry, I.M.S., delivered an interesting lecture on Caesarean Section.

Dr. K. S. Narayanan, L.C.P.S., (Bombay), L.D.SC., (Calcutta) Z. L. O. (Vienna) gave an interesting demonstration and lecture on Haslingers Endoscopy which were very much appreciated.

The President offered cordial thanks to Dr. Narayanan for his very good lecture and demonstration and to Dr. Srinivasa Prabhu, L.M.P., and his co-workers for their kind and generous hospitality and for organising the meeting.

Then a very enjoyable seabath and a grand dinner brought the meeting to a close late at night.

K. KALYANARAMAN,
for Secretary and Treasurer.

Book Review

Hydrochloric Acid and Mineral Therapy *By Walter Bryant Guy*, M.D., 1934, pp. 129. The Record Press, Rochester, New Hampshire, U. S. A. Price, $ 2/—

This book inaugurates a new era in medical art. In it, one will find the important part and purpose of the lymphatic circulation, and how it nourishes every part of the living cells of the body. How the cells of the body are grossly affected giving place to disordered functions when their nutrition is hampered, has been clearly set out. The author is of opinion that diseases like diabetes, tuberculosis, heart and urinary affections can be prevented and relieved.

The author advocates the use of Acid mineral solution in various disorders like diabetes, tuberculosis cancer etc., and cites many cases where he and his co-workers have found definite improvement in the condition of the patients. The minerals which he has found of benefit are, Arsenicum, Potassium, Silicon. "The author's formula for progressive degenerative diseases, is the following list of minerals, (*viz.*,) Arsenicum, Potassium both chloride and sulphate, and silicon in a ten per cent solution of

hydrochloric acid. The exact formula as used by the writer is given as:

℞ Solution of Arsenite	...	c.c. or grm. i ♏ xv
" of Pot Chloride	...	10% 8 or ℥ ii
" of Pot Sulphate	...	10% 12 or ℥ iii
Saturated Sol. of Silicic Acid in Acid hydrochloric dilute Q.s. ad.	...	grm. 30 or ℥ i

Dose of above well diluted is 5 to 25 drops one to six times daily.

For intravenous injections, take of above solution 8 c. c. add to water distilled Q.s. c.c. 120. Dose: 5 c.c. to 10 c.c. intravenously or intramuscularly. It is our earnest desire that our numerous readers should read this book and find for themselves the truth of the statements mentioned therein.

Preparations and Inventions

As a scientific note it might be mentioned that Cow & Gate when reconstituted has a guaranteed content of 250/300 International Vitamin D Units to the pint. This is a natural vitamin concentration, and forms an absolute safeguard against any possible risk of the development of rickets, a risk which is undoubtedly present with an unbalanced Food.

Notice

The Editor, "The Antiseptic", Madras.

Dear Sir,—I shall feel thankful if you will kindly publish the following announcement in your valuable journal which will be useful to a number of your readers who are anxious to know particulars of the new Diploma of L. G. O. instituted by the Government of Madras.

"The Government of Madras have recently instituted a Diploma in Gynaecology and Obstetrics. This Diploma will be styled L. G. O. (Licentiate in Gynæcology and Obstetrics) and will be awarded to condidates who undergo a special course of clinical training at the Government Hospital for Women and Children, Madras, attend the prescribed tutorial classes and pass the final qualifying examination at the end of the course. The course is open only to non-graduate medical men and women of not less than 5 years' standing. The number of candidates to be trained at one course will not exceed 6. The following fees will be levied from all candidates other than those in permanent Government service under the Madras Government: (a) the fees for the course is Rs. 100 for the first quarter and (b) Rs. 50 for every subsequent quarter; (c) Examination fee Rs. 30. Full details of the scheme can be obtained from the Superintendent, Government Hospital for Women and Children, Egmore, Madras. Applications for admission to the course should be made to the Superintendent of the above hospital".

Yours faithfully,
A. LAKSHMANASWAMI MUDALIAR, M.D., F.C.O.G.,
Superintendent,
Govt. Hospital for Women and Children, Madras.

CORRIGENDUM

On page 282, Vol. 32, No. 5 of 'THE ANTISEPTIC' (May '35 issue) *line* 9, (Heading) and on Cover page, *for* 'Dihalen' *read* 'Digalen'.

1935]

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AND
DR. U. KRISHNA RAU, M.B., B.S.

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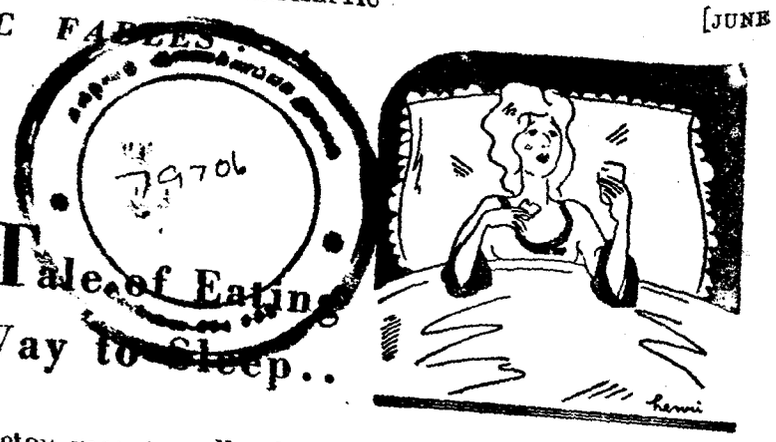

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