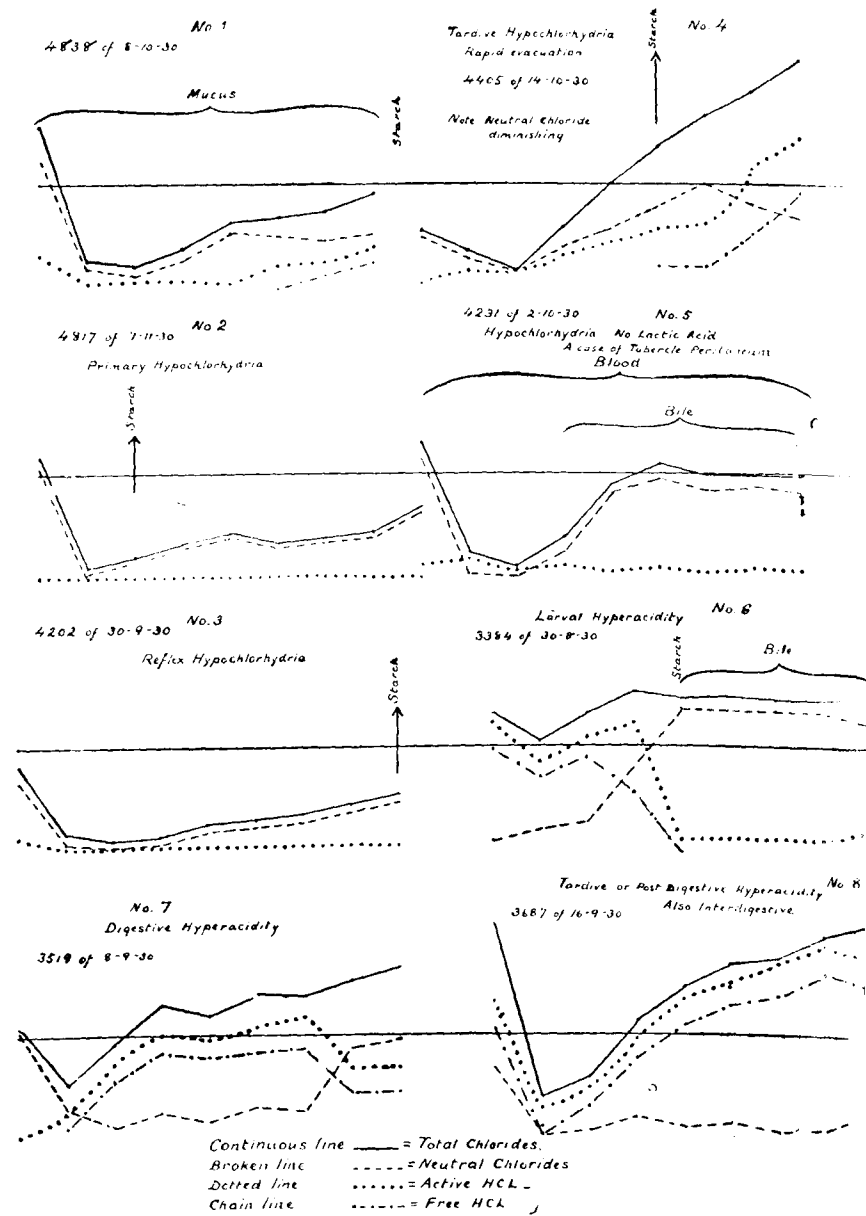




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Since the days of Kussmaul, gastric contents were being examined. But the first standardised study of gastric function was with Ewald's test meal. Ewald's test meal consists of two slices of bread and 400 cc. of weak tea and the stomach contents were arbitrarily withdrawn in its entirety at the end of one hour. When it was sometimes observed that where you had put in 400 cc. of liquid, you could in some cases withdraw a litre or more with food residue of previous feeds it began to be gradually recognised that the resting contents of the stomach may be a factor to be reckoned with. Hence the next development was the complete evacuation of the stomach, before administering test-meal and examining the resting juice. But later on it was found that the acidity and Pepsin content varied with the time subsequent to test-meal feeding, and it gradually came to be recognised that what is studied by Ewald test-meal is only the response of the stomach for a particular food for a particular time interval and not the study of gastric digestion in its entirety. Hence, the logical development of the idea was to study gastric contents withdrawn at convenient intervals till the whole stomach is shown to be free of any food matter that has been introduced. Ewald's method has been replaced by the fractional methods of gastric analysis. This is the method which has been mostly utilised by the Americans. But Boas introduced the gruel meal. Two table spoonful of oatmeal boiled down in two pint of water to a pint, strained and administered. This meal is a clean white stuff, free from any colouring mater and also free from organic acids such as occurs in bread and hence it is better suited for rapid study, shows bile quickly and does not show organic acid not produced in stomach. Instead of gruel meal, rice-kunjee is equally good for use in Madras as it is more homely. Whilst Ewalds and oatmeal has been in routine use for a long time and has been rightly popular, objections have been raised that these are mostly or only Carbohydrate meals and the proper functions testing should be done with the usual mixed meal of every day life. Various other test-meals have been proposed but these are unnecessary in so far as we are working under standard condition with the oatmeal and the normals having been worked out with that alone, it gives a comparative idea of the function of the stomach in

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The Biochemical Investigation in Gastric Function*

BY DR. P. A. MATHEW, M. B. & B. S.

The stomach consists of two essentially different structures, the muscular coat and the mucous coat. The muscular coat consists of outer longitudinal fibres, inner circular and the innermost oblique, the latter being the least important. The circular fibres are more evident in the pylorus. Clinically the stomach is divided into the cardiac portion which is generally passive, the fundic portion which initiates active movements and the pyloric antrum which is the most active and which grinds up food material into chyme and lastly the pyloric sphincter a band of circular fibres the tone of which determines the egress of food from the stomach and ingress of materials from the duodenum. The mucous membrane of the stomach also differs. In the fundic portion, the Hydrochloric-secreting parietal or oxyntic cells as well the chief cells are situated whereas in the pylorus only the chief cells secreting only pepsin is present.

Much work has been done and still the question is left undecided as to the action of pyloric sphincter and its mechanism. It has been observed that when solid material impinges on the pylorus, the sphincter automatically closes and when liquid material is introduced into

* Abstract of a paper read before the Madras Medical Association.

the pylorus, the pylorus does not exhibit the same active contraction. Hence the state of sub-division of the food has something to do with the state of the pylorus. Although one might say it is begging the question the sphincter protects itself against trauma and hence it closes with solids and opens up with liquid. Cannon argues that it is the concentration of the Hcl that determines sphincter opening, but it is doubtful; for after all we all know that the sphincter works well even in the absence of Hcl in the stomach as in people with achylia. Apperly suggested that the optimum concentration of the cl. ions—no matter whether as Hcl or Nacl determines sphincter relaxation and when the cl. ions is in excess, it is brought to optimum by dilution and when in deficit, Hcl or Nacl is secreted and thereby optimum is obtained but low acidity and low chloride is often associated with hypermotility and rapid emptying.

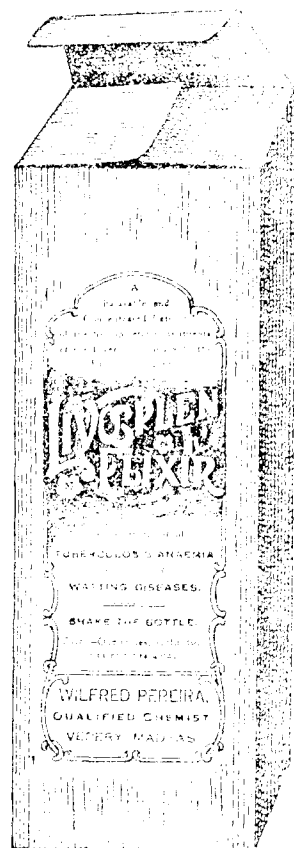
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question. There are more valid reasons for sticking to the gruel meal, more of it later on. I may in passing mention that stomach function has been tested with all articles of food, individually and collectively with various groups of students in various medical institutions and the normal types of gastric secretions and also the normal evacuation times with various food stuffs have been worked out.

None about the gastric technic. Because all the recent stomach tubes, can be used for duodenal intubation also and has got marks to show off distances to the Pylorus and duodenum, the marks are to be taken only as rough guidances. What is to be aimed at is to get the tip of the gastric tube at the *Pyloric antrum* and there is nothing so helpful as to remember that the lean, acute costal angled individual has got a fish hook type of stomach and the lowest portion of his gastric anatomy is in a line joining the anterior superior iliac spine and that short stature and obtuse costal angle is associated with a steerhorn, hypersthenic type of stomach and that the most dependent portion of the stomach is at the level of the umbilicus. Every nurse may be able to pass the smaller tube into the stomach but it is necessary that the doctor determines the length of tubing to be passed into the stomach in individual case. I cannot sufficiently emphasise the necessity of having the tip of the tube in the most dependant part of the pyloric antrum. It is at this place that the food is reduced to chyme and hence withdrawal is easy, it is here that height of digestion is seen and not at the fundus. Besides this the tube should remain at that place throughout the period of work. Otherwise, it is nothing unusual for the tube to be driven by gastric peristalsis into the duodenum with in half-hour or so and very often, it is duodenum that is intubated and not the stomach—a state of affairs that defeats its own purpose. After introducing the tube in the pylorus, the next procedure is aspiration of the resting stomach contents. With the usual procedure as in the mornings, the stomach would have no food residue, except under pathological condition. In collecting the resting contents, in normal individuals the pylorus may be expected to have all the resting contents in it, still it is important in practice to withdraw stomach contents in all positions of the body—Prone, supine and both lateral positions and very often by this procedure it is possible to collect much larger quantities than by aspiration in one position only. A sterile syringe—like the ear syringe with a glass barrel is to be preferred for aspiration and only sufficient pressure used as is possible

with one hand when aspiration is practised. When the resting contents have been collected, the prepared test-meal is given with the tube in situ. Subsequently every quarter hour after, about 10 c.c. of contents are withdrawn till about two hours, or till the gastric contents are emptied into the duodenum. The end of digestion or evacuation of gastric contents into duodenum is determined by (1) No more food can be aspirated from the stomach. (2) The change in appearance of the gastric contents, with slight admixture perhaps of Pyloric mucus. (3) The injection of air through the tube will show the presence of a hissing rather than gurgling sound with the statescope over the stomach. In fact, I suggest from a lot of analysis performed in the laboratory that it is a good plan to inject a few c.c. of air after every aspiration. The reason will be obvious from some of the charts; you never expect that quarter hour samples to have more acid than half hour samples, but that is what you get in most of the samples. The reason is that the remains of the previous evacuation is still in the tube and that it is also aspirated along with the stomach contents of the particular period. The period of quarter hour and quantity 10 c.c. are only suggested for convenience. It has been our lot to work most often with 2 c.c. and less of materials and it has taxed our technical skill to no small extent but I have worked out a method of analysis with 1 c.c. of filtrate and so smaller quantities does not matter.

Now, we shall discuss the examination of the gastric contents to see whether the stomach is doing its purpose, i.e., reduction of its contents to a condition of homogeneity and a proper condition most favourable for small intestine digestion. The following examinations are made. First and foremost is macroscopical examination of the contents. This is an examination which is very often neglected but which I should say gives a very good idea of the resting condition of the stomach, and also the progress of digestion. The aim of all examinations is to see that there is nothing in gastric contents outside of stomach secretions and food. Such things as saliva, mucus from the nasopharynx and duodenal contents, including bile, any food residue of the previous meal blood, pus, stomach mucus are to be considered matters not pertaining to the normal stomach contents. It is usually found, that in the resting phase of the stomach, the average amount of fluid that can be aspirated is about 50 c.c. without any food residue, but quantities up to 150 have been seen in perfectly normal individuals. I must say that the Madras

figures are rather unusual even in definite pyloric obstruction not even half a test tubeful is sent to us and the only explanation that I can give is the stomach is not fully evacuated. It may have a yellow colour due to duodenal regurgitation of bile—a natural method to regulate the acidity of the stomach to the optimum about 0.21 Hcl. according to Bolydreff, Bolton and other's or abnormal according to Maclean who thinks that the normal regulation is automatic in the stomach itself—it may have a yellow or greenish colour due to the presence of cryptococcus salmonaeus (Startory) and has not got much significance. Mucus in stomach contents may be from saliva Nasopharynx, or stomach. Salivary mucus is always frothy Nasopharyngeal mucus is in pellets and the gastric mucus is always intimately associated with the stomach contents. Similarly, with regard to blood. Macroscopic blood if found only in the resting contents and in the first one or two specimens and none in the last specimens it is to be thought that it is not the regular oozing that we get in congestion, erosion or ulceration of the stomach the only conditions in which you get actual bleeding from the stomach. Similarly when doing the Benzedine test for occult blood in stomach contents, the same interpretation holds good. And I may be permitted to point out that Benzedine test being a peroxidase reaction is not specific for blood. Almost all tissues and tissue fluids and some vegetable tissues give the same reaction and hence it is not uncommon to get Benzedine test positive when no blood is present. The only way to be sure about the reaction is to boil the stomach contents thoroughly to inactivate all the enzymes, cool and add the Benzedine glacial acetic Hydrogen peroxide mixture. Similarly in the large majority of cases, to test for bile the yellowish green colour and the Hays test is enough but in case one wants to be extra careful, a small portion may be extracted with 3 c.c. of acetone, and into the acetone if HNO_3 is added green colour develops if bile is present. Besides inspection for bile, blood, mucus, or pus examination for food residues are also made. This detailed examination is to be carried out with regard to the test meal fractions also. Then the contents are filtered. There are those who advise that the acidity is better tested with unfiltered specimen as Hcl. is mostly absorbed to be Proteins as Combined Hcl. and higher values are likely to be obtained by this than with filtered contents. But we in the laboratory prefer to work with filtered contents for the amount of Protein in the usual gruel meal used is almost negligible, besides in practice, it is

much easier and quicker to deal with filtered contents which give clean filterates. Then we take 1 c.c. of the filterate add one drop each of alcoholic Solution of P. di methyl amino azo Benzene reagent and one light drop of Phenolphthalein Sol. and usually titrate with $\frac{N}{100}$ NaOH to orange-yellow first and then to definite orange. This gives the free Hcl. and total Hcl. Into this add 1 cc. of AgNO_3 —1. cc. corresponding to 10 mg. of NaCl into each of the specimens and then add into the test-tube 1-2 drops fuming Nitric acid. The first drop brings out the red colour, and the subsequent drop bleach the red colour of Di. Methyl amino azo Benzene and when it is bleached more distilled water is added to make the total vol. about 10-15 cc. titrated with Standard KCNS 1 cc.=1 cc. of AgNO_3 =10 mg. NaCl, using iron alum as indicator, using a micro N. P. L. burette 10 cc. divided into 500 divisions. It is the addition of HNO_3 containing HNO_2 and NO_2 into the mixture which is the technique which I spoke of as worked out in the laboratory and which has enabled me to work with 1 c.c. of material. This determines the total acids, and free HCl. and total chlorides. We do not test for organic acids if the resting contents and the test-meal contents show definite free HCl. If not we make it a point to test for organic acids. Among this, Lactic acid is the most important, although other acids are found in the stomach. Lactic acid is the most important because, according to Hugh Maclean, the presence of Lactic acid is the earliest Biochemical change in the gastric contents in cancer. It is present even before the establishment of subacidity or anacidity certainly before the establishment of Coffee grounds. Though stagnation can give rise to Lactic acid, it is likely to be present only in the resting specimen and not in the subsequent specimen, if the resting contents have been removed completely. The only way of testing for Lactic acid in the stomach contents is by the colour reaction of Lactic acid and FeCl_3 . Maclean's reagent contains FeCl_3 5 gm. H_2Cl_2 Sat. Soln, 100 c.c.—1.5 c.c. Hcl Str. one or two drops will give an yellow or yellowish green due to Lactic acid. Of course if Lactic acid is present, neutral Chloride cannot be estimated by subtracting Tot. acid from T. Chlor. otherwise it works. We do not test for pepsin and trypsin as a routine for usually pepsin and HCl. runs almost parallel. With the figures available, the graphs are constructed. These graphs are also constructed with a view to see if Bolydreff's theory is correct or Maclean's is correct. These graphs are not really complete without

testing for trypsin and without estimation of the same. Almost all authors are of opinion that trypsin is present in the later stages, and that there is a quantitative increase in the same with increase in the Nuetral Chloride and that the fact that Nuetral Chloride cuts the HCl. curve is taken to show that the latter increases at the expense of HCl. by Nuetralisation. Maclean says that towards the later stages of digestion, Nuetral Chloride secretion from the stomach mucosa increases and that HCl. diminishes *pari passu*. I may say that in the absence of trypsin Maclean must be right. At least there is one graph No. 4 which shows that Nuetral Chloride increases towards the middle and then diminishes and these could be possible only with a diminishing NaCl. secretion and increased HCl. secretion. Maclean also says that in a Pavlov's pouch, NaCl. may be shown to be increasing towards the later stages as HCl. diminishes and this would certainly indicate that the automatic regulation of acidity is certainly in the stomach itself and not by regurgitation. Probably the truth is that both theories are right. It is not likely that nature will stop with one method of adjustment only.

It has been found that no matter what type of food or test-meal is given, mankind could be divided roughly into three general groups—Hypersecretory, Irosecretory and Hyposecretory—the terms being used both in reference to the amount of acid and amount of secretion. The hypersecretory showing increased acidity and increased secretion and ditto with reference to the other types. What then is Irosecretory type which is the larger group. What is the amount of acidity or secretion which marks out the Irosecretory group. The effort of the stomach will vary with the type of food—usually carbohydrate food like gruel meal or Ewards give rise to an acidity near 0.21% at the height of degistion which is about 1—1½ hours after and evacuation of the stomach contents will take place not later than 2 hours and not earlier than 1½ hours. Evacuation of stomach contents is tested for by starch reaction. In the case of meat, the acid response approximate to any thing upto 0.26 per cent. HCl. and evacuation time of three hours. In the case of fish, the acidity is the highest and evacuation time about 2½ hours. In the case of pork, acid response is high and evacuation time is about 3½ hours. The longest evacuation time has been found to be with regard to nuts and guinea hens about 4 hours. Milk takes 1½—2½ hours and acid response is less than 0.2 per cent. HCl. Of course the acid response and evacuation times could be changed by varying the quantity of food stuffs introduced. Instead

of introducing foods into the stomach, we might as well introduce plain water and still the type of response will be the same. The acidity response is at its height within 20 minutes, range 0.18—0.44 and the evacuation will be also very rapid—perhaps at the most 30 minutes. The same is the case with Histamin injection 0.2—0.5 m.g. of Histamine will give rise to acid response. In fact ergamine injection is a better method as it gives rise to free Hcl. secretion even in some cases where there is no free Hcl. by the usual test meal technique. More about Ergamine when we discuss hypochlorhydria.

So you see that total Hcl. of about 0.21 per cent as cl. with an Ewalds gruel meal is the normal response of the majority of individuals and this is the isotetretory type. The amount of secretion will also vary usually proportional to the acidity of the stomach contents. With these meals, responses of above 0.21 Cl. (as, Hcl.) is considered hypersecretion and responses of below 0.07 per cent. as Hyposecretory. In the course of investigations about 7—8 per cent. of normals were shown to have acid response about 0.25 Cl. as Hcl. per cent. and figures up to 0.36—0.4 are not uncommon. In fact it has been shown that pure undiluted human gastric juice is capable of reaching the height of 0.5—0.6 Hcl. per cent. which was formerly thought to be only present in Dog's stomach.

Besides defining the type of curves after test meal, the introduction of the newer gastric tubes have enabled study of gastric response to various other stimuli. It has been shown by Carlson that Phychic juice is the first secretion of the stomach and that as test meals are done at present, there is not much of physichic secretion. Next we have got digestive secretion, which has usually an ascending limb, a hight or pleatau and a descending limb at the end of the stomach digestion and evacuation of stomach contents; if the gastric contents are collected further on keeping the stomach tube in situ, it will be found that the gastric mucous membrane is not inactive and still goes on secreting. This is known as intestinal phase of gastric secretion. Beyond the intestinal phase, when food has been with held for 24 hours even, gastric secretion is present. It follows that stomach is an organ in continual activity irrespective of any digestive phase or not, with increase in responses with food in stomach or intestines. The total acidity of the resting stomach is usually about 0.11 per cent. Hcl. per cent. or less of which ⅓ is free Hcl. and that is the continuous secretion. The height of secretion is within 1—1½ hours and the maximum normal is about 21

per cent. Hcl. but when the fractional test is done for the first time the response may be low especially in nervous people due to the presence of the stomach tube; but when it is repeated a few days after, it may show a higher figure.

Now of all the fractions withdrawn to me it appears that the resting secretion is the most important. Because it shows the condition of the stomach in the resting phase; it enable, the observer to study clinical condition best. Here hypersecretion is more important than low acidities. High residuum in resting stomach may be divided into two groups without food residue and with food residue. High residuum—above 100 c.c. without food residue suggests one of three conditions (1) the patient is a smoker (2) the patient is a vago tonic (3) or the patient has duodenal ulcer.

With food residue it shows some *organic lesion*:

It may be a muscle defect of the stomach (1) atony of stomach (2) dilatation of the stomach.

B obstruction to the passage of food.

- | | | |
|---------|---|--|
| Gastric | { | 1. Neoplasm—cancer pylorus—especially anular variety. |
| | | 2. Gastric ulcer 50% of cases only show food residue. |
| | | 3. 20% of duodenal ulcer, even without stenoses and higher % in stenoses with D ulcer. |
| | | 4. Gastric syphilis—esp. near Pylorus. |
| | | 5. Benign Tumours of the Pylorus. |
| | | 6. Hypertrophic Pylorus. |

C. Extra gastric construction.

1. Tumours—E.G., cancer Head of Pancreas.
2. Adhesions and bands to surrounding structure, E.G., Gall bladder etc.
3. Inflammatory masses near the Pylorus.

Now if the residue contains fairly large quantity of acids, the greatest chances are it is duodenal ulcer. If the residuum is foul smelling cancer and syphilis are very important. Both conditions are accompanied by altered blood, low Hcl, pus, and in cancer lactic acid invariable according to Maclean. Well marked pyloric stenosis will also show high residuum with decomposing materials. The fallacies in

connection with the presence of blood and mucopus should never be forgotten—especially when we remember that between the teeth and the stomach a large area of septic foci could exist from which mucopus may be swallowed. Also the presence of large quantity of bile suggests some obstruction low down being present preventing bile going down and regurgitating as mucopus suggests some septic foci above. That the examination of the Resting juice is sufficiently useful for the clinician is evident.

Fractional analysis studies two main things gastric motility and gastric secretion. Motility of the stomach is determined by the evacuation time of starch. If starch reaction is present even in the specimen taken after say 2½ hours it is definitely pathological—also if evacuation is earlier than 1½ hours. The following groups show Rapid evacuation.

1. *Primary subaciditis, anaciditis and achylia*.—Here it is nothing unusual to see the disappearance of starch even in ½ hour. See graph 2. Here the stomach is not able to perform its proper duty and hence the food is passed on straight to intestine where the work will be done alright. In *secondary cases*, there may not be much interference with gastric motility and hence food is passed in normal times or may be delayed. See graph 3.

2. *Schirrhous cancer of the Pylorus*.—Here the pylorus is converted into a rigid patent tube and the muscular activity of the fundus is not interfered. Rapid evacuation. *Here Lactic acid is to be expected in the Resting juice.*

3. *In a small percentage of cases of Duodenal ulcer*.—Here hyper acidity is certain. *Probably No. 4.*

4. *Hyper motility* or what the French call gastric chorca, no other abnormal finding, in acidity no blood, mucus, etc.

Nos. 2, 3 and 4 are best diagnosed by X ray.

5. *Gastro enterostomies.*

Normal evacuation is a sign of health or if disease is present, it is such as does not interfere with gastric motility.

Delayed evacuation.—Atony or dilatation of the stomach or obstruction. When discussing high residuum with food all the causes have

been mentioned. Deviation of normal evacuation is always pathological and a cause must be found. But in the matter of secretions the same thing cannot be said. We have seen that there are three types of secreting curves. The largest per cent being iso, about 7—8 per cent hyper secreting and a smaller percentage hypo with regard to gruel meal. Hence, it is not the secretory curve that is so important as the other pathological variations unless of course we know the normal type of curve for the individual from some previous test meal. And we in India need not hope to have such a record for many or any for a long time.

Clinically the hypo secretory curves are again sub-divided.

1. Subacidity due to excessive neutralisation.
2. *Pseudo achylia* or delayed digestion not pathological
3. *Achylia* without any pathological addition like mucus, blood etc. These cases are the results mostly of reflex influences or the result of systemic disease. These group includes acute infection in all stages, pernicious anaemia and other anaemias, sprue in later stages, acute rheumatism, diabetes, Basedows and also hypothyroidism, ovarian dysfunction, Pellagra, nasal pharyngeal or oral infection, Tubercle, syphilis, heart disease, Cirrhosis, Chronic Cholecystitis &c.

Early Syphilis and cancer of the stomach may give rise to hypo-chlorhydria without any pathological additions. In this group of cases, when there is no free Hcl and very little of active Hcl, two tests which will unmask the real state of affairs must be mentioned.

1. Histamine injection 0.2—0.5 mg. Ergamine Phosphates is injected and the stomach contents are aspirated periodically. In true achylia there is no response and the curve will be a repetition of the test-meal curve, but in reflex conditions, &c, a normal curve of secretion with free Hcl and active Hcl is found.

2. The second is a bit easier. It is merely to give a test-meal, say at 8 o'clock. Collect 1 hour urines before test-meal and subsequently for the periods till 1 p.m. determine the Ph. of each sample. If there is acid secretion in the stomach, there is an alkaline tide in the urine. This does not show the degree of Hcl secretion, though it will show if Hcl secretion is present or not. This method has many fallacies and is not very useful. Instead collecting urine and estimating Ph., CO_2

tension of alveolar air may be determined periodically. If no Hcl, and no symptoms it is to be considered normal.

3. When low acidity is associated with mucus, throughout or in the major fractions, only two conditions are to be thought of (1). Myxorrhoea, which is essentially a neurosis and the other is chronic gastritis Graph. No. 7.

4. Low acidity C blood: Blood always suggests one of three things—congestion, erosion or ulceration.

Congestion may be due to Hepatic, Cardio renal or renal disease. It may be due to peritoneal inflammation, e.g., Tubercular Peritonium (No. 5) and also in the early stages of acute gastritis when mucus will be present as well. *Erosions* are associated c toxæmias: Blood disease, acute yellow atrophy, Phosphorus Poisoning, &c., *Ulceration*: Gastric ulcer.

5. With Pus. Late stages of syphilis and cancer stomach and also acute or chronic injected gastritis.

In the case of normal Secretory curves, the presumption is that the stomach is working normally—though certain cases of gastric ulcer and early cases of cancer may show a normal curve.

In the cases of Hyper Secretory curve we have to differentiate the time of excessive acidity in relation to test meal. When the hyper-secretion is in the first half-hour or so, it is known as *Larval Hyperacidity* and is of the nature of a vagal phenomena and is found only in Hypersthenic stomach. It does not in the least suggest any organic lesion.

Digestive Hyperacidity: (see Graph 7). It is either normal or a nervous, i.e., vagal phenomenon, including excessive pyloric tension preventing duodenal regurgitation. It is also present in reflex conditions as diseases of the Gall bladder, appendicitis &c., and is generally due to irritability of mucous membrane or Hypertrophy of the mucous membrane. It is also found in any condition with increasing pyloric tension as in commencing pyloric stenosis.

Tardive Hyperacidity: Here the high acidity is towards the later stages of digestion and may be associated with delay in emptying or may be associated with rapid evacuation. In the former case there is increased pyloric tension 80 per cent of duodenal ulcer give rise to

tardive hyperacidity or climbing type *c* delay in emptying. It is also present as a result of Reflex reaction, *i.e.*, diseases of gall bladder, appendix. No. 8.

In the graph (No. 4) Tardie hyperacidity *c* rapid evacuation, pyloric mechanism cannot be at fault otherwise there would have been delay in evacuation, but must be the result of increased formation of gastric juice and may be of the type of exaggerated intestinal digestive phase.

The last type of Hyperacidity is divided into two groups—the *plateau type*, in which if the stomach contents are withdrawn for 3 or 4 hours the high acidity figure is seen to be maintained. This is most marked in Pyloric ulcer with stenosis.

2. *Interdigestive Hyperacidity*—in which the resting contents will also show hyperchlorhydria, This is best seen in duodenal ulcer—also in smokers and vagotonics. No. 8.

I may finish my paper with the main conclusion of Carlson and associates with regard to gastric function.

1. The three types of secretory and motor group of stomach runs to the same type throughout life, if no pathological factor is superadded.

2. Each food stuff has got its typical response to each stomach. But fish and pork gives hypersecretory reaction compared to cereals, which is more than that for fats. In the case of motor function, the individual foods do not run parallel with secretion. Fish gives perhaps the highest acid response though its evacuation time is about $2\frac{1}{2}$ hours and pork about $3\frac{1}{2}$ hours.

3. Hence hyperacidity should be gauged by the food stuff given for test meal. In the Oatmeal group Ryle found only 7 per cent of 100 medical students showed acidity over 0.219 per cent.

4. Fasting Hyper secretion (Reschman's disease) and digestive hyper secretion are only exaggerations of the hyper secretory type. The same applies to the other types.

5. Functional Hyperacidity is not the same as Titrable acidity which is what we measure. Even an individual with subacidity may complain of symptoms, and may be relieved by alkalies. Each individual has an upper limit of tolerance for gastric acidity and when this is exceeded, symptoms of hyper acidity appear.

An Aspect of Therapeutics— Proprietary Medicines

BY V. ISWARIAH, B.A., M.B., B.S.

With reference to therapeutics there have been two leading schools of doctrine and practice. One of these has an unbounded faith in the remedial and curative properties of drugs and prescribes them promiscuously. The other is prone to carry incredulity as to the drug treatment of disease to such a pitch that its members prefer any method rather than that of medication to which they have recourse only as an accommodation to the infirmity of human nature. To them fussy misdirected interference with nature is a violation of the will of Providence. To the former the house of therapeutics consists of mansions, to the latter they are lumber rooms. The average longevity of an Indian in the course of the last four decades has come down from 36.2 to 22.5 years. The question arises if this is the case in spite of the import of standardised products and "good" proprietary medicaments or is it because of them?

The public in this country more than anywhere else have a childish faith in medicines to cure all their ills and judge the efficacy of treatment from the number of medicines prescribed and the costliness of such medicines. Medical practitioners are often too complacent in satisfying this desire and sometimes even encourage it. The faith of the lay public in patent and proprietary medicines is such that an honest simple but sure compounded mixture is of less value than a costly complex patent medicine of doubtful composition. When a patient is prescribed general dietetic treatment and nursing, a doctor is often asked "Is not the patient going to have any medicine? You can prescribe any patent medicine. We do not mind the price."

One factor responsible for irrational drug therapy is the publicity which is given to drugs through notices in the medical and lay press and by means of circulars broad casted to the members of the profession. Most manufacturers prepare a large number of products whose compositions are kept secret but sweeping claims are made regarding their

therapeutic value without producing any satisfactory evidence in support of their claims. The challenge comes from nowhere, and if it comes, reasons to circumvent won't be wanting. Professor Clark sometime back, in a paper entitled "Commercial influence in therapeutics" very ably and forcibly brought certain facts to the notice of the profession in England. He bemoaned the absence of safeguards in the claims made for patent and proprietary medicines in advertisements which were demonstrably false. For all practical purposes the British Law is powerless to prevent any person from procuring any drug and making a mixture whether potent or without any therapeutic activity whatsoever, so long as it does not contain a scheduled poison. He can advertise in any terms as a cure for any disease or ailment and recommend it by bogus testimonials under facsimile signatures of fictitious physicians and sell it under any name he chooses on the payment of a small stamp duty for whatever price he can persuade the public to pay for it. Therapeutic promoter occupies a position of great power. He controls the lay press on account of its advertising capacity and through it the Parliament. He exercises a considerable influence over the medical press as well.

The term patent medicine is a misnomer since as popularly used it does not apply to products protected by letters patent under the great seal but to proprietary remedies recommended in the treatment of disease. In England till very late anyone was at liberty to make or sell remedies who paid the licence which cost about 5 sh. The annual yield of revenue from this source is estimated at £ 300,000—400,000. A true patent cannot be held as valid unless there was something novel and useful about it and it seems now that the process of manufacture can alone be patented. It was later decided in the courts of law that if a patent is obtained for the preparation of a certain drug and if a characteristic name or trade mark is given to that drug the state grants 14 years for the sole right of manufacture after which time the patent lapses with the trade mark and both become public property.

In India the advertisements of patent medicines are sufficiently patent. The announcements in the dailies, periodicals and pamphlets are intended directly to appeal to the "Educated public", some of whom diagnose their own cases and rush to these advertisements that are worded so ably to attract them. The Lodhra that gives "health and happiness, to any woman," the "Mahasakthi Molish" that cures by three external applications diseases ranging from Elenphantiasis to Strangulated hernai, "The

electro tonic thaila" that brings back "an octogenarian to his prime," "The vapo creosoline" that claims by its inhalation to cure diseases beginning with coryza of the respiratory system and ending with arterio sclerosis of the cardio vascular system—these are some that could not escape the reader of any daily. Most of these advertisements correctly appeal to the sex psychology of the buyer. There is on the other side the scientific therapeutic promoter who keeps abreast of the times and manufactures his things in the light of modern scientific observations. His advertisements are calculated to appeal to the medical profession. Here one has only to watch the arrival of the foreign mail any week to have an idea of the amount of the most aesthetically drawn up advertisements addressed to medical men of standing as well as to the house surgeon of yesterday. The elaborate quasi scientific and clinical dissertations which they shower so freely on us are guarantees perhaps of their energy in pushing business, but scarcely of a profound knowledge of pharmacology or therapeutics. If a vitamine deficiency theory is the order of the day, he brings out a number of vitonoils-phospho vitamine A and E. to combat any disease. If harmonic theory is the stunt of the physicians, lo! a testifortin and an ovocoid here, a hyporenaline there, a compound mammary tabloid for menstrual troubles and orchitic prostatic tablet for restoring youth and any amount of pluriglandular permutations and combinations. The field here is new and the mode of the action of the substances is not thoroughly understood and few general practitioners are well informed concerning them. But the manufacturer has his own case and Professor Stockman of Glasgow University in dealing with the subject has said "the manufacturing drug firms deserve our gratitude for furnishing us with reliable preparations mostly in a very convenient and pleasant form but here I think their legitimate function ceases and they should abandon the role of teacher of pharmacology and therapeutics."

In America the legislation for controlling proprietary and other drugs is very effective and the provisions of the Food and Drug Act are very comprehensive. This law lays down that in case of proprietary medicines, labels on packages should not contain any statement of therapeutic and curative effects of drugs which are false or fraudulent. The use of the word cure or remedy should be used only for those medicines which are real cures or remedies for the conditions named on the label. The placing on the label of the name of disease is taken to imply that

the medicine contained in the package is itself a treatment for the disease or the conditions named. This has led to the more cautious use of the terms as "Will often relieve," "Will aid nature to restore health," etc. The postal authorities are vested with power for the prevention of frauds and exploitation through posts. The powers of the postal authorities in this respect are shown by a recent occurrence. An individual was advertising a fraudulent specific. All letters addressed to him were opened at the post office and if found to relate to this specific, were stamped "*fraudulent*" and returned to the sender.

There are medical men here with the idea that he is abreast of the times who is conversant with all the lately come out proprietary medicines and prescribe for as many cases as he possibly can these high sounding stuffs in place of time honoured simple remedies which are relegated to the old fashioned practitioners or the common run of doctors. They must needs order "two bottles of Braydon Road Laboratories' Petrologar" for a case where castor oil is indicated, "Neostibosan" for any pentavalent antimony compound, an "iodamin methyl salicylas" where painting of Tr. iodine B. P. is enough. Partly this is due to the genuine modesty of the medical practitioner who is prone to receive with credulity or undue respect any kind of plausible nonsense which appears to be scientific. In U.S.A. the Council of Pharmacy of the American Medical Association is serving a very useful purpose in bringing before the profession the truth concerning new proprietary preparations. This council which consists of reputed physicians, chemists and pharmacologists investigates all the new preparations put on the market and carries on a propaganda for the rational use of drugs. Those remedies which promise to be of value in general practice are put into its annual publication under the heading "N. N. R." (New and non-official remedies). In time some of these are weeded out of the list as having been proved useless by further experience. The medical man must discriminate commercial advertisements couched in scientific or pseudo scientific language from genuine ones advertised on the strength of practitioners. The tendency to accept readily patent and proprietary medicines from obscure sources and new remedies from even recognised and scientific sources is to be deplored. Conservatism is not advocated but caution. The cheap fame earned by prescribing the so called up-to-date drugs and recent patents released for 'inhuman' consumption is not worth the name. Sir William Osler talking about the dangers of new drugs and about falling under the claims of

pseudo science and commercial empiricism, said "Give our students a first hand acquaintance with disease and give them a thorough practical knowledge of the great drugs and we shall send out independent, clear headed, cautious practitioners who will do their own thinking and be no longer at the mercy of meretricious literature which has sapped out independence."

In this country for all practical purpose, with the exception of the Poisons Act of 1919, there are no safe guards whatsoever against manufacturing, advertising and selling to the public therapeutic products of any kind whether patent or inert, effective or ineffective. The terms of reference of "the drugs inquiry committee", (*Vide* Gazette of India notification No. 1637, dated 11th August 1930), that was engaged in collecting evidence are such that one can read the terms to include proprietary and patent medicines as well, but presumably the question of proprietary medicines does not come within its scope. The sale of proprietary medicines in India is further complicated by certain conditions peculiar to the country. The indigenous systems, *e.g.*, the ayurvedic, unani and tibbi use many drugs that have so far not been studied pharmacologically, much less have they been standardised. The patent Indian therapist finds therefore, no difficulty in introducing any stuff whose composition, as to quality and quantity is unchallengeable. When the gullibility of the masses is taken advantage of by unscrupulous commercial advertisers and even by some qualified medical men, the state alone has to protect them from the onslaught. Legislation on the lines of the Food and Drugs Act of the U.S.A. cannot be thought of in India according to some, for the above reasons. In a discussion opened by Col. R. N. Chopra at the Rotary Club, Calcutta, about the proprietary medicines and the advisability of controlling them by legislation, the trend of opinion there was that it was not possible to pass an Act to control them at present. In a deliberation of the Indian Research Fund Association the question was raised in 1929, "If legislation for the control of therapeutic substance should include in its scope, proprietary and patent medicines?" The predominant feeling then seems to have been that as long as there is no recognised pharmacopœa for Indian Indigenous drugs legislation is not possible. Here is a field for the practitioner to do his bit.

On the Necessity for a Public Health Act for the Madras Presidency

BY DR. A. THIRUMALAYYA, D.P.H.

The success of any effort for the protection of the Public Health of any community depends on a number of factors, the most important of which being the existence of adequate sanitary legislation. It has been said that sanitary instruction is even more important than sanitary legislation, but it is equally certain, nevertheless, that Public Health must have as an essential foundation, practical laws which can be invoked when necessity arises. Unfortunately, education and moral persuasion will not always bring about the desired results, unless it is realized that behind them is the long arm of the law. The famous doctrine "Speak softly, but carry a big stick" is particularly applicable to Public Health work.

If we trace the evolution of Public Health legislation in the more progressive countries, we find that it runs parallel with the evolution of Public Health itself. About a hundred years back, when all disease was supposed to be caused by filth, health legislation was merely confined to the control of nuisances and the Health official was not much more than a Police man. The next stage of advance was made when Pasteur established the Science of Bacteriology and its close connection with the Science of preventive Medicine. Now, Sanitarians began to control the environment and regulate the movements of individuals when they affected the Public Health. Health legislation then assumed a wider scope. The present era envisages Public Health more as a promotion of positive Health than mere suppression of disease. Thus, in addition to control of the individuals and environment, Health education as regards personal Hygiene and the rules of right living have rightly occupied the foremost place in Public Health administration. When the sanitary millenium does arrive, then perhaps there may be no need for Health legislation, but until then adequate legislation is indispensable for adequately safeguarding the Public Health. The right to the enjoyment of sound health is a sub-division of the right of personal security, one of the absolute rights of persons and it is a recognized

principle that among all the objects sought to be secured by Governmental Laws, none is more important than the legislation intended for the preservation of Public Health.

Now, coming to the conditions in our own Presidency, we will just examine the existing legislation affecting Public Health. At the outset, it must be stated that, it is not the want of law that we are suffering from, but more the want of co-ordination between the various public health enactments that lie scattered about in a number of widely different sources. The remedy that is suggested is not for introducing anything new or drastic by way of legislation, but is merely for codifying all the public health provisions that are found in the various Acts and rules now in force, with some alterations that are found necessary as a result of the difficulties that have been so far encountered in the actual working of these provisions.

To mention the different sources in which rules affecting the Public Health are scattered about :—

- (1) The Madras City Municipal Act.
- (2) The Madras District Municipal Act.
- (3) The Madras Local Boards Acts.
- (4) The Village Panchayat Act.
- (5) The Town Nuisances Act.
- (6) The Town-Planning Act.
- (7) The Prevention of Adulteration of Foods Act.
- (8) Port and Marine Regulations.
- (9) Indian Factory Act.
- (10) Indian Leper Act.
- (11) Indian Mines Act.
- (12) Public Resorts Act.
- (13) Indian Railways Act.
- (14) Epidemic Diseases Act.
- (15) Plague Regulations in Madras City.
- (16) Plague Regulations in the Presidency outside the City of Madras.
- (17) Act III of 1899 for Registration of Vital Statistics in rural areas.
- (18) Criminal Procedure Code.
- (19) Indian Penal Code.

- (20) Canal and Public Ferries Act.
- (21) Hindu Religious Endowments Act.
- (22) The Police Act, etc.

Besides these there are also rules and regulations framed under many of these Acts, which have statutory force, *e.g.*, the cholera rules, vaccination rules, etc. The number is still further increased by numerous departmental orders and codes, which have an important bearing on the actual administration of Public Health, although they do not possess statutory force, *e.g.*, The Educational Code, The Village Officers' Manual, Boards Standing Orders, The Public Health Code, etc.

The very multiplicity of these enactments, scattered as they are in such widely different sources, introduces a confusion and uncertainty in the administration and make it unnecessarily complicated and difficult to carry out. It needs no saying that in Health legislation the rules should be easily accessible and well defined, the procedure should be simple and the difficulties due to want of law and dubious interpretation of law should be minimised, so that in case of need the actual worker in the field could invoke its aid without any confusion.

In addition to the confusion caused by this multiplicity of Acts relating to Public Health there are many defects to be rectified in the existing provisions themselves. For example, there is no question that such branches of Preventive Medicine as Industrial Hygiene, Maternity and Child Welfare, Medical Inspection of Schools, control of venereal diseases are all Public Health problems, but the administration of these is not at present a statutory duty of the Public Health authorities, as it legitimately ought to be.

The confusion in administration exists not only in central authority but also in regard to the administration by the local bodies.

To give a few examples of this overlapping at the central authority:

In Medical Inspection of Schools, there is overlapping between the Ministries of Education and of Local Self-Government.

With regard to Factories and Industrial Hygiene there is dual responsibility between the Ministries for Local Self-Government and for Development. The administration of Marine Hygiene is in the hands of the Government of India and is dealt with through the Finance Department. The Public Health provisions in the Town Nuisances Act, the

Indian Penal Code and the Criminal Procedure Code are dealt with by the Law Department. The Epidemic Diseases Act is administered by the Governor-in-Council and the Plague regulations framed under this Act, are administered by the Collectors. Jail Hygiene is administered by the Home Department. An arrangement like this, at the centre, could not lead to co-ordinated action and uniformity of procedure and dual or rather multifarious responsibility at the central administration and overlapping in the administration of the different branches of one subject, *viz.*, Public Health is certainly not conducive to efficiency.

Taking the administration of Public Health by the local bodies, the confusion is worse here, and a thorough re-arrangement of duties and responsibilities is necessary and for this statutory legislation is required.

To give only a few examples:—

The District Board has charge of some branches of administration although these are mainly the concern of Taluk and Union Boards. The control of epidemic diseases is in charge of the local boards and the necessary expenditure has to be met by the Taluk and Union Boards; but the staff the Health Inspectors and District Health Officer are paid by the local Government and are working under the District Board.

In the case of Plague, the Collectors are held responsible, and the District Health Officer and Revenue Divisional Officer are both the Plague Officers and there is dual responsibility. Even here, part of the Plague expenses are to be borne by the Government, and part by the local board. Such an arrangement can never be efficient.

With regard to Vaccination, the Taluk Board has to pay and equip the staff, and the Health Inspectors supervise their work. These vaccinators have to work in Union areas also, but the Union Board is free from all financial obligation. As regards Registration of Vital statistics in rural areas, the village officers are authorised by statute to be in charge of the work, although Union Boards, who are in no way less competent to do the work, are debarred from doing the same.

Again, even in such a subject as Food Control, there are different Acts which deal with it, *viz.*, Indian Penal Code, Prevention of Adulteration of Foods Act and the Municipal and Local Boards Act, and the provisions are by no means concordant, or capable of easy working in practice.

Another anomaly is the omission, from every statute dealing with Public Health, to recognise any officer of the Public Health Department as the one who is to carry out the provisions of the Law, although he is the person who has the requisite technical knowledge and who is the man on the spot who is doing the actual work. The Public Health officer has not been given at present any statutory duties or responsibilities. It is highly desirable that the Public Health officer should be given statutory powers to take immediate action whenever circumstances demand, as, for example, in the case of control of epidemics, unwholesome articles of food, etc. Unless this is done, the full advantages that might have been otherwise available to the public from the Health Officers, are all lost and progress is not possible.

Again, as regards housing and over-crowding, the existing provisions are very vague. Another serious defect in the existing statutes is with regard to such an important matter as the problem of contacts of cases of infectious diseases and the equally important problem of carriers of infectious diseases. At present, practically very little could be done to deal with this problem which is a serious menace to the Public health, as they form a fruitful source of spread of many an epidemic.

The remedy.—To ensure that all the existing provisions regarding Public Health legislation are not lost sight of in actual practice, and are properly co-ordinated they should be collected together into a single Act—the Public Health Act. Re-drafting of many of the provisions might be necessary to secure co-ordination. The existing defects will have to be removed by making suitable provisions to solve the difficulties on the lines indicated above. The central administration of the Act will be by the Ministry of Health, which will have to be statutorily constituted, and the other central departments of Government who now exercise powers with regard to Public Health will make over the same to the Ministry of Health.

As for the Administration in the districts and municipalities, when once the powers and responsibilities and duties of the Presidents, Chairman and officers of the Health Department are statutorily defined the Administration of Public Health is bound to be much more efficient than what is possible under the present conditions.

A Public Health Act on the lines suggested above is an urgent necessity. The rapid advance made in countries like England and

U.S.A. with regard to Public Health, is due, in no small measure, to the framing and working of a properly drafted Public Health Act. Madras can legitimately take credit for the "best organised Public Health Department in India" as stated by Col. Russell who had occasion to see all the Provinces in India as Medical Assessor to the Labour Commission. A Public Health Act is the next progressive measure that will consolidate the results so far achieved and help in bringing about a very tangible improvement in the Public Health of our Presidency.

Spinal Analgesia

Spinal Analgesia A NEW METHOD AND A NEW DRUG—"PERCAINE"

BY CAPT. M. R. W. HART, M.B.E.,
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Having read a report on the above subject by W. Howard Jones, M.B.B.S. (Lond), Surgeon Anaesthetist to Charing Cross Hospital, I decided to give the drug a fair trial.

Percaine belongs to a group of chemical combinations which up to recently were unknown to possess analgesic properties. It does *not* belong to the same family as Cocaine or Novocaine but is a derivative of Quinoline and therefore related to Quinine.

The solutions recommended are :—

- (1) For nerve block 1 in 1000 or 1 in 500.
- (2) Large infiltration 1 in 2000.

Maximum amount of these solutions to be injected as follows :—

400 c.c.	... 1 in 2000.
150 c.c.	... 1 in 1000.
50 c.c.	... 1 in 500.

For Spinal injections the following solutions are recommended :—

1 in 1000, 1 in 1500, 1 in 2000.

The Sp. Gr. of C.S. fluid according to Starling is 1.005. This may vary from 1.001 to 1.010 ; whereas, Sp. Gr. of Percaine in Solutions is as follows :—

	1 in 1000.	1 in 1500.	1 in 2000.
In water	... 1.0001	1.00005	1.00005
„ 0.5 % NaCl	... 1.0035	1.00345	1.00345
„ 0.9 % „	... 1.0062	1.0062	1.0061

From this table it will be seen that only the most delicate methods are capable of detecting any rise in Sp. Gr. due to percaine dissolved in water in these high dilutions. The terms hyper—Iso—Hypobaric are used to describe solutions which have sp. grs. greater than, equal to, or less than that of C. S. F.

Comparison of Percaine solutions with C. S. Fluid.

Bearing in mind the very important variation in the Sp. Gr. of C. S. fluid and comparing P. Sols. with it, it is evident that the normal saline solutions in all high dilutions may prove to be hyper—Iso—hypo Baric.

* The 0.5 % Saline Solution having a Sp. Gr. of 1.003 will almost certainly be hypo-baric and is also Iso-tonic and will not have a difference comparable to that of the old Novocaine and Stovaine Solutions.

In Hyperbaric. There is always a danger of a spread by gravity in the high Trendelenburg.

Iso Baric will of course, stay in the region into which it is put until absorption takes place.

Hypo Baric. Being lighter than C. S. F. will of course be the safest to use, particularly in the Trendelenburg position.

Administration.

A 20 c.c. Record Syringe, some fine rustless needles a fraction over 1 mm. in diameter, with the point ground down to a short bevel and a barrel length of 9 c.m.

A 2 c.c. Record Syringe for administration of Ephedrine Gr. 1, which is given in every case and, to blow out a needle if one should become blocked.

The distal $\frac{1}{4}$ of the needle should not be touched with the fingers.

If the point is sharp, puncture of the skin is not difficult and, is effected by a sudden stab, hardly noticed by the patient.

At the Osmania, we use the lumbar puncture needle to tap the sub arachnoid space, on withdrawing the stillete, the C. S. fluid escapes

and, as soon as this happens, the nozzle of the Record Syringe containing the Percaine solution is fitted on and, the injection slowly given; if there is a sense of resistance, pause a little to allow the fluid time to push upwards and, then proceed with a pause between each 2 c.c.; after injecting the whole of the fluid, the needle is not withdrawn at once but, after a pause of $\frac{1}{2}$ minute—during the whole process only about 1 c.c. of C.S.F. escapes. The wound is then sealed with collodion or Tr. Benzoin. In this method an equivalent amount of C.S.F. as that of the Percaine solution injected is not withdrawn.

The patient is now placed in the Ventral decubitus for 7 to 10 minutes, in order to soak the posterior "Sensory" roots and develop analgesia, and finally put in the dorsal decubitus—by the time the abdomen is painted over and, the towels placed in position paralysis of the Anterior (Motor) roots follow.

The Position.—The position of the patient at the time of injection is the "right lateral", the spine is flexed as much as possible. The injection is given in any of the interspaces between the 1st and the 5th Lumbar.

Testing the Results.—Inability to raise the legs proves that the lumbar plexus is blocked. If the abdominal muscles are paralysed, coughing is difficult and ineffectual, and the patient is unable to raise the thorax. A skin clip is now applied gently but with progressive firmness unseen by the patient in skin area D4 and the face watched for any record of this test. If this is satisfactory, splanchnic block may be assumed.

General Management.—Plug ears with cotton wool, watch patients colour, appearance and pulse. The B.P. is scarcely affected and, there is no need for a sphygmomanometer. There is no vomiting either during or after the operation. Do not crowd round the patient's head, allow plenty of fresh air, avoid loud discussions about any pathological abnormality. Put up a screen in front of the patient's face. Sips of cold water, from time to time, a teaspoonful of brandy diluted with two of water every $\frac{1}{2}$ hour, and occasional sponging of the face with cold water is refreshing. An hypodermic injection of Adrenalin (1 in 1000) $\frac{1}{2}$ c.c. helps to keep up the blood pressure.

The following cases have been operated on under Percaine at the Osmania.

1. Total Hysterectomies with tying of both Int. Iliac Arteries	... Two.
2. Sub Total Hysterectomies	... Two.
3. Ovariectomies	... Two.
4. Amputation of Cervix Uteri	... Two.
5. Obstructed Labour	... One.
6. Huge Incarcerated Scrotal Hernia	... One.

One woman aged 65.—Ascitis and acute abdomen, stoppage of bowels, huge mass blocking pelvis, pulse scarcely perceptible, 10 c.c. of the solution was injected. 10 minutes later abdomen opened, 8 pints blood stained ascitic fluid given exit to, Omentum red and Oedematous firmly adherent to growth and pressing on Pelvic colon. A large portion removed between ligatures, the growth, a malign Cyst. of the ovary was partially removed, wick drain inserted, abdomen closed with through and through stitches. The pulse improved during operation. She is now comfortable as well as can be expected three weeks after the operation.

A Young Primipara.—Difficult labour, R. O. P. head fixed at brim, will go through with good pains and delivery can be effected with a strong pull. Cx. 4/5 dil, membranes entire. As the case was handled outside caesarian section was not decided on. At 9 a. m. 10 c.c. of Percaine solution injected, patient suspended in Ventral decubitus for 10 minutes and, then placed on her back; for the first half hour uterus was absolutely relaxed, the head disengaging and floating above brim; Foetal parts very distinctly palpable as if only a layer of thin "soft silk" intervened between the foetus and the palpating hands. After this pause of $\frac{1}{2}$ hour, uterus began to act again and in an hour from the time of injection, Uterus was acting strongly. In the meantime during period of relaxation with some manipulation the head was made to engage in R. O. A. position, and 15 minutes after, the Bi-Parietal of the foetal skull had passed the pelvic brim; membranes were then artificially ruptured, cervix being completely dilated 15 minutes later i.e., 1 $\frac{1}{2}$ hours after injection only slight progress was made in spite of good uterine action. Head now in mid cavity Pituitrin $\frac{1}{2}$ c.c. was given, this had the effect of almost immediately increasing the pains. Little

or no progress in 3 minutes and, Axis traction forceps were applied and delivery effected with difficulty after several strong pulls. Cord tightly round neck, could neither be drawn over head nor pushed back over the shoulders, and, was therefore divided between clip forceps. A female child delivered in a state of white Asphyxia, resuscitated with difficulty but died a few hours after. Child weighed $6\frac{1}{2}$ lbs. The placenta was ejected immediately after delivery of the child.

The points I wish to lay stress on are :—

1. With a little practice the Subarachnoid space can be tapped with ease.
2. An abdominal operation can be commenced 12 to 15 minutes after the injection.
3. The perfect relaxation of the abdominal muscles, obviating to a great extent the use of retractors.
4. The intestines recede automatically, affording a good view of the Pelvic Cavity, only a very moderate Trendelenburg, if at all, being necessary.
5. The pulse improves both during and after the operation. No post operative complications, *e.g.*, vomiting, distension and pain have been noticed.
6. The action of Pituitrin is not interfered with. In the case of labour quoted above, Pituitrin would have expelled the child had it not been for the cord being relatively short and tight round the neck.
7. In cases where a Caesarian Section has been decided on Percaine will prove useful provided the operation is begun after the temporary relaxation is over ; the period of relaxation can be cut short by an injection of Pituitrin $\frac{1}{2}$ c.c.
8. In the case of huge incarcerated hernia, the relaxation of the abdominal musculature was very much in evidence, reduction of the mass was comparatively easy and manipulations consequently reduced to a minimum.
9. There is complete analgesia relaxation for $1\frac{1}{2}$ hours.

Spinal Analgesia

10. Percaine is an ideal drug for producing spinal analgesia and should displace ChCl_3 in all operations on the abdomen and lower extremities. For my part I shall in future use Percaine in all Gynaecological operations until something still better comes along.

The preparation used at the Osmania is the 0.5% Saline Solution in 1 in 1500 Percaine, contained in 20 c.c. sterile ampoules. We have not found it necessary to use more than 15 c.c. The Drug is purchased from the Clayton Aniline Company, Pharmaceutical Department, 40, Southwark Street, London, S.E.1. Cost of each injection 10 annas. I am sure Percaine will prove an ideal drug for Nerve block, infiltration anaesthesia and for E.N.T. cases.

The point to remember is that the O. S. Saline Solution 1 in 1500 is lighter than C. S. Fluid, so that, with the patient in the Right Lateral position and the head lowered slightly there is no fear of the solution travelling upwards into the upper cervical region.

Mercury Lotion and Cataract operation.

BY KEWALRAM, B.I., L.C.P. & S., *Daharki (Sind)*.

To prepare an aseptic field prior to any modern Cataract operation it is essential to wash the conjunctival sac with mercury lotion.

Authors suggest different strengths of Hydrargyri Perchloride or Biniodide varying from 1 in 2000 to 10000 but the one most commonly used and adopted to-day is 1 in 3000 of Hydrarg Perchloride.

The Herbert Bamber method of conjunctival disinfection is unsurpassed for Indian work. About half an hour before operation the lids are everted and conjunctival fornices everted as much as possible. A stream of H. P. lotion (1 in 3000) directed from a height of eighteen inches strikes with force for about two minutes.

The object is twofold :—

(1) To wash away mechanically such organisms as may be lying on the surface of conjunctiva.

(2) To cause such changes in the superficial epithelial cells as will result in the formation of mucus and in the exfoliation of many of them. The presence of a mass of mucus in the fornices is the test as to whether the irrigation has been sufficient and efficient. Micro-organisms lodged amongst the surface cells of conjunctiva are caught in the mass of mucus and catarrhal epithelium as fish are caught in the net and the mucus and micro-organisms together may be cleared out of fornices by a moist mop of cotton wool. This is a means to remove the micro-organisms mechanically and not to kill them by chemical action of the disinfectant. Two minutes irrigation is quite enough to produce necessary conjunctival reaction, in an ordinary and average Indian villager, but it may be extended to $2\frac{1}{2}$ minutes if there is excess of fibrous tissue or curtailed to $1\frac{1}{2}$ minutes in delicate and clear eyes. The wash sets up temporary redness and chemosis of the conjunctiva.

Mercury Lotion and Cataract operation

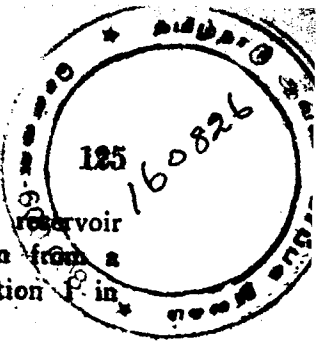
Lieut.-Colonel HENRY SMITH of Jullunder hangs a reservoir from the ceiling six feet above the table and receives the lotion from a wide bore nozzle on the delivery tube. He uses mercury lotion 1 in 2000 and states that it produces no objectionable irritation.

The mercury lotion affects cornea ; and at times harming it severely.

Mercurial clouding of the cornea may occur when too strong solutions are used in the conjunctival sac after the globe has been opened and specially if any solution passes into the anterior chamber or as described before if some mercury lotion remains in the fornices and has not been mopped out well when it slowly gets into the anterior chamber as soon as the corneal incision has been performed. Perchloride appears to be more injurious than Biniodide solutions of similar numerical strength. No solutions stronger than 1 in 5000 of either should reach the incised cornea. The cloudiness is diffused and unaccompanied by any signs of inflammation. If at all well marked it is liable to remain permanently and seriously reduce visual activity. The introduction of iris forceps or other instruments into the anterior chamber to remove capsule or cortex allows the lotion to slip in the anterior chamber and be brought into contact with the posterior surface of cornea. It also emphasises the importance of washing out the conjunctival sac with normal saline solution, immediately before operation and mopping up any fluid lying in the fornix. No treatment appears to be of any use while slight cases may clear up excepting prophylactic instillation of a few drops of argyrol 25% prior to bandaging.

Another consequence of mercurial wash is the production in quite a number of cases of the so called FILAMENTARY Keratitis. The appearance is quite characteristic; the small filaments can be seen like short threads attached by one end to the cornea whilst the other end hangs free. On irrigating the eye with normal saline these little threads can be well demonstrated on first opening the bandage after operation.

It is probable that many other factors are capable of causing Filamentary keratitis ; but the condition is rarely met with except after perchloride irrigation. Clinically it is not of much importance as the filaments fall off after a few days and the cornea clears up. The corneal healing may be hastened by the use of soothing treatment such as the instillation of argyrol solution at intervals during the day.



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Pathology.—This has been worked out by Bardelli by means of chemical and microscopical researches. According to his writing the corneal epithelium under conditions of irritation undergoes an abnormal proliferation at various spots ; at each of these a bud is thus constituted ; this becomes elevated and acquires a pedicle. The movements of the lids and of the globe bring the tortion and elongation of this pedicle by dragging upon the contiguous epithelial cells, which are more or less loosely attached to the deeper layers. In this way the filaments are formed.

Editorial.

A new step forward.

Our readers would have read with interest that recently the University of Madras has been pleased to pass certain regulations enabling the diploma-holders of the Medical Schools in this country, to study for and obtain Degrees in Medicine from the University. We beg to offer our sincere congratulations to all those concerned who have piloted through this measure successfully and we heartily appreciate the broad spirit evinced by the Senate in accepting the motion.

The spokesman in the Academic Council—Dr. M. R. Guruswami Mudaliar—made it out clearly that the step was one which was conducive to promote the best interests of the Medical Profession and that it was unfortunate that in this country so far, nobody had realised that there was a legitimate grievance on the part of the diploma-holders in that they were not afforded the opportunities for prosecuting further their medical studies and rising to the highest rung of the ladder. It was certainly an anomalous position that, while they could obtain higher degrees and diplomas by going to Great Britain and Ireland, in their own country there was little or no opportunity for them to prove their worth. The position was even more deplorable from another point of view. It must be confessed that owing to economic causes and various other factors, a student joins a medical school, not because he may not be fully competent to pursue his higher studies and join a College, but because circumstances necessitate his doing so at that juncture. A person situated in this position should have all reasonable facilities, when conditions improve, to prosecute his studies further.

The limitations imposed upon Diploma-holders has naturally led to a great deal of disappointment and we must confess that the rigid caste system which obtains in the Medical Profession to-day is one of the chief factors against the promotion of that healthy union and corporate life so essential not only for the profession itself, but even more so for its influence to be felt in diverse ways in the public life of the country.

Some criticism has, no doubt, been levelled against certain of the proposals, and while, on all hands, generally, the step has been welcomed, there has been a certain amount of dissatisfaction that a more 'generous' move has not been possible. We can understand such criticisms, but we are afraid that if the critics would consider all aspects of the question, they would themselves realise that the present step was the only possible step that could have been taken at this juncture. It would be conceded on all hands, that there must not even be the suggestion that lowering of the standards has been forced upon the University. In view of the recent events, such a criticism is often levelled without justification and it is therefore necessary for those reasonable for Medical Education in this country to see that no plausible reasons can be given even if such charges are made. Secondly, the framers of the resolution, we take it, had to consider not only the interests of the diploma-holders, but how these regulations will affect the general Medical Regulations already in existence; and we have no doubt that if the subject is studied in all its bearings, many will agree that while opportunities should be afforded, there must be no attempt at either lowering of the efficiency or promoting an indirect method of obtaining a Degree easier than is now possible for the regular students. But there is yet another fundamental reason and one with which we heartily agree. When the Diploma-holder gets his University Degree,

Editorial

there must not be any further possibility of trying to institute a comparison between the M.B. of a Diploma-holder and the M.B. of a regular student. Both are equally efficient; both should be treated alike and both Degrees should be valued in the same way—not only in this Presidency, but wherever the Degree of this University for anything, in other counts parts of India and in other countries nearby or remote.

From all these points of view, we consider that the Regulations passed, take us a great step forward in the amelioration of the condition of the Diploma-holders and in promoting a healthy spirit of enterprise in them to advance in their medical career. We understand that steps are being taken to see that for the entrance examination needed, either the Intermediate or an examination accepted by the General Medical Council, may be offered. This is but necessary because, a large number of diploma-holders have we understand, already passed the Cambridge Senior or similar examinations with a view to proceed to England for further studies. It would certainly be a hardship for them and for others similarly situated, if this concession were not allowed. We have no doubt that when the University finally passes the Regulation, a large number of diploma-holders will avail themselves of the facilities afforded and we trust that the example of the Madras University will be followed by other Indian Universities.

MADRAS MEDICAL ASSOCIATION

Dr. A. Lakshmanaswamy Mudaliar's
Inaugural Address.*Madras, January 1931.*

The inaugural meeting of the Madras Medical Association was held on Saturday the 24th January when to a large gathering of ladies and gentlemen, both in service and in independent practice the President Dr. A. Lakshmanaswamy Mudaliar, M.D., delivered the following address.

Let me, on behalf of the Madras Medical Association, offer you a most cordial welcome to this, the inaugural meeting of the year. This Association was started in the year 1915 with the three-fold object of promoting the cause of medicine, of maintaining the honour and the interest of the medical profession in general and of the Madras Medical service in particular and of maintaining an 'Esprit de corps' among the members of the Association, objects which will naturally force a better understanding among the members of our service and closer co-operation between them.

It was our good-fortune in those days to have as our President one combined in himself a deep knowledge of the science and a wide acquaintance of affairs in general and medical affairs in particular. The late Dr. Koman, during the period of his Presidentship, contributed not a little for the stability and success of this Association and we of the next generation cannot be sufficiently grateful to him and to his memory for all that he had done unto us. At the demise of Dr. Koman, the Association was fortunate to secure, as its President, one who was held in high reputation by medical and the lay public for his erudite scholarship, his professional abilities of high order, and his unfailing courtesy and tact. It is due to these qualities that Dr. Kesava Pai was able to steer the Association through difficult times and through many vicissitudes; and it is due to his indifatigable energy that I have the privilege to-day, through your kindness and courtesy to succeed to a heritage, which is at once so magnificent in its outlook and so onerous in its responsibility. I feel that we cannot express our

gratitude in sufficient terms to Dr. Kesava Pai for all that he has done in the past, and it is our wish that in the years to come, he will still continue to guide us in our deliberations and to help us in our work.

It is also my melancholy duty to place on record our deep sense of the loss that the Association has sustained by the untimely demise of one of our most promising members and staunch supporters of the aims and ideals for which this Association stands. I refer to the late Dr. V. V. Narasimham.

As I said before, I feel particularly gratified that the Association to-day is showing sign of renewed activity: and I fully believe that the spirit which has been evinced by its members will be kept up in years to come and will grow in enthusiasm, such that it may be said of this Association that it has taken its proper place in the attainment of the ideals that we of the medical profession have so largely at heart. For the first time, I have indeed the privilege of welcoming a section of our members, whose presence here, this evening, is an indication of the part they will play hereafter in the successful working of this gathering. I refer to the Lady members of the Madras Medical Service. I can assure them on behalf of our Association, that it is not only a pleasure for us to welcome them into our midst this afternoon, but it will be our privilege to do whatever we can to promote their interest, to safeguard their legitimate rights, and to be of service to them in any manner that it may be open unto us, with a view to strengthening their place in the medical profession.

It is my pleasant duty to announce that at the last annual general meeting of this Association, a resolution was passed which enables us now to welcome the members of that other great department of medicine—the preventive side—and we hope in this year to gather unto our Association all the members of the Public Health Department, whose valuable co-operation with us in scientific and other fields of activity of this Association, will go a long way to fulfil the aims and objects of our Association. The time is long past when the medical profession can afford to live in water tight compartments and I believe that we have taken the first and the right step in promoting a unity of interests by welcoming into this body these two great branches of the profession, whose share is bound to be an increasing one in the future of the growth of the medical profession in this country.

SAFEGUARDING THE INTERESTS.

As I have said, our ideal is the promotion of the interests of the medical profession as a whole, and not of any particular section thereof and while this Association, constituted as it is, will take some share in looking after the interests of its own members both by virtue of the greater authority with which it can speak about them, as well as because of the greater knowledge that it will possess of that side of the picture. I say while this Association will naturally take the interests of the members of this Association into special consideration. I can say without any fear of contradiction that we aim at the best interests of the medical profession; and that whatever may be our views with regard to what may be called the special claims of the members of our Service, it will not be to the detriment of the profession in general. Let me make myself perfectly clear. I believe I am voicing the feelings of all you here to-day and I believe the interests of the country at large when I say that although we realise that we are but a part of the whole of the medical profession, our desire is and always has been, the promotion of the best interests of the whole, and the promotion of the particular section thereof, provided the latter does not conflict with the former. To-day there are great changes going on in the system of medical relief in the country at large. We welcome these changes. I know, and I speak with some authority, when I say that the Madras Medical Association welcome the new changes that have been introduced, realising as it does that they are inevitable, and that they are to the advantage of the country at large. We feel that conditions being what they are in the country, there is scope for both systems and that there is a necessity as well. I do not visualise any conflict of ideals or interests in the existence side by side of those two systems, at least in the present stage of evolution of the country. Not only that; I feel that the best interests of the profession require a hearty co-operation between these two systems and the Medical Association will strive to the utmost of its capacity—whether it will succeed or not, it is not for me to say—to promote a better understanding and more whole hearted co-operation between these two systems. It is also our hope that we shall get into touch more and more with the general practitioner in the City and in the mofussil and place at his disposal our services in the interests of the common public and for the better development of harmony in the profession.

I visualise the system that obtains in many other countries where those, who have the privilege of working in these larger hospitals and who doubtless by virtue of that privilege enjoy the opportunities of having at their disposal better facilities for diagnostic purposes, will, without hesitation, place their services at the disposal of the general practitioners and give them a helping hand, if they so desire, in the work with which they are faced. It should be possible in any hospital for the practitioner for instance, to send up a patient who is otherwise entitled for free treatment in the hospital for consultation to any of the staff, honorary or otherwise; and it should be deemed a privilege on the part of the staff of the hospital to communicate their views about the patient to the practitioner concerned, and thus help him in his somewhat difficult task as a general practitioner. This is the system that obtains in many English and Continental hospitals; and I do believe that the time is come when such a spirit of whole-hearted Co-operation should be actively cultivated between those who are working in the larger hospitals and those who are filling the difficult, but none the less most essential role of the general practitioners catering to the needs of the very large body of the general public. There are other ways by which we can bring together a closer spirit of co-operation, ways which it is unnecessary for me to go into; but I believe I am speaking on your behalf as well as on my own, and I know I am speaking with some little authority after consultation with your Executive Committee, when I say that so far as our Association is concerned, whatever may be doubts that might arise in the minds of some people outside, we shall continue to do the best that we can, according to our limited light, to promote that better understanding which I believe is one of the crying needs of the hour; so that the medical profession in this country could feel that it is a whole and harmonious body, and not a vivisected, dis-organised, dis-united, and almost lifeless skeleton.

MEDICAL EDUCATION.

Let me next touch upon another important matter in which I believe we, both as an Association and as individual members thereof, are very much interested. I refer to the subject of Medical Education. The events of the last year are doubtless familiar to you all. Medical Education in this country has come to a stage when it seems necessary that everybody interested in the future of the profession should take a keen interest. So far as University education is concerned, the resolu-

tions of the General Medical Council are doubtless familiar to you all, as well as the proceedings of the Faculties Conference held at Bombay in March last, and the Conference held at Simla under the auspices of the Government of India. We are awaiting the introduction of the Bill ere-long, and I do hope that when that Bill is introduced; members of this Association will have an opportunity of expressing their opinion and of helping it on with such criticism that they may have to offer. I should like to state categorically, that we have no intention of aggrandising or in any way using our position to limiting the activities of any other section of the medical profession. When the Medical Bill is introduced, I trust a great step forward would have been taken in promoting the best interests of Medical Education in this country and in developing that education along lines best suited to the needs of this country. I know the University is most keenly interested in this subject and will welcome any views that this Association may have to offer as to the progress of Medical Education in general. We, who have so large a part to play in the training of the medical students in this Presidency, cannot over estimate our responsibilities in this direction. As one intimately connected for the last 10 years with the medical education of the youth of this Presidency, I venture to submit that while the education that the students are getting, is sufficient to equip many of them, it would be an advantage, if in the interests of a smaller number, some organization was possible to equip them better, both from their examination point of view, as well as for their future.

Those who have visited the Universities in the West would be familiar with the fact that side by side with the normal activities of the Medical Colleges, there are certain side activities calculated to interest and benefit the weaker section of the student population. I believe the time is come when we should try and see whether it may not be useful, in the interests of the student, to establish a system of tutorial education, such that those who are interested in particular subjects, or those who feel the necessity for additional instruction in particular subject, may have that benefit placed at their disposal. Such classes are to be found in London, Edinburgh and Dublin: and whether they are called tutorial classes, coaching classes, or grinds, the underlying idea is the same. I speak with some diffidence on the subject in the presence of such a large number of senior and better informed Professors of the College: but it seems to me that it would be a matter worthy of consideration for these

of us who are engaged in Medical Education, to think whether the time is not come to this Presidency for some such line of development.

Unfortunately in this country, there has grown for a long time two separate grades of medical education and the criticism has been levelled often, and not without justification, that these two different grades result in the creation of what is known as a spirit of caste exclusiveness in the medical profession, which is bound to be detrimental to the best interests of the profession at large. I have had the privilege of being a Lecturer in a Medical School for 6 years, and I can say without fear of contradiction, that if students do take their medical education in these schools, it is more often because of financial difficulties and other circumstances over which they may have no control, rather than because they are in any way less well-equipped intellectually than those who can claim the benefits of a medical education in the Medical Colleges. It ought to be possible for anybody, who has got the energy and the intellectual equipment, to rise to the highest level of development whatever may be the initial start: and it is from this point of view that I regret the limited opportunity that is unfortunately available to the Diploma-holders in Medicine in this Presidency. I say, it is unfortunate that these Diploma-holders have necessarily to go to a foreign country to get the higher qualifications in medicine, and I think we should do our level best, in whatever sphere of activity we may have a voice, to see that such a state of affairs does not continue to exist.

I am glad to have this opportunity of stating that the Chairman of the Board of Studies in Medicine is more than sympathetically disposed for any proposals to alleviate this state of affairs, and it is our hope very shortly, to place for the consideration of the authorities concerned, proposals by which the Diploma-holders in Medicine in this Presidency will have opportunities of getting a University Degree under prescribed conditions and by passing prescribed examinations. I am sure we will welcome these proposals and I feel sure that these proposals will have a great effect to stimulate a spirit of study and further development in a large class of the medical profession who to-day have doubtless the inevitable grievance that opportunities are so few before them that they cannot show their intellectual worth. Speaking for myself, I hope the gulf will soon be bridged, and that whatever reform other provinces may be prepared to undertake or not, in the Presidency of Madras at

any rate, we shall ere-long have the satisfaction of having but one minimum standard of medical education whether it be taken in the College affiliated to the University, or in the schools maintained by Government such that these irritating differences may cease to exist, and such that the profession will be better unified and better able to meet the demands of the public. When a suitable opportunity occurs, I have no doubt this Association will express itself in no uncertain terms and will place unreservedly at the disposal of the authorities concerned, such knowledge as it has to help in the solution of this very difficult and urgent problem.

DEVELOPMENT OF MEDICAL PROFESSION.

I should like, with your permission, to refer to the aspect of medical education in general, which I think is of vital importance for the growth and development of the medical profession. During my recent tour in the West nothing has impressed me so much as this significant fact—that in every important centre of medical education, the emphasis is now laid more and more on post-graduate, rather than on pre-graduate medical education. Knowing as we do the rapid advance of medical science and the degree of specialisation in the different branches thereof we cannot but look with some amount of concern on the lack of facilities for post-graduate education in this country. Post-graduate education, let me remind you, is not for this or that particular class of medical practitioners, but for all practitioners for the specialist as much as for the general practitioner more perhaps for the specialist even, than for the general practitioner. For whatever particular departments of study we might have tried to specialise in, there is no gainsaying the fact that nobody can lay claim to a proficiency in every branch of the subject—nay, not even that adequate knowledge of the modern researches in these particular branches, adequate to help one to do his only as a specialist. It is here that post graduate studies and post graduate lectures come to play such a large part. As one who has dabbled in the field of Obstetrics and Gynaecology for very nearly 20 years, may I say how much it would be an advantage if such post graduate courses or lectures were to be delivered in the kindred subjects of medicine, surgery and the inevitable laboratory sciences? To the general practitioner, I need hardly tell you the advantage of such a course of study.

Even the most voracious of readers cannot afford to keep pace with modern developments, and mere theoretical knowledge will be quite unimpressive without the presentation of the practical aspects of a question by those working in individual departments. If, therefore, the general level of the profession is to rise, it can only be by a wise use of the system of post-graduate instruction. I feel sure that the Association is fully alive to the necessities of such an instruction, and I have the authorisation of the Executive Committee of your Association, to say that they will be only too glad to co-operate, in whatever manner they may be allowed to, with other associations similarly engaged in this City, for the purpose of inaugurating a scheme of post-graduate study. Let me state in passing, that our object is not to give opportunities for this or that particular member thereof; nor are we in the least bit inclined to the view that post-graduate lectures will tend to promote the interests of any set of persons who deliver such lectures. I feel with some feelings on this subject, because I realise that there is an impression—unfortunate in my opinion—that such lectures will be calculated to promote self-interest. Nothing is farther from our thoughts.

I hope that the hand of fellowship extended will not be refused, and that those who are interested genuinely in the future development of the medical profession will not hesitate to avail themselves of all opportunities to inaugurate a well-conceived scheme of post-graduate study. During the course of the year, I hope it will be possible for our Association to take such part as it may be privileged to, in the development of this idea by very close co-operation with such other bodies as may be similarly interested.

Intimately connected with the harmony and cordiality in the medical profession, is the subject of Medical Ethics. Medical Ethics should very largely be governed by convention and public opinion, and not by Draconian laws, or by threats of punishment. Individual cases there may be here and there, and to whom nothing else will appeal but the fear of punishment and facing the inevitable trial before a Medical Council: but I would like to emphasise upon this fact that it should be our duty as members of this Association, to do all that we can to foster that spirit of innate obedience to the well-known codes of Medical Ethics amidst our members and to set, if I may say so, by our own conduct, an example to the new men that enter the profession. I do not intend to suggest that the profession is not at present following the well known canons of

Medical Ethics, but it is a truism to say, that in such questions we cannot be too much on our guard : and I hope that it will be conceded as part of the duty of every member of this Association, to do what he can towards the promotion of those high ethical standards which are as much in the interests of the individual as that of the profession.

THE PLACE OF INDIAN MEDICAL PROFESSION.

I now come to a subject which, I must confess, is very dear to my heart. Time and again the criticism has been levelled against the medical profession in India, and against the medical graduates of the Indian Universities in particular, that they have shown little of original research to their credit, and that after all, the place of the Indian medical profession can be judged only by the extent of its contribution in the field of Medical Research. It would serve no useful purpose, either to justify our position, or to offer explanations for this apparently incontrovertible fact. What I am more concerned with, as I feel you are all, is, so to shape our activities that, far from giving room to such criticism, we shall be able in years to come, to hold our head high up, and to claim our just share in the promotion of the advancement of Medical Science. I state it in all humility and with no idea of exaggeration, when I say deliberately that at the present time we have in the medical profession in this Province and in our Association, persons who are well-equipped for the task of research and whose contributions will, by no means, be mean, provided suitable facilities are afforded and opportunities availed of. Comparing the position of the members of our Service 10 or 15 years ago, with what obtains at the present day, I cannot help the feeling that the responsibility for research devolves on us in a very special degree and that we cannot hereafter afford to explain away our position—much less to justify.

It is a matter for gratification for all of us that at the present time, we have in all the important departments of Medicine, members of our service holding a place which gives them opportunities and which must necessarily claim therefore responsibilities from them. This Association will do all in its power to gather those who are interested in research and to do what little it can in helping them onward in that great and good task. I have always felt it somewhat of an anomaly that it should not have been possible for the Government to encourage research more actively than has been done in the past. I believe that it is necessary to create

the taste for research at an early stage in one's career in the medical profession : and I therefore feel that it will be a very useful thing indeed if some of our youngmen had opportunities to concentrate their activities on particular lines of research during the first few years of their entrance into the medical profession. It would certainly be a great advantage if the Government were to grant certain research scholarships to the brilliant men of the year perhaps half a dozen every year and to get them to work for a period of three years on such scholarships under the supervision of specialists in the different departments. The University is encouraging research in this direction by awarding scholarships, one of which is generally in the field of Medicine. But, considering the amount of material that awaits research work, I do hope that this Association will place its views before the Government and request the Surgeon-General to support the plea that such scholarships should be given to the bright young students of the year. Conditions being what they are to-day, and it still being a great desire on the part of the brilliant young men to enter our service, it should also be possible to so frame the conditions of award of these studentships that those who are research students may claim their service as equivalent to that of the House Surgeons for instance, and if they should get into the Service through the door of open competition, that competition, that they are skilled in the research line if their research work is promising for a number of years.

RESEARCH WORK.

There is another direction in which I trust the Association will approach the Surgeon-General and the Government. Some of our members who are keen about research, find that for want of grants in aid, it is not possible to take up certain lines of research work and to that extent their activities are unnecessarily de-limited. I hope it will be possible for the Surgeon-General to support the system of grants in aid for research under special conditions when he is satisfied that the work is of such a nature as requires such grants-in-aid.

Let me draw your attention to the fact that at present, there is an Indian Research Fund Association, whose main object is the encouragement of research and to support it in whatever manner it is possible for that Association to support. I hope that members of our Association will get into greater and more intimate touch with the activities of this Association and that it will be possible for them, some of them at any

rate, to claim the benefits of this Association in the work that they may take up. I can only say that as one recently elected to the Governing Body of that Association, it will be my privilege and indeed my duty, to do what I can to see that Madras gets its fair share for any work that the members of the medical profession may do in any department of research.

I would like to refer in passing, to what we hope will soon be passed by the authorities of the University of Madras. For some time past, some of us have been feeling that it is anomalous that, while research degrees exist for those who take up many other sciences, such facilities should not be at the disposal of graduates in Medicine. I am glad to inform you that the Board of Studies in Medicine took up this question last year and pressed upon the attention of the University the desirability of throwing open the research degrees of Ph. D. and D. Sc. to graduates in Medicine; and within a very short period, we hope that the Academic Council and the Senate will set their seal of approval on these proposals and that henceforth the graduates in Medicine will have the opportunity of obtaining the coveted distinction of Ph. D. and D. Sc. for original work contributed by them. This should indeed be another incentive for our young men to enter on the field of medical research.

Speaking of research, may I just utter one word of caution? I am afraid it is too often believed that research necessarily implies laboratory equipment and a great deal of laboratory technique. It is undoubtedly true that at present, much of the work is indeed intimately connected with laboratories. But there is a growing consciousness in the mind of the medical profession in general and of the medical research workers especially, that there is another field of research open to all members of the medical profession, the field of clinical research. Great problems can be tackled in this field—the topographical distribution of disease, the peculiar local conditions responsible for the spread of certain diseases and many other intimately associated clinical factors concerning these diseases, are as much matters of research as laboratory experimentation or animal breeding experiments. I do hope that every member of the Association will think it his duty to take some share or other in carrying on research of this description, if the additional facilities of laboratory equipment etc., are not easily available or placed at his disposal. In passing, may I say that it gives me great pleasure to announce that some

of the members of our Association resident in Madras, have already taken up this subject of co-ordinating research work, however limited and humble it may be and that we hope during the course of the year to have definite lines of research conducted by different members of this Association in close co-operation with each other such that at the end of the year, it shall be our privilege to publish the work that has been possible during the year.

IMPORTANCE OF CO-OPERATION.

Friends, I am afraid I have taken up too much of your time and I must really bring my remarks to a close. I have claimed the privilege of a few desultory remarks and random thoughts of an ill-asserted and ill-digested nature. But my apology is your own weakness in choosing me as your President. What little I can do, I shall always place unreservedly at your disposal, and I hope by your active co-operation, it will be possible for me at the end of the year to place before you some little work, at any rate, some little work accomplished, however humble it may be. I am indeed most deeply grateful for the co-operation that has been assured me by many members of our Association already. To-day I am in a position to state that we shall have the privilege of having meetings in the first week of every month when papers of scientific interest will be read, and the opportunity of having clinical meetings in the third week of every month in the different hospitals in the City, when subjects will be discussed and cases demonstrated. To whomsoever my appeal has gone forth, the response has been most generous and gratifying; and I venture now on this occasion to express my most grateful appreciation of the fine spirit that has been evinced by the members at least.

I shall conclude as I began, by reaffirming the faith that I feel for the activities of this Association and the part it can play in the future of the medical profession. We stand for honourable co-operation, for the true interests of the medical profession in general, for the highest and noblest ideals that have animated that profession from time immemorial; and whatever may be my shortcomings, whatever may be my limitations, may I venture to assure you once again that I hope and trust, like the village blacksmith, that

“Something attempted, something done.

“Will have earned me my day's reward”

Case Reports

Case Reports.

I.—Ectopic pregnancy complicating chorion-epithelioma

BY P. RATNASWAMI, B.A., M.D.

Kittamma, 23, H. Married 15 years. Number of children 2. Date of birth of last child, 2 years ago. History of Hydatid mole, 8 months ago.

Complaint :—Bleeding per vagina 8 months.

Previous history :—In January 1930, she supposed to be pregnant 5 months. One day she had severe bleeding p. v. and she passed a large jelly-like mass which was diagnosed as Hydatid mole by a doctor. Metrorrhagia from then till July. She missed two periods in August and September. Towards the end of September, one day she felt severe pain in the abdomen. She had severe bleeding then when she passed a fleshy mass (uterine cast?) She was taken to the Bangalore Hospital where she was curetted. She was discharged 10 days later early in October. On the 13th October night she felt very severe pain in the abdomen and she had bleeding and collapsed. She was admitted on the 14th into Coimbatore hospital. The case was diagnosed as Ectopic and she was operated on the 15th.

Operation notes : The right tube was found to be ruptured and the Douglas' Pouch and peritoneal cavity were full with old blood clots; there were also a few fresh blood clots. The tube was removed and the uterus was found to be about the size of two months pregnancy. Uterus was fixed with one stitch. Patient had an uneventful recovery and the wound healed by 1st intention.

About 10 days after the operation she began to bleed irregularly and there was a slight rise of temperature in the evenings. The uterus began to enlarge. On the 9th November she passed an uterine cast, on the 10th she was curetted, there was some cheesy material from the uterus. Chorion-epithelioma was suspected and was confirmed by microscopical sections.

She was admitted in the hospital on 23-11-1930.

Notes of examination.—An ill-nourished anaemic girl. No P. A. Liver and spleen not palpable; nodular tumour in the hypogastrium slightly movable. Heart: boundaries enlarged.

Rt. para	1" external
sternal	to lt. nipple
line.	line.

Sounds : Haemic murmurs present, feeble sounds.

Pulse : rapid, feeble and dicrotic.

Lungs. The left base showed impaired resonance with marked bronchial breathing and coarse rales. A few patches of consolidation in upper part also. Right base also showed sign of consolidation. Metastasis in the lung was diagnosed and X-Ray report was confirmatory. "Large number of secondary deposits in both lungs, with early calcification of costal cartilages. Heart appears generally enlarged".

T. 102°, P 112, R. 30.

*Blood Report.**Diff. count.*

Hb. 10%	Polymorph. 68% Anisocytosis.
R.B.C. 1,860,000 per c. mm.	Myelocytes 14% Poikilocytosis.
W.B.C. 6,000 per c. m.m.	Lymphocytes 16% No megaloblasts
C.I. 0.265	Eosinophiles 2%

Urine—nil abnormal.

Motions—Ova of Trichostrongylus.

She was put on stimulants and expectorant mixture and nourishing food.

As it was deemed risky to operate, Radium 50 mgms. were applied to the cervix on 27-11-1930.

She died on 28-11-1930 at 1-30 a.m. (15 hours exposure).

Note.—The case is unique from the fact that an intercurrent tubal pregnancy seems to have occurred during the course of a chorion-epithelioma unless one attributes the metrorrhagia, from January to July 1930, to subinvolution. On referring to the text-books, the authors either

make a non-committal statement on the subject or are silent about it. Jellet remarks that in a few cases the haemorrhage (in chorion epithelioma) does not begin till some months after the abortion, but that it is quite exceptional and in such cases it is possible, he says, that in the interval the patient has had another abortion.

In case one assumes that the tubal lesion is an example of chorion-epithelioma metastasis, it is difficult to account for the amenorrhoea in August and September 1930. The case lends itself to further discussion.

II. Krukenberg's tumour secondary to Gastric Carcinoma.

G/1164. Perumalamma, Hindu, 35.

Admitted.—9-12-1930.

Died.—12-12-1930.

History.—Married 20 years ago. Five children were born out of which 3 died; the date of birth of last child was 10 years ago. Two abortions.

Complaint.—Pain in the lower abdomen—4 weeks duration.

History of Periods.—Amenorrhoea 2 months. Scanty periods for 6 months before amenorrhoea. Regular and painless periods once a month before the scanty periods commenced. Date of last period, 2 months ago. No leucorrhoea.

Examination.—Patient's general condition poor; complains of intense pain in the abdomen.

Abdominally, a tumour was palpable up to 2" above umbilicus.

P. V.—Cervix soft, uterus enlarged up to 2 months size and pushed over to the left. A tender mass in the posterior fornix; the mass pushing the uterus to the left. Blood on examining finger. No foetal heart heard. Probably extra-uterine.

Operated on 10-12-1930: Notes.—A ruptured papilliferous cyst of the left ovary of the size of a mango with deposits on the omentum and the intestine. A moderate amount of fluid in the peritoneal cavity. Left salpingo oophorectomy was done and the right ovary also was removed as it also showed papilliferous changes.

The patient never rallied satisfactorily and died on 12-12-1930.

Post-mortem Report.—Abdomen was opened through the operation wound.

Omentum.—Very thick, infiltrated and friable.

Stomach.—Distended, hard and infiltrated especially towards the pyloric end. There is a shallow healed crater on the posterior wall of the stomach near the pylorus—edges are thick, hard and rounded, the base of the crater friable and hard—suggestive of malignancy. The small and large intestines were thick and infiltrated, the transverse mesocolon and mesentery infiltrated, thickened and friable.

Liver.—Definite deposits could be made out; operation wound healthy; uterus normal.

Micros: appearances:—

Ovary.—Appearances suggestive of Krukenberg's tumour.

Stomach.—Spheroidal celled carcinoma.

Omentum.—Metastatic carcinomatous infiltration.

Intestines.—No signs of infiltration.

Note.—Under the title "Fibrosarcoma Mucocellulare Carcinomatodes" Krukenberg, in 1896, described a peculiar malignant tumour of the ovary, usually bilateral, occurring in subjects, of all ages, growing slowly, usually with ascites and eventually fatal by extension and recurrence. The microscopic structure presents small or diffuse groups of rounded or polyhedral cells with mucoid contents compressing the nucleus into a signet ringform. Krukenberg failed to point out the close resemblance of his tumours to secondary carcinoma of the ovary and he was unable to determine from which ovarian element the tumours arose. This deficiency was supplied by writers like Wagner etc., with the demonstration that this peculiar tumour may be exactly reproduced by secondary carcinoma from stomach and other abdominal organs and that the great majority of such growths are secondary to tumours in other organs. It is still generally admitted that there are primary tumours of the ovary of Krukenberg type. It is not always possible to demonstrate the primary focus in cases of wide-spread carcinoma of the abdomen with the involvement of the ovary, although the structure is not always

that of the Krukenberg type. Ewing is inclined to believe that the pure Krukenberg tumour is always secondary and that the primary carcinoma presenting this structure regularly yield areas of a different type.

REFERENCE:

Ewing "Neoplastic Diseases" III Ed.

III. A Case of old "Osgood-Schlatter's disease."

CASE SHOWN BY DR. N. MANGESH RAO, F.R.C.S.

Previous history.—A male adult aged 27 years now, suffering from pain in the upper part of both tibiae at the age of 15. This pain started after a vigorous game of foot-ball. Under medical advice he took complete rest for two months and the pain subsided. But it reappeared now and then after any vigorous cycling or foot-ball. It was situated about three inches below the knee.

Present history.—A month ago after cycling for six miles pain appeared in the same place in both legs and he had also slight fever. This subsides on resting but reappears when he has to cycle etc.

Present appearance.—Both tubercles of tibia appear unusually prominent and broadened. Both the bursae in front of the tubercle are swollen and painful. On palpation there seems to be a loose body deeper to the bursa on the left side.

Roentgenograms.—On the right side there is a small prominence in close contact with the shaft of tibia, but on the left this nodule of bone is distinct from the shaft.

Comment.—Apparently the patient suffered from osteo-chondritis of the secondary centre of tubercle of tibia, that in some appears at the age 12 to 14 years but usually unites with the tibial epiphysis by 18 years. In this case though all epiphyses have united this secondary centre has not united with the main epiphysis and has resulted in a loose body. This is rather a rare complication in Osgood-Schlatter's disease.

Abstract from current literature.

Edinburgh Medical Journal, Vol. XXXVII, No. 8—*The Practicability of the Aschheim-Zondek test for pregnancy*—E. Robertson.

Aschheim and Zondek were the first to show that the urine of pregnant women when injected into the immature mouse produces certain characteristic features in their ovaries. They also showed that with few exceptions, this reaction was peculiar to the urine of pregnancy. This tests depends upon certain ovary stimulating substances present in pregnancy urine. They appear to be the same as or very similar to hormones contained in extracts of the anterior lobe of the pituitary and the placenta. The active role of the placenta as stimulator of the ovary and the similarity of the action of placenta and pregnancy urine indicate that the substances present in the pregnancy urine are the products of the placenta which have been excreted for some reason. Thus it becomes apparent that the Aschheim-Zondek reaction should not be regarded as a test for the presence of a living fetus but as indicative of the presence of active placental tissue or derivatives thereof. It is a placental sign rather than a pregnancy test. Experiments show that urine and extracts of tissue from cases of hydatid mole may produce the Aschheim-Zondek reaction.

Ten cases of Hytadidi from mole and four of chorion-epithelioma gave positive reaction. Incomplete absortions where active products of conception remained also gave positive results. Fibroid tumours, benign and malignant conditions of ovaries consistently gave negative result.

In the discussion, Dr. Johnstone regretted that the test could give no great help in cases of threatened abortion.

Suprasellar tumours, their diagnosis and treatment.

By DE MARTEL T. PRESSE MED. PARIS 1930, XXXVIII, 465.

Supraseller tumours originate near the sella and grow upwards, compress the optic chiasma and cause bitemporal hemianopia and primary optic atrophy without causing deformity of the sella tursica.

Suprasellar Meningioma is a good example. This tumour arises from and is attached to the anterior tubercle of the sella, anterior to the optic groove and may be completely removed surgically. It usually occurs in middle age, chief complaint being dimness of vision especially in one eye. If perimetry be not done the lesion may be over-looked. There is no hypophyseal insufficiency. A careful ophthalmological examination may show a narrowing of bitemporal fields and often a definite bitemporal hemianopsia and there may be pallor of optic discs. Lateral roentgenograms may show a normal sella but a stereoscopic view may show the tubercle of sella as longer and denser than normal.

Suprasellar Adenomata.—These develop above the diaphragm of sella. But changes in the sella are unusual. Deformity of sella are more common with adenomata than with meningiomas. The differential diagnosis between the two is usually made only at operation.

Congenital cysts developing from the rests of the cranio-pharyngeal Canal (Rathke's Pouch) frequently manifest themselves in children or young adults. Their walls usually show calcium deposits in roentgenograms. These cysts are more common than is generally supposed. They vary in size. When situated above the sella the chiasmal syndrome is dominant and sella may show no changes.

In supra-sellar tumour cases, a careful examination should be made for primary optic atrophy and defects in visual fields. If intracranial hypertension syndrome is present, primary optic atrophy may be accompanied by stasis. Signs of wearing away of sella should be looked for as thinned and pointed anterior clinoid processes, thinning and enlargement of sella, thickening or attenuation of optic groove or enlargement of optic foramen.

Meningiomas once removed do not usually recur. Adenoma of the hypophysis recur but can be easily removed again. Congenital cysts are less favourable. Cushing punctures the cyst and removes as much as possible. Cushing's approach is the best. When hemianopsia is present he cuts the chiasma as it does not increase the visual defect and by detaching the optic nerve and fascia a better exposure of the cyst cavity is obtained which is removed as far as possible and the remaining lining wall is touched with Zenker's solution.

N. M. R.

B. I. MALT EXTRACT AND ITS COMBINATIONS.

The Bengal Immunity is the first Indian Firm in issuing Malt Extracts and its combinations in the market and their Malt preparations have been found superior to foreign Malt preparations in many respects.

B. I. Malt Extract conditions the true Malt diastatic ferment, is rich in maltose, phosphate, and albuminoids; and Vitamine is present in active and assimilable conditions.

Vino-Malt :—(containing Pepsin, Iron Peptonate, Iron and Ammonium Citrate, Glycerophosphates of Lime and Soda, Malt Extract and Alcohol 15%). Vino-Malt is an ideal general tonic and its power is much increased by the nutritive and digestive qualities of Malt Extract.

Radiated Malt :—(Malt Extract with Irradiated Oils, Yeast, etc.). It is a Vitamine Food for Undergrowth, Wasting Diseases, Exhaustion, Lung Diseases, Tuberculosis, Rickets, etc., in which are incorporated all the vital vitamins which are necessary for maintenance of our perfect health.

Morrhuo Malt :—(Cod Liver Oil with Malt Extract). It is palatable and at the same time easily assimilable and provides vitamin A, B and D. It is moreover a vitalising food for Wasting Diseases, Underdevelopment, Lung Diseases, Exhaustion, Tubercular Conditions, Rickets, etc. The finest light brown Cod Liver Oil is so incorporated in B. I. Malt Extract that easy assimilation is ensured.

Marrow Malt :—(Malt Extract with Bone-Marrow, etc.). It is a children Food for Under-development, Rickets, General Debility, Lung Diseases, Malnutrition, etc.

Malt Hypophosphites Co. :—(Malt with Cod Liver Oil, Hypophosphites Co., etc.). It is a Lung Food for Chronic Bronchitis, Asthma, and other Lung Diseases, etc. Hypophosphites are very unstable salts. They keep their chemical properties and mask their bitter taste in combination with B. I. Malt Extract.

Malt Easton :—It is a combination of the Phosphates of Iron, Quinine and Strychnine with Liquid Malt. It is an excellent general and Nervine tonic and superior to simple Easton Syrup. Here Syrup is replaced by B. I. Liquid Malt which makes it less bitter and easily assimilable.

Malt Lecithin Phosphate :—(Malt Extract with Cod Liver Oil, Lecithin, Glycerophosphates, Strychnine, etc.). It is a Nerve Food for Nervous prostration, Exhaustion, Sexual Impairment, Hysteria, Wasting Diseases, etc. Lecithin Phosphate combination with Malt is most palatable and assimilable. It is a general tonic for children and adults and especially useful in nervous debility.

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Lesions of chiasmal region.

BY WALKER C.B., AM. JOUR. OPHTH., 1930, XIII, 198.

Tumours:—Aneurysms 1·2 per cent half of them lie close to the chiasma. The cerebro-spinal fluid contains a little blood from recurring leakage. Pressure on the Vth and VIth nerves may cause migraine or palsies.

2. Primary gliomata of chiasma—3 per cent, cause primary optic atrophy, atypical hemianopic defects, excavation of optic canal causing sella to appear pear-shaped and unilateral exophthalmos.

3. Cranio-pharyngeal cysts—mostly supra-sellar and cystic. Occur in children or young adults. 85 per cent of those show calcareous deposits (in pituitary adenoma these deposits are very rare).

4. Other supra-sellar tumours equal in number to the third group above. These are Meningiomata, hypophyseal adenomata with a normal sella, cholesteatomata, gliomata of third ventricle, gliomata of chiasma. Midline tumours produce bitemporal defects, but if asymmetrical, show a variation up to homonymous hemianopia. If pressing on the third ventricle by extension upwards produce adiposity, diabetes insipidus, hypersomnia.

More extensive tumours—especially from third ventricle give rise to (1) extrapyramidal syndrome of bradykinesia and rigidity. (2) Thalamic syndrome of central pain and painful hypotonicity. (3) Perinaud's syndrome—paralysis of conjugate vertical movement of eye-balls. (4) Ley's syndrome—hemichorea.

Lateral extension causes pressure on uncinate gyrus. Pressure downwards may produce secondary pituitary involvement with distortion of sella and clinoid processes giving rise to hypopituitarism, Symmond's disease from infarct in the anterior lobe, hyperpituitarism, dyspituitarism or apituitarism.

N. M. R.

News.

The Inaugural function of the Medical Officers' Association of the Government Hospital for Women and Children was held in the Giffard School with Col. C. A. F. Hingston (Patron) in the chair on 8th December 1930. After Tea, Dr. A. Lakshmanaswami Mudaliar, President of the Association, delivered the inaugural address in which he spoke about the aims and objects of the Association. Among the various objects, the most prominent were: (1) to promote and ameliorate the conditions of the House Surgeon's working in the hospital, and (2) the idea of starting a quarterly journal of Obstetrics and Gynaecology was outlined. Col. Hingston in his concluding speech encouraged the idea of the Association and gave a generous donation of Rs. 100 towards the Association funds. He promised to take a fatherly interest in the Association even after his retirement from Service. With a vote of thanks the meeting terminated.

The business meeting of the above Association was held on 17th December 1930 and the following members were elected to the executive by the Association.

Patron.—Col. C. A. F. Hingston, I.M.S.

President.—Dr. A. L. Mudaliar, B.A., M.D.

Vice-President.—Mr. E. Achyutha Menon, F.R.C.S.

Honorary Treasurer.—Mr. W. S. Martin, I.M.D.

Honorary Secretary.—Mr. K. Narasimha Rao, M.B., B.S.

Tennis Secretary.—Mr. K. Chandra Rao, L.M.S.

The first Clinical Meeting of the Association was held under the chairmanship of Col. Hingston on 16th February 1931. Dr. Kuriappan, M.D., read a paper on "The Modern Treatment of Cancer". He dwelt at length upon the methods of conducting investigations of cases in cancer cervix. Col. Hingston replying to Dr. Kuriappan appreciated his thought-provoking lecture. There was a short discussion on the paper, in which most of the medical officers took part, and Dr. Kuriappan replied. Dr. Lazaro then demonstrated a case of Cerebral Embolism as a sequel to puerperal sepsis and Phlegmasia Alba Dolens.

Towards the close of the meeting a case of Pseudo-Hypertrophic Muscular Dystrophy in a young girl of 20 was demonstrated by Dr. P. Ratnaswami, B.A., M.D.

Association Notes.

An Executive Committee meeting of the Association was held on 8th January 1931, at No. 11, Police Commissioner's Office Road.

Besides the Executive Committee members the following members were present on invitation :—

Drs. M. G. Kini, N. S. Narasimhan, K. Rama Menon, P. A. Mathew, P. Venkatagiri and B. T. Krishnan.

The Committee discussed the proposed creation of cadres in Pathology, Physiology, Bio-Chemistry and Bacteriology.

The members were in agreement to the creation of cadres in these departments.

The discussion centered on the question of how those who are at present holding teaching appointments in these subjects will be graded in the new cadres.

The Executive Committee felt that the total number of years that these officers have served as teachers in the particular department should be counted in fixing the initial salary in the proposed cadres. The Secretary was requested to draft a letter to the Personal Assistant to the Surgeon-General on these lines which was done on 10th January 1931.

The President met the members of the Madras Medical Service resident in the city at Tea on 24th January 1931 at 5-30 p.m. and at 6-15 delivered his inaugural address; nearly 60 members attended.

Major A. M. V. Hesterlow, I.M.S., Col. K. G. Pandalai, I.M.S., Dr. R. Adishesan, and Dr. B. Ethirajalu, were also present.

A clinical demonstration by the Surgical Staff of the General Hospital was held at the out-patient department of the General Hospital on 14th February 1931.

Drs. N. Mangesh Rao, M. G. Kini, K. Rama Menon, N. S. Narasimham, C. P. Viswanatha Menon and P. V. Cherian, demonstrated a series of interesting cases followed by discussion which was very much appreciated.

Over 40 members were present. The Surgical Staff entertained the guests with Tea before the meeting.

An Executive Committee meeting of the Association was held on Wednesday the 18th February 1931 at No. 11, Police Commissioner's Office Road at 6 p.m.

PRESENT :—Drs. A. L. Mudaliar, M. R. Gurusami Mudaliar, A. Srinivasulu Naidu, M. Narayana Pai, K. Venkatachalam, P. V. Cherian, H. S. Hensman, N. Mangesh Rao, P. Kutumbiah and S. Ramakrishnan.

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The desirability of bringing to the notice of the Government of the claim of service men to a vacancy arising in the superior medical staff of the General Hospital was discussed and the President was requested to address Government.

A letter from 8 service men representing certain grievances in the matter fixing their seniority when making them permanent was considered and the President was requested to address the Government with a view to remedy the grievances.

With reference to a letter from the Surgeon-General regarding the appointment of a medical officer for the examination of Civilian Aviators it was resolved to recommend the name of Dr. P. Achutha Menon, F.R.C.S.

A letter from the staff of the General Hospital regarding the introduction of cadres in Medicine, Surgery, and Midwifery was discussed and the Secretary was directed to send a copy of the letter to the members of the service in the teaching institutions in Madras, Vizagapatam, Royapuram, Tanjore asking for the joint opinion of the members in those teaching institutions.

The Treasurer was directed to pay Rs. 400 towards Solden and Co. bill. It was resolved that the blocks for the journal to be printed after due notice given to the Committee and the gleanings from the medical journals to be much more condensed.

An ordinary meeting of the Association was held in the Physiology Lecture Hall of the Medical College on Saturday the 28th February at 5-30 P.M. when Dr. P. A. Mathew read a paper on Bio-Chemical investigations of gastric functions.

24 members attended the meeting.

A clinical demonstration by the Staff of the Tuberculosis Hospital was held on 16th March 1931 which was very much appreciated by the members.

Over 40 members attended the meeting.

An ordinary meeting of the Association was held on Saturday the 25th April 1931 when Dr. M. G. Kini read a paper on "Fractures of Os Calcis" accompanied with demonstration of cases treated and exhibition of X-ray photos.

Correspondence.

MADRAS,
Dated 23rd February 1931.

FROM

THE SECRETARY,
THE MADRAS MEDICAL ASSOCIATION,
Madras.

TO

THE MEMBERS OF
THE MADRAS MEDICAL SERVICE

At Vizagapatam, Royapuram, Tanjore,
Government Ophthalmic Hospital,
Government Maternity Hospital and
Government General Hospital.

DEAR SIR,

I am desired by the Executive Committee of the Madras Medical Association to forward to you the following letter that has been received from some members of our service. The Executive Committee is anxious before taking any steps, to have your joint opinion on the proposals herewith submitted, so that it may be in a position to know how far these proposals are favourably received by the members of our service.

The Executive Committee wishes to point out that when cadres are introduced in any of the teaching sections, they should include all appointments, professorial and otherwise, and at the present time there are certain appointments which are reserved to particular services and particular sections of such services. The Executive Committee is keeping an open mind on this subject and is anxious that all aspects of the question should be considered by you and a detailed memorandum kindly sent for the information of the Executive Committee. The proposals made herein are important and there is a considerable feeling among members of the service that these proposals should be sent up for the consideration of the Government. To enable the Executive Committee to decide on the final form in which the scheme should be sent up, I am to request your kind consideration and opinion. Should you so desire, the Executive Committee will, after perusal of all the memoranda received, again submit a note on the subject for your consideration before finally addressing the Government on the subject.

I have the honour to be,

Sir,

Your most obedient servant,
(Sd.) S. RAMAKRISHNAN,
Honorary Secretary.

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Correspondence

COPY.

That "Cadres" be introduced for the teaching sections in medicine surgery and midwifery, on a scale of Rs. 300—25—800 with permission to have consultation and "operative" practice in their own speciality only.

That this scale be applied to Assistant Professors in the Medical Colleges, Lecturers in the medical schools and Assistant Surgeons with collateral teaching duties in the different State Hospitals attached to the Colleges for purposes of clinical teaching.

That Surgery shall include ophthalmic, orthopaedic, venereal, genito-urinary and oto-laryngology sections for purpose of caderising.

That the privilege of giving coaching classes to students and post-graduates be permitted to the "Cadres."

FROM

THE PRESIDENT,
MADRAS MEDICAL ASSOCIATION.

TO

THE PERSONAL ASSISTANT TO THE SURGEON-GENERAL
WITH THE GOVERNMENT OF MADRAS.

SIR,

I am directed by the Executive Committee of the Madras Medical Association to submit for the consideration of the Surgeon-General the case of a few assistant surgeons recruited in 1927 (Nos. 178 to 186) Page 28 in the Quarterly Civil Medical List, December 1930.

These assistant surgeons were recruited as temporary assistant surgeons and later confirmed and there was then no competitive examination and no period of probation fixed for them. Subsequently by virtue of G. O. No. 1029, dated 9th October 1929, recruits to the Provincial Medical service had to put in a two years probation and during this time they earned increments on the time scale. This concession has not been permitted to all those who were not confirmed on the date of

issue of the G. O. but to those confirmed before that date, with the result that assistant surgeons (Nos. 178 to 186) of Civil Medical List, although senior to Nos. 192 to No. 12 in the list of temporary assistant surgeons on page 35 are now in the disadvantageous position of drawing less pay than their juniors for no fault of theirs.

The Association feels it is a hardship and grievance which justifies favourable consideration at the hands of the Surgeon-General and Government.

I am to request that the Surgeon-General may be pleased to address the Government and remove this disability.

I have the honour to be,
Sir,
Your most obedient servant,
(Sd.) S. RAMAKRISHNAN,
Honorary Secretary,
for the President, Madras Medical
Association.

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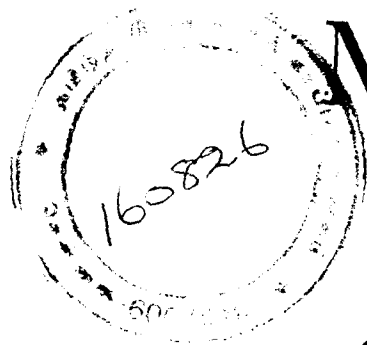
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