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Edited by

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

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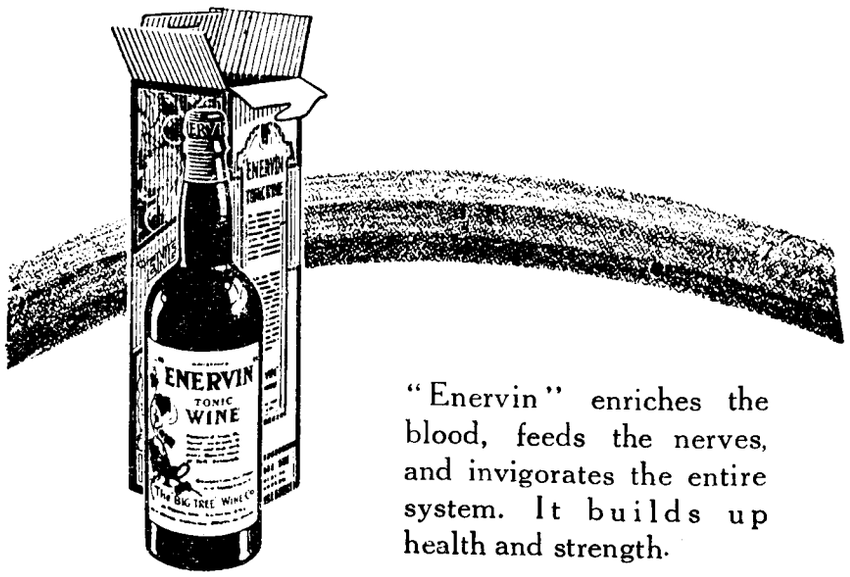

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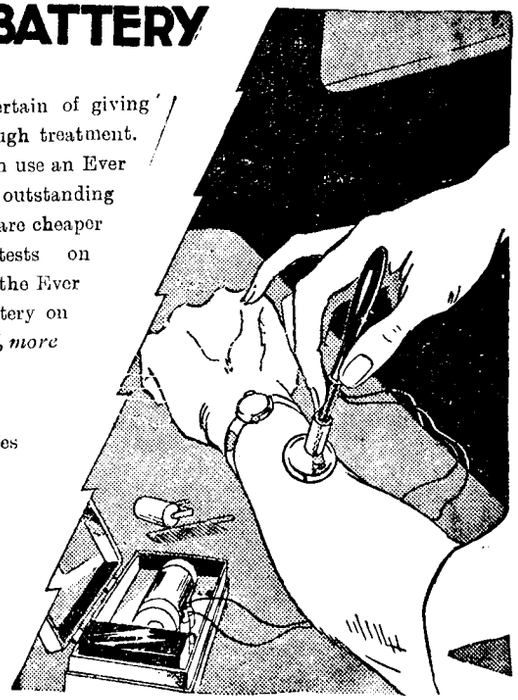

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Original Articles

CHOLECYST—ENTEROSTOMY IN BILIARY DISEASE*

BY

DR. M. S. KHERA, F.R.C.S.

Surgeon to Mawchi Mines Ltd., Mawchi, Burma.

THE modern treatment of any surgical condition is based on detailed study of the anatomy, physiology, pathology and embryology of the diseased organ. In treatment, consideration of one factor alone is erroneous. In relation to the gall bladder, consideration of the pathological side alone, without regard to the anatomy and the mechanical factor in cholecystectomy is merely empirical treatment. It is a serious operation, and if less drastic means will secure as good a result, they should be chosen.

The disease for which cholecyst-enterostomy is to be advocated might well be discussed individually in the acute and in the chronic forms of disease in the gall bladder, and the gall stone affection. Though these two conditions differ in appearance, they are intimately associated; and a process which is secondary to these is carcinoma of the biliary tract.

We shall consider each separately, and then the treatment of all of them in relation to the aetiology, with due regard to other advantages.

Acute Cholecystitis

The acute condition in the gall bladder is classified under various types as catarrhal, suppurative, gangrenous, ulcerative, and phlegmonous. These are one and the same disease, but vary

* Specially contributed to the 'Antiseptic'.

according to the virulence of the infections, the resistance of the organ, and the mechanical handicaps the latter may labour under at the time.

Causes.—The acute gall bladder condition is always associated with a similar affection in the ducts of the biliary system. The acute infection may originate in the gall bladder and extend towards the ducts, or the original source may be in the ducts, and the condition spreads to the gall bladder. From the treatment point of view, both should be regarded as infected.

Predisposing factors:—(*a*) Calculi. These calculi are usually of the cholesterol type; they irritate the bladder wall, and lower its resistance; (*b*) foreign bodies trapped in the bladder, acting like stone; (*c*) obstruction of the biliary passage, so preventing effective drainage. These are somewhat aggravated by abdominal tumours, pregnancy, sedentary habits, or by the presence of some other pathological lesion in the biliary passage.

Exciting Causes:—(*a*) Infection and trauma, the latter being rarely of consequence. Infection may be brought about by (1) the blood stream from any focus; (2) it may be a retrograde infection from the alimentary tract, the bile is usually sterile, but in an inflammatory state of the duodenum infection may possibly spread by the portal vein, rather than by the ducts; (3) by the lymphatics from the liver to the gall bladder; (4) by the portal vein, an important means of spread from the intestinal tract, the organisms damaging the liver tissue producing areas of focal necrosis, whence infection spreads to the ducts. Most important is the first route, which it has been found experimentally may start as a descending cholecystitis from infection of the intra-hepatic ducts, or as capillary emboli in the biliary tract from organisms with an elective affinity for that part. Whatever the method of spread, the most important point evident is that the primary infection is never confined to the gall bladder.

Morbid Anatomy.—The organ is usually distended with pent-up pus, which is retained by the obstruction of the passage outwards by the swelling of the mucous membrane at the cystic duct, or as a result of past inflammation and ulceration due to the passage of a calculus. Either a stone or inspissated bile may block the duct. A stone may cause obstruction by exerting pressure at Hartman's pouch. If the lymphatics in relation to the cystic and common bile ducts are enlarged, this will be a cause of further pressure on them. The mucous membrane from the gall bladder to the intra-hepatic ducts shows epithelial desquamation, the mucous glands being inflamed and the fibro-muscular coats infiltrated throughout with small

cells. The most important feature is the small celled infiltration of the portal spaces in the liver. So that, surgically the tract may be regarded as infected from the liver to the gall bladder, and this is of the greatest importance in considering the drainage of not only the gall bladder, but also the whole biliary tract. Again, the main feature is the distention of the gall bladder with inflammatory exudation, which cannot escape because the cystic duct is blocked by the swollen mucosa. The clinical significance of pain is the spasmodic contractions of the biliary tract in efforts to overcome the obstruction, which may be due to blood clot or to the swollen mucosa.

Therefore, in acute cholecystitis the predominant features are: (1) the *Involvement of the whole biliary tract and* (2) the *obstruction*. Hence treatment consists in removing these factors.

Prognosis of Cholecystitis.—If the obstruction with a virulent infection, occurs, there is the danger of gangrene of the whole organ, commencing at the fundus *i.e.*, the weakest part. The sequel to this would be fulminating peritonitis and death. But if the gall bladder be relieved from distention by efficient removal of the contents, this danger is minimised. Here again the cause of this complication is distention from *Obstruction*.

2. The later complication that may follow is the acute stage passing into the chronic, with such results as the setting up of joint troubles, gastric ulcer, or appendicitis; these are very likely to happen if the bladder is not properly drained in the acute stage. If in the latter stage cholecystostomy be done, it leads to rapid resolution. Closure of the external fistula, either by operation or by itself, would lead later to partial, or even complete blockage from cicatrisation following ulceration during the acute stage. Defective drainage then, with the infection still present in the walls would very likely lead to a chronic state in the gall bladder. The chronic state of the gall bladder must be dealt with by removal of the obstruction with effective prophylaxis against further recurrence from either internal adhesions or scar formation.

3. The most important after-effect of the inflammation in the gall bladder is stone formation. The contents of the bladder with the solid material and a high salt saturation of the bile and the consequent stagnation would lead to a further solidification by the mucoids. On removing the obstruction, fresh bile pouring into the gall bladder would have its salts precipitated, adding further layers with each *Obstruction*.

4. There is the possibility of cancer supervening later in life,

owing to the irritation, from retention of stone or prolonged infection.

5. Obstruction by scar tissue at the ulceration site in the cystic duct, or even lower, would again cause trouble in the biliary tract.

6. Recurrent attacks of acute cholecystitis may follow as soon as the obstruction is renewed, for the infection may lie latent and ready to flare up on any provocation.

7. The most important risk is that of acute or chronic cholangitis following, either at the acute stage or some time later. This complication, can occur only when obstruction causes *back pressure*.

8. Such other complications as empyema of the gall bladder due to obstruction, adhesions to surrounding structures caused by a long-standing inflammation in the gall bladder, causing "Adhesion Dyspepsia" or pyloric stenosis and dilatation of the stomach may follow.

The Treatment of Acute Cholecystitis

Naturally, the treatment of the acute inflammation would be based on removal of the causes of the trouble. The two potent causative factors are *infection* and *obstruction*. The latter may be due to impacted calculus, cicatricial contraction, the result of ulceration or from peri-cholecystic adhesions, or a new growth surrounding the ducts, also the swelling of the mucosa of the ducts.

The infection.— From what has been said it will be clear that it would be futile to remove the infection, as it extends from the gall bladder to the ducts, and *even to the liver*, which, in acute cases, often shows areas of focal necrosis. This can only be reduced by drugs which would effect the whole biliary system, such as Hexamine, Dechloin and the Salicylates. These are of doubtful benefit, but might be tried in the milder cases which show a low temperature. In severer cases, with raised temperature, a rapid pulse, and other signs of acute infection, to attempt to deal with the infection is to court the possibility of perforation and gangrene. The tendency to complete cure is very remote apart from active treatment by the surgeon.

The Obstruction.—This causes a damming back of the exudation in the gall bladder. Though no more bile may be able to enter the gall bladder, the secretions of the inflamed mucous glands add severely to the great increase of tension in the organ. There is danger of perforation at the fundus, which is poorly supplied with blood, and the supply is further diminished by increased pressure in the organ due to obstruction at the outlet. This de-vitalised part of the bladder would cause patches of necrosis. All these factors show the great importance of dealing with the obstruction in acute disease of the gall bladder.

Methods of removing the obstruction.—The method carried out will depend on the severity of the disease and the type of obstruction. The severity may be gleaned from the pulse, temperature, accompanying jaundice, and the degree of pain at the gall bladder site. The pain is due to the spasm of the wall in the effort to overcome the obstruction to the exit of the pent-up exudate, and varies with the consequent distention of the bladder. Liver enlargement or tenderness over its site would indicate graver phase.

The type of the obstruction and its exact site should be ascertained by a complete investigation, including skiagrams. Jaundice would indicate blocking in the common bile duct, and this may be caused by swelling of the mucosa in the absence of acute colic, or calculi, or a blood clot, or any foreign body. The potency of the cystic duct could be demonstrated by the injection of a 30% solution of magnesium sulphate, by Lyons' method with the duodenal tube, into the region of the duodenal papilla. This relaxes the sphincter of Oddi, so that the bile flows into the duodenum ; this is aspirated, and the amount obtained estimated. It would also show the type of acute disease present in the infected gall bladder, *i.e.*, by the presence of pus, mucus, blood or debris. A bacterial examination of the bile will show the type of infection, and enable a vaccine to be prepared for the patient's treatment.

In very mild cases, in which the obstruction is slight, and likely to be due to a mere swelling of the mucosa, drainage internally by Lyon's method should first be tried. According to Hurst, a saturated solution of magnesium sulphate, given in doses of a dram or two before food, would relax the sphincter of Oddi. This is supplemented for some days by regular intravenous Decholin which has been found to reduce the viscidity and increase the flushing of the whole Biliary tract. In some cases recurrence is due to inefficient flow of bile. This is well counteracted by prolonged and massive doses of Decholin by mouth. In trifling cases and in catarrhal cholecystitis the patient will probably be relieved by these means.

In severe cases surgery must be sought, to obviate such dangers as perforation ; the tension in the gall bladder must be relieved as soon as possible. In very acute cases this can be done under local

anaesthesia, making a stab puncture into the fundus of the organ, after packing the surroundings with pads of gauze, and leading away the contents through a tube attached to a cannula. Any impacted stone in the pouch of Hartman would then fall towards the fundus, whence it may be removed by an incision into the wall. The cystic duct and the common bile duct should then be very gently probed with the catheter until it is passed into the duodenum. The next step will depend on the general condition of the patient. In an ordinary case anastomosis might be carried out with the duodenum after external drinage to quiet the acute stage.

The choice of an internal permanent fistula in the latter type of cases is offered for various reasons. First, the acute focus would be very efficiently drained; but it might be said that an external opening would do this as well. In the latter case the bladder would be drained well for the purposes of immediate relief, but on the closing of the external opening of the gall bladder, would be shut off again. In the operation of cholecystostomy the cause of the obstruction that was such a great feature in the causation of the acute condition is very often left behind in the organ, or allowed to go unrecognised. Even supposing that the patency of the ducts be found to be present, a later scar formation in the mucosa of the wall of the ducts or the neck of the bladder would lead to the defective drainage of the biliary contents.

Without obstruction the infection would be very mild in the tract, and would have no damaging effect on the organ. Hence gall bladder disease can be defined as an acute or chronic obstruction with complications.

The effort of the surgeon is directly focussed first on saving the life, and, secondly, to prevent immediate or remote complications. External drainage does the former, but not the latter as the cause of the disease is still left in the body. We will deal with the complications separately.

1. **The recurrence of the acute phase.**—When the external opening of the cholecystostomy has closed, the external passage by the cystic duct would be the only outlet,and that might be obstructed again. If so, acute disease would be likely, with the disease lying dormant in the tract, and would flare up on even lesser provocation, especially in a de-vitalised organ. Here the gall bladder might be very closely studied with the appendix, where also the disease arises with similar factors at work. By providing internal anastomosis the gall bladder would be most efficiently drained permanently, with no chance of the recurrence of the acute phase, and free drainage would prevent stagnation in it, and any stone or foreign body later would freely pass out. No infection could cause inflammation, and there would be no danger of perforation of the gall bladder.

2. **The chronic stage following the acute.**—Should the external opening be closed before the internal infection now so well established even in the walls, it is difficult to see how the chronic stage could be prevented with any recurrence of obstruction. It would have periods of ups and downs, causing all the effects of focal infection. Though the external opening may close naturally, the internal infection cannot be assumed to have been eliminated. There is great likelihood of a gastric ulcer and appendicitis following, if the organisms be looked up in a closed bag distended with inflammatory products and so forcing them into the circulation by internal pressure.

If the gall bladder be permanently and very freely drained of its content by internal anastomosis, the free flow of the products of the mucous gland of the gall bladder takes place. With the complete rest to the wall of the bladder from a tonic state, the chronic stage will be prevented as in gastric ulcer.

3. **The formation of stones after the acute stage.**—This is the most important complication in gall bladder disease. It has been said that stones may lead to inflammation just as inflammation may lead to stone formation. The products of the inflammation may become inspissated from long retention, or the bile contents may be precipitated in the gall bladder after the inflow of the bile into the infected, organ as soon as the obstruction be removed. Whatever the resulting debris, with stagnation, debris would get settled at the fundus of the gall bladder and, with further stagnation, this would get rolled into a lump, after which successive layers would be deposited, this being assisted by the stagnation. Here it is very clear that though the primary source is the infection producing exudation, the real issue in the retention of those products is deficient exit. If that exit be made free, the precipitated debris would easily pass out, but if it be maintained for long, stone formation follows. Owing to the dependent position of the fundus and its more roomy space, the stone nucleus falls back to it by gravitation. There it starts growing until it is too large to permit of its exit through the cystic duct. Without that obstruction the stone would not form, and if at all present its stay would not be long if an artificial larger stoma be provided at the most dependent part of the gall bladder.

In the treatment of acute cholecystitis the object should be the relief of the immediate dangers and the prevention of the late ones. This can be best prevented by the operation of cholecystenteros-

tomy, which would relieve tension, and avoid the dangers of perforation, etc. The immediate benefit would be relief of tension and the dangers of perforation etc. The risk of the external fistula not closing and the necessity of another operation to deal with it among adhesions would be obviated. The cause of the obstruction even if not removable at the time of operation, as in the case of a stricture of the ducts, or their compression by outside causes, or if overlooked at the time of the operation, would not render the operation less successful from the view of both the immediate results or the prophylaxis of the complication liable later. The external fistula is often impossible to close at all even by repeated operations. The internal fistula need not close at all. Indeed this non-closure is desirable, for the block in the cystic duct or common bile duct would not interrupt the drainage of the biliary tract.

When the patient's condition is severe, a self-retaining Pezzer's catheter of large size may be introduced into the gall bladder, the other end being carried out of the wound. If time permits, another similar catheter of large size may be introduced into the duodenum at the most easily apposed part, after careful packing round both tubes separately. Then both may be carried out of the wound. Both may be irrigated after the operation with mag. Sulph. for some days. When the condition of the patient improves, and after the adhesions have had a chance to form between the openings in the gall bladder and the duodenum, the catheters may be withdrawn. The contents of the gall bladder would then pass direct into the duodenum, forming an internal fistula. The external opening would gradually close up. The stoma would be many times larger than the natural one, besides being placed at a more advantageous position to meet the effects of gravity. The natural passage might be re-established at operation, but even if that fails no harm could follow. This operation could also be adopted where the gall bladder is buried in adhesions.

Chronic cholecystitis.—The chronic inflammation in a gall bladder may be the result of acute trouble persisting owing to maintenance of the factors which initiate the disease. Secondly, it may be an insidious one, advancing with complications, even up to the acute stage with relapses.

Aetiology ; predisposing causes.—The acute stage may pass into the chronic, but here we shall consider the insidious chronic cholecystitis. The trauma caused by the continued presence of a foreign body, causing hyperaemia under the mucosa of the gall bladder, would tend to lower its vitality, so helping its defeat in its fight against micro-organisms in the blood or interior of the gall bladder. It starts the chronic infection and maintains it indefinitely.

I. **Obstruction:**—Next to trauma, obstruction is the chief factor responsible for the cause and maintenance of the chronic inflammation. This obstruction is usually of the chronic type, being caused by a stricture in the cystic duct, or in the common bile duct, by pressure from outside causes, or the presence of a foreign body or stone impacted in the pouch of Hartman, the cystic or the common bile duct, causing partial or intermittent obstruction. Though the trauma and infection be present, the maintenance of the chronicity is by the *obstruction*.

II. **Stones in the gall bladder.**—These play an important role in both the production and the upkeep of the chronic affection, in two ways ; they may irritate the wall of the gall bladder directly at the site of contact of the wall, causing a hyperaemia by rubbing against it, so lowering its vitality, and making infection easy. Or they may obstruct the outward flow of the contents, and, with stagnation, increase the susceptibility to infection. Hence stones cause both trauma and obstruction, and it is difficult to say which is the more important. The presence of the earliest ring of opacity so often seen at the neck of the organ, extending towards the fundus, may be caused by direct trauma at the very frequent site of stone impaction at the neck, and may be regarded as a primary condition originating in the gall bladder, but it is more likely to be secondary to the infection extending backwards from the ducts. This is very important from the treatment point of view, for removal of the gall bladder focus would not be complete operation, seeing that it would leave the infected ducts.

Fulminating causes.—The presence of the predisposing factors in the organ, causing increased liability to infection with various organisms, is necessary for the establishment of the diseases. But it is the presence of organisms in the body which eventually leads to the infection of the organ, and these may be derived from various foci, such as appendix and teeth. The routes of infection have been discussed under acute infection.

Pathology of the Chronic Gall Bladder

Naked eye morbid anatomy.—In the early stages the gall bladder is distended with mucus resembling in appearance boiled tapioca, evidently emanating from the mucous glands of the bladder wall. This distention is due to pressure from stones, or following impaction in the cystic duct which causes *obstruction*. The

organ may be found normal in size, due to the intermittent outflow of its contents. In late stages its contracted state is due to fibrosis of the wall, which then overcomes the dilatation of the early stage. The internal surface shows folds of the mucosa, ulceration, scarring, mucous gland proliferation, etc., The wall is thick. The cystic gland is usually enlarged, and is always infected. The head of the pancreas usually feels hard, and there are adhesions to liver, etc.

Microscopical examination.—The gall bladder shows the thickening due to the increased muscular tissue in its wall, mixed with fibrosis. The former is the result of a tonic state of the wall, persistent or intermittent, and an indication of the attempt of the organ with muscular tissue trying to overcome the obstruction. The herniations of the mucosa between the hypertrophied muscular strands is another evidence of *obstruction* to the outlet. The presence of islands of necrotic tissue on the mucous surface seen with the microscope is the cause of nuclei for stone formation, while stones may cause a chronic affection.

Of more importance is the state observed in *other organs* constantly; the liver may be the primary site of the disease, it having spread thence to the gall bladder, and at the operation for removing the disease it is impossible to know where it originated. The pancreas also shows similar infiltration with fibrosis, starting at its head, due to the spread of the infection from gall bladder, and although this pancreatic hardening may not be palpable with the touch of the hand at the operation, it would not be satisfactory to presume its exemption from involement. The microscopical evidence obtained from liver and pancreas in chronic gall bladder disease renders consideration of those organs essential in treating the disease. Mere removal of the gall bladder would not cure all. Defective drainage after removal would aggravate the trouble in them. Diminution of the pancreatic secretion in 85% of cases of cholecystitis is an indication of the secondary effect of gall bladder disease on the pancreas.

The Complications of chronic Cholecystitis

1. **Focal infection.**—There is now no doubt that the infection in the gall bladder acts as a focal source of infection in the causation of gastric ulcer, appendicitis, or rheumatism. This, it might do in two ways: firstly, by direct spread, creeping peripherally in a radiant manner from the original focus, either by lymphatics or by invasion of the adjacent healthy tissue as the Liver and Pancreas. Secondly, by the blood stream from absorption of the germs from

an ulcer on the mucosa. An erosion of the surface capillaries would give direct access to the blood stream. This is not likely to occur from the deep wall of the organ as that would be well protected by the surrounding fibrosis, and Leucocytosis. The pent up secretions assist in increasing internal pressure, thus aiding absorption of the organisms. Here again the Obstruction is evident.

2. **Stones.**—Stones may cause the chronic affection, just as the chronic affection of the gall bladder may cause stone formation. This occurs in various ways. The ulceration of the mucous surface may result in desquamation of areas of the membrane which would form nuclei. The germs may form lumps by free growth in a pent-up organ. If these are allowed free exit as soon as they are formed, no nuclei would result. Again, the impaction of a foreign body or an existing aseptic stone in the pouch of Hartman, causing an obstruction, would lead to stone formation after that is relieved by the precipitation of the bile salts with the mucous secretion of the glands in the wall and the infection that may follow.

3. **Cancer.**—Cancer may follow very late as a result of long-standing irritation, either directly by the chronic infection or through the stone formation. Removal of the irritation would diminish the cancer risk.

The Treatment of Chronic Cholecystitis

Apart from the medical treatment directed to preventing stagnation of bile in the gall bladder and increasing the flow through the ducts, by flushing them out by drugs or by the Lyons method of intraduodenal injection of mag. Sulph. solution, or by frequent and prolonged courses of Decholin, surgical treatment has often been resorted to. This latter consists of one or two operations, external drainage of the gall bladder, removal of obstruction in the ducts being included, or removal of the organ. At present, cholecystectomy is the operation preferred. When this latter is not possible, owing to such reason as the presence of adhesions or the severity of the case, external drainage is carried out. When for the reasons given external drainage is carried out, even when done as an emergency owing to the patient's low vitality, it is an excellent means of relieving the immediate trouble. But as soon as the external fistula is closed, there is a recurrence of the symptoms of colic, etc., owing to deficient drainage along the natural passage, the cystic duct. Hence a second operation is usually needed, either for the infection and stone formation, or because of the persistence of the

fistula. This is borne out by Judd and Priestley's figures in giving the results of 72 cases of cholecystitis without stone: these gave a 62% proportion of satisfactory cures after external drainage, and 100% with cholecystostomy and choledochotomy combined in spite of choosing the severer cases for the latter type of operation where the removal was not possible owing to the severity of the cases. After removal has been carried out they estimate 85.7% of cures, leaving 14.3% complaining of symptoms after operation; thus it is apparent that external drainage was permitted for short periods only. In the cases in which the gall bladder was removed there was recurrence of colic in about 50%. In some cases pancreatitis was noted. If these cases had been permanently drained, there would not have been a recurrence of stone formation or other troubles. And it would be ridiculous to suggest permanent external fistula, with all its inconveniences, and the disadvantages of loss of bile. The necessary drainage would be supplied by the operation of cholecystotomy enterostomy followed by a course of Biliary flushing out by drugs as Decholin to allow flushing by free flow in the higher passages. The figures of the authorities mentioned give recurrence of post-operative colic in 49% of both the cholecystotomy and the cholecystectomy, in the latter the reason given being the dilatation of the ducts after the removal of the gall bladder, the latter is certainly clear evidence of damming back of the biliary secretions.

Blackford and Mason, at about the same date, estimated that there is an association of inflammatory changes in the liver and the biliary ducts, with damage to the liver function, almost every case of cholecystitis.

The operation of internal drainage for the chronic condition would provide effective drainage to the whole biliary tract from the liver, and even from the pancreas. Rest from internal tension and free drainage secured to the gall bladder would cause healing, just as it would in any other part of the body.

ANTE-NATAL CARE OF PREGNANT WOMEN*

BY

DR. SURYAKANT. B. TRIVEDI, M.R.C.P., (ED,) F.R.F.P.S.G., L.M. (ROT.)

Hon. Obstetrician and Gynaecologist, to Sir Hurkisondas N. Hospital, Bombay.

Ante-Natal Care

CARE of pregnant women during pregnancy is of extreme importance from the point of diagnosis, prognosis and treatment, but it is not easy to lay down hard and fast rules about what should be the particular line of treatment in each particular case. Routine examination of patients comprises in external measurements of the pelvis, hearing of the fœtal heart, ascertaining the date of the last menses and the day of the expected delivery. Examination of the urine for the presence of the albumin *etc.*, is also very important.

All these things plus the previous obstetric history are together very important, but here I want to show how to examine a particular patient without wasting much time, with points that are of very little importance to that particular patient. One must ascertain in all cases whether a particular fœtal head will pass through that particular pelvis, by trying to push it down. If it can be pushed down into the pelvis without causing any overlapping over the symphysis pubis, then we know that she will probably give us no trouble. This fixing the head into the pelvis I consider to be of much more importance than even the pelvic measurements. What we want is not the size of the pelvis, but what we want to find out is whether the particular ball *i.e.*, the head, will pass through that particular ring *i e.*, the pelvis. If I find that the head can be fixed in the pelvis I dot not waste time in taking the measurements of the pelvis. It is of no particular interest from the safe delivery point of view, whether a particular pelvis is bigger than the average or the pelvis is only of the average size, and the head is smaller than the average. All that matters most is that the head can pass through pelvis. Condition of the pelvic outlet quite often is given by the shape of the symphysis pubis, which gets beaked when the outlet gets contracted in cases like osteomalacia. Examination of the urine is of extreme importance to pregnant women. Presence of albumin under no circumstances should be left untreated. It is the indication that the kidneys are not able to throw out all the poisons of the

*Specially contributed to the 'Antiseptic'.

body. Presence of albumin in urine does suggest a very serious condition but the contrary does not hold good. That is to say, if there is no albumin in urine it does not mean that there are no renal complications. I have found that when the patient had a blood pressure of 160 to 165 m. m. of mercury the urine was crystal clear. The patient remains free from symptoms till the kidneys do their work properly, but the moment they fail to do their work the symptoms of eclampsia supervene. One case I remember. I saw her on a Wednesday when her urine was clear. At that time I was not so particular about taking blood pressure as I am now ; so I did not take it at that time. The following Friday I was consulted because this lady had severe eclamptic fits. Her B. P. was over 180 m. m. and she was completely unconscious. Her B. P. at one time rose to such an extent that even with the full tube of Manometre the pulsations in the arteries could not be obliterated. This patient I had nearly lost but for my good luck. Since this case I tried to look up the literature and found that cases were on record who had normal B. P. and clear urine, yet had the fit the next day. This case again typically shows the extreme importance of taking B. P. as a routine in all ante-natal cases. It is true that over and above urine and B. P., other signs and symptoms like oedema, headache, giddiness, want of sleep, previous obstetric complications, would give very important clue to a large number of cases. Usually cases come under observation when they are six to seven months pregnant. At this time an expert may be able to do quite a lot of things for the safe delivery of the patient. It may not be possible to do equal amount for the child at this period of pregnancy. You must have the patient under observation right from the beginning and in grave specific diseases they should be under observation even before they are pregnant and for a long time after delivery. If this occurs I am positive that infant mortality in our country will be substantially reduced. Till this ideal condition is attained we should treat them when they come to us even when they are pregnant and advise them to remain under observation as long as necessary. In all suspected cases blood should be taken and Wassermann reaction should be seen in all cases. When there is foul vaginal discharge it should be examined for Gono-cocci and proper treatment must be given.

Importance and dangers of constipation should be properly emphasised. Mild laxatives are very good for relief of constipation. Diet should be regulated and plenty of fresh vagetables should be given. Vegetables that leave plenty of undigested mass-like cabbage and grass group-are very good, because the residue acts as a

mechnical sweeper in the intestines. Fresh fruit is also very good in proper quantity. Regular invigorating exercise in fresh air—without causing fatigue—may help to relieve constipation.

Free elimination of urine is also of very great importance. Patients should be carefully questioned whether her urine is free or she has frequent micturition When she has frequency of micturition she will probably complain that she has to pass urine more frequently, but that does not mean that she passes enough quantity of urine. Free urination may be attained by giving her increased quantity of simple water, which is a very good diuretic or barley water, soda water, or fruit juice may be given in sufficient quantity.

Skin should be moist and warm, and should perspire to some extent. Though a great deal of toxins are not eliminated by perspiration, yet perspiration does help to reduce the toxins.

Rest and sleep are of very great help. Worry and anxiety should be reduced as much as possible, and regular healthy sleep should be encouraged. In cases where want of sleep is noted a change of place as from husband's house to mother's house or hospital will do good in quite a number of cases.

Clothing should be according to climate of the year but one thing is quite certain, that unnecessary tightness of clothing over abdomen or chest is undesirable. At night light covering may be used when weather tends to be colder. During rainy season malaria should be properly guarded against by regular use of mosquito—curtain at night.

Ordinary household work like cooking and ordinary management of the house is not detrimental but is desirable because it gives occupation to the patient and her mind. Household work which comprises in carrying heavy weight should not be indulged in after five months are over. Washing the clothes or utensils is strictly forbidden because it entails heavy work and exposure to chill. Slipping the foot and resultant fall is quite a common accident while cleaning vessels. This accident frequently results in termination of pregnancy. So barring these, other house-hold works are not bad.

Question of personal hygiene is of very great importance to pregnant women. 'A tooth, a child' is a very old saying which is not without some truth in it. Pregnant women should be very careful with their teeth. Every morning teeth should be properly cleaned and the whole mouth should be washed out—half a dozen gargles with warm simple or salt water. If neglected the mouth is known to harbour a great many injurious organisms. The best method

to clean teeth is to make up a brush of a babul stick and clean the teeth with camphorated chalk.

A bath with ordinary warm water every morning is strongly advised; it is invigorating and refreshing and cleans out the folds of the body which might grow germs because of the hot climate and perspiration. Very cold or very hot water baths are very bad, because they may stimulate labour. Washing the hair once a week is enough; nails of the hands and feet should be cut and kept clean. Any skin disease or cut or boil on any part of the body should be properly treated.

Care of the nipples is of very great importance particularly during the first pregnancy; the mother should be taught gently to pull the nipples with her fingers without causing any lacerations. Nipples should be bathed once a day with equal parts of Eue de Cologne and water during the last two months of pregnancy. In this way the nipples get hardened and lacerations are prevented when the child starts its feeds.

Keeping the ante-natal records is also very important. I keep a big alphabetical book where, I maintian both ante-natal and natal records. It is best to keep a blank record book because points of importance in each case will be absolutely different. I keep regular notes of previous obstetric history, reports on blood or vaginal discharge, history of specific disease in husband or children, or condition of urine, X-rays etc.

After confinement when the patient goes home I take notes of this particular pregnancy for future reference because I find it much more troublesome to dig out the case sheets and charts just when I want them.

VESICAL CALCULUS*

DR. SYED ALI HASAN,

I/c. Reformatry Hospital, Amritsar.

Surgical Anatomy.—It is essential to describe in few lines the Surgical Anatomy of the bladder before taking up the real subject. In the infants the bladder lies at a comparatively higher level than in the adults. The internal orifice of the urethra is at the level of the upper border of the symphysis pubis and the anterior aspect of the bladder is in contact with the abdominal wall. During childhood the internal orifice is gradually lowered to an extent that during puberty it is seen behind the symphysis. In the adult the empty bladder is entirely within the pelvis. In

* Specially contributed to the Antiseptic.

females it lies still deeper in the pelvis and the result is that it does not extend as far in the abdomen as in the males when it is distended. The postero-superior surface is covered by peritoneum which is reflected on to the rectum in the case of males and to the uterus in the case of females, thus forming recto-vesical pouch in the case of former and recto-uterine in the latter case. Literally the peritoneum is reflected on to the pelvic wall. The antero-inferior aspect is devoid of peritoneum and is usually separated from the symphysis and the anterior abdominal wall by means of loose areolar tissue. When the bladder is filled up with urine this surface rises up and comes to lie behind the abdominal wall where it can be safely tapped or incised without damaging the peritoneal cavity. The mucous membrane of the bladder is so loosely attached to the muscular that it is seen in folds when the bladder is contracted and is smoothed out when it is distended excepting over the trigone where it is firmly adherent and remains smooth under all conditions. The outlet of the bladder is controlled by sphincter vesicæ and by sphincter of the membranous urethra and the bulbe cavernesus. The bladder receives its nerve supply by sympathetic fibres from the upper lumber segments through the hypogastric plexus and from the upper sacral segments. Stimulation of the sympathetic causes inhibition of the body of the bladder and contraction of the sphincter and stimulation of the sacral segments causes contraction of the body and inhibition of the sphincter.

Causes:—In the majority of cases stones in the bladder are due to calculii from the kidney passing down to the bladder through the ureter. Some of the stones pass out through the urethra. Others having reached the bladder begin to increase in size due to the deposition of these crystals which are primarily responsible for the stone in the kidney, such as uric acid, urates and oxalates in acid urine and over and above these, deposits of ammonio magnesium phosphates due to alkaline decomposition of urine Thus the stone in the bladder may have a nucleus of uric acid or oxalates and then it may present successive rings of phosphates depositing after every attack of cystitis.

In some cases stones may form primarily in the bladder. In such cases foreign bodies such as broken piece of a catheter or a blood clot or a portion of mucus serves as nucleus. Once, the stone was removed in which ordinary sewing needle had formed the the nucleus. In cases of repeated retention of urine due to enlarged prostate combined with cystitis purely phosphatic stone may appear. In shape, vesical stones are usually rounded or ovoid. When there are several stones, their surfaces become

faceted as a result of mutual contact. When a stone lies partly in the bladder and partly in the urethra it shows an hour glass constriction. An elongated stone suggests that it has formed around a foreign body. A stone is said to be encysted when it lies in a pouch which communicates with the bladder cavity. Such a stone grows in one of the pouches of a sacculated bladder as a result of repeated retention of urine. It is usually of a phosphatic nature, due to the decomposition of stagnant urine in a pouch. If it is not treated in time, it may ulcerate the sac wall and thus may lead to extravasation of urine. Uric acid calculii are smooth round or oval and hard but easily broken and on section they show the colour of a brick dust and are marked by concentric rings. They are soluble in dilute potassium hydrate and in nitric acid. They are combustible and leave hardly any ash Oxalate of lime stones are round with many projecting nodes like the mulberry ; hence it is called mulberry calculus. These are very hard and are of brown or green colour due to the admixture of blood from the bladder wall. This variety of stone is soluble in hydrochloric acid.

The phosphatic stone on the other hand is very light, soft, smooth, white and shows no laminæ on section. Some rare forms of primary stones are composed of Xanthine which are reddish brown, cystin, indigo or blue stones, calcium phosphates or calcium carbonates or blood concretions which are soft, brown, calculii consisting of altered blood pigment and phosphates. Usually there is admixture of all the varieties ; thus, the nucleus of a stone may be of oxalate of lime glued together by mucus, and then there is encrustation of uric acid when the urine is acid in reaction and when cystitis sets in it makes the urine alkaline and a stone receives coating of phosphates.

The stones are very common in children, especially amongst the lower classes. It is less common from the childhood to the age of puberty, and then gradually increases in old age due to repeated retention of urine owing to enlarged prostate. Stone forms quickly in hot weather as the large amount of fluid is withdrawn from the body through perspiration and urine becomes highly concentrated. Anything that favours the formation of an excessive urinary deposits may cause stone *i.e.*, defective digestion, excess of solids and nitrogenous elements in the diet, deficient exercise, catarrh of the genito-urinary tract, pus or muco pus in the highly concentrated urine may induce formation of stone. Stone is very rare in females, because the urethra is very short, has a large diameter and gets easily dilated to allow the escape of the stone

from the bladder and secondly females are very rare victims of chronic cystitis with stagnation of urine which leads to the formation of phosphatic stone. Gout, rheumatism, lithemia, vesical atony, enlarged prostate, stricture of urethra and catarrhal inflammation of genito-urinary tract are the chief predisposing causes.

Symptoms.—Stone in the bladder generally occurs at the two extremes of life *i. e.*, in childhood and old age. In the former case it is due to difficulty of escape of small stones through the narrow urethra. In the latter it is due to enlarged prostate. The severity of symptoms depends more on the roughness of the stone than on its size and upon the sensitiveness of the bladder mucus membrane and the degree of urinary infection. A small rough stone of oxalate in nature may show alarming symptoms from the very start, while a patient with a smooth large stone may walk about quite at ease without any noticeable symptom. The chief symptoms are :—

(1) Pain.
(2) Frequency of micturition.
(3) Hæmaturia.

All these three symptoms are aggravated by exercise and jolting and are relieved by complete rest on bed provided the bladder is not septic. The pain is sharp and very cutting specially noticed at the end of micturition and is referred to the perineum and along the urethra to the tip of the penis where it is specially marked on the under surface of the head of the penis a little behind the meatus. This pain is due to contraction of the empty bladder upon the stone. It disappears gradually as the urine enters and gradually distends the bladder. The child usually pulls on the penis to relieve this pain and due to constant and repeated pulling the propuce becomes elongated and pendulus and some of the patients develop the habit of masturbation. Pain in cases of atony of the bladder in old cases or in cases of vesical paralysis may be either diminished or sometimes totally absent. In a case of enlarged prostate with stone in the bladder the pain may precede the act of micturition.

Frequency of micturition.—It is more during the day; especially, it increases after exercise. Sometimes the stream of urine suddenly stops due to stone coming just behind the internal meatus and thus blocking its passage. The patient again begins to micturate after a slight change in the posture. Frequency of micturition becomes nocturnal if it is associated with enlarged prostate ; in

which the patient tries to evacuate his bladder repeatedly during the late hours of the night.

Haematuria.—It may or may not be noted as it is not a prominent feature. It comes on after exercise and is seen at the end of micturition. The first urine passed is generally clear, the later urine may show tinge of blood and at the end of the act the patient may pass few drops of pure blood, especially in cases where the stone is of a rough and hard variety as Mulberry stone with spicular projections. If bleeding appears during the act of micturition, it is either from the urethra or from the prostate. The bleeding from the growth of the bladder is also profuse and mixed with urine, but in such cases blood clots and fragments of the tumour may appear every now and then. Bleeding from the tubercular ulcer may also leak like that of a stone case; but pus or muco-pus will appear in cases of stone in the bladder due to more or less of cystitis.

Methods of examination and diagnosis.—In every case of suspected stone it is necessary that the urine should be examined, which may be normal or a slight amount of albumen, mucus, pus or blood may be detected. The chief methods of examination are :—

(1) *Bimanual examination*:—In children the stone can be easily felt by bimanual rectal or vaginal examination. A stone cannot be felt in the adult by this method unless it is very large.

(2) *By X-ray*:—It is conducted in the usual way. Care should be taken that the rectum is empty. The lamp is placed over the patient's abdomen and the rays are directed downwards and backwards and the plate is placed behind. The stone usually appears as a shadow just above the pubic ramii. Sometimes it fails to detect the stone if it is very small or is formed of pure uric acid.

(3) *Cystoscopy*.—It would indicate the size, shape, position, colour and number of the stones. It will also show the condition of the bladder whether it is associated with cystitis or if any other pathological condition is present. The patient should be put to bed for a day or two before the cystoscopic examination and lot of mineral water should be given to drink.

(4) *Sounding the bladder for stone*.—The patient should be confined to bed for a few hours before sounding. The urine is drawn off and the bladder is filled with

boric, saline or weak Condy's lotion and the patient is placed in Trendelenburgh position. The instrument is boiled and lubricated with a sterilized castor oil or any other lubricant and is introduced inside the bladder. If the stone is free in the bladder it would very easily strike against the instrument. If not, the instrument should be steadily rotated from side to side and moved backwards and forwards gently to explore the entire cavity of the bladder. If stone is composed of uric acid or oxalate, it would give a metallic click. The phosphatic stone generally gives a soft grating feeling. A trained hand will be able to note the size, shape and the nature of the stone. If the sound fails to detect a stone; small lithotrite may be introduced and interior of the bladder be explored in a similar way. The patient should never be sounded while he is standing because there is danger of heart failure.

Sometimes the stone is present but the instrument cannot detect it. These conditions are :—

(1) When it is encysted.
(2) When it rests in a pouch.
(3) When it is fixed to the roof or anterior wall of the bladder.
(4) When there is encrustation of blood clot.
(5) When there is much pus or mucus in the bladder.
(6) When it lies in a post prostatic pouch.

Sometimes the stones are discovered quite unexpectedly as the surgeon is operating on a stricture or enlarged prostate case or for a growth of the bladder and stone is detected.

Prognosis.—Stone in the bladder if diagnosed early is not a serious condition. In neglected cases cystitis may occur or the infection may spread backwards and cause ascending uretritis, pyelenephritis which may be followed by uræmia. If cystitis is very severe it may set up pelvic cellulitis or peritonitis.

Treatment.—The only treatment for stone in the bladder is its removal by separation. The patient should be confined to bed for a couple of days in order to improve the general, bladder and renal conditions especially in advanced cases. Water and milk should be given freely. Alcohol, meat, sugar and fat should be avoided. The patient's diet should be green vegetables, bread, fruits, eggs, fish, weak tea, or coffee and barley water. A mild

laxative may be given if needed, but repeated purgings should be avoided as these concentrate the urine. The bladder may be washed daily with warm boric lotion. If the urine is very acid, make it alkaline by the use of piperazin about 20 grains daily or by potassium citrate or sodii bicarb and similar other drugs. If the urine is alkaline make it acid by administering mineral acids. Urotropin and similar other antiseptics like salol, or acid boric may be given according to the demands. There are various ways of removal of stone from the bladder, out of which two methods are being adopted most commonly. These are :—

(1) Litholapaxy *i.e*, crushing the stone with a lithotrite and the crushed pieces are removed by an evacuator.

(2) *Supra-pubic Lithotomy* :—In this the stone is removed by means of forceps by incising the non-peritoneal aspect of the bladder suprapubically.

Litholapaxy is the operation of choice. This operation is selected for the following reasons :—

(1) The patient in most cases, if the operation is performed successfully can resume his work in about a week's time.

(2) There is no risk of severe hæmorrhage or infection if the operation is conducted by a skilful surgeon.

(3) There is no danger of forming a urinary fistula in this operation.

There are certain conditions in which Litholapaxy is contra-indicated :—

(1) *Conditions of the stone*.—Very large stones having a diameter of about two inches or so and hard stones cannot be crushed. Soft stones usually clog the teeth of the instrument. If the stone is encysted or impacted in the orifice of the ureters.

(2) *Conditions of the bladder*:—

(*a*) When there is severe cystitis, it is always advisable to drain the bladder.

(*b*) In enlarged prostate or in tumour of the bladder accompanying the stone condition.

(*c*) If the bladder wall is so contracted that the instrument cannot be moved freely in the bladder.

(*d*) In patients with deep perineum or narrow pelvic outlet, bithelapaxy is not successful.

(3) *Urethral conditions*:—

(*a*) If urethra is too small as in young children, which cannot allow the introduction of a proper sized instrument.

(*b*) If there is stricture.

(*c*) If the stone is impacted in the urethra and cannot be moved.

In previous days before the introduction of evacuator and canula the surgeons used to perform litholapaxy in various sittings. The stone was crushed into small pieces and the patient was allowed to pass these fragments during micturition in a couple of days and again the same procedure was adopted repeatedly. It was after the introduction of evacuating catheter with the attachment of a suction pump usually called evacuator that this operation could be easily performed in one sitting and the fragments were removed as soon as these were crushed.

The patient is prepared for operation. The perineum, scrotum, lower portion of the abdominal wall, buttocks and the upper portion of thighs should be thoroughly shaved, cleaned and dressed antiseptically. He should be given castor oil night before the operation followed by an enema early in the morning. The patient is brought to the operation theatre and is made to lie down on his back and the anæsthetic is administered. Some surgeons prefer the patient to be in the Trendelenburg position. The canula is introduced and the bladder is washed repeatedly with sterilized Condy's or boric lotion. About 8 to 10 fluid ounces of the lotion in case of grown up patients and about 4 to 6 ounces in the case of children are allowed to remain in the bladder and the canula is removed. The proper sized lithetrite is introduced inside the bladder. The stone lies in the most dependent part. The blades of the instrument are opened and the stone is caught. If the stone does not fall in the blades, the instrument is slightly moved on both sides and the blades are moved. One practical point at this stage is that the instrument should never be turned in such a way for searching stone that the blades should come in close contact with the posterier wall; because slight effort for the stone would injure the mucus wall of the bladder especially near the trigone where it is in rugose condition even though the bladder contains the required quantity of fluid. When the stone is grasped in the jaws of the instrument, it should be brought to the middle of the cavity in order to know that the bladder wall is not included in the instrument. The blades are locked and the stone is crushed

by the screw action at the handle. As the stone breaks its fragments naturally fall to the most dependent part, from where these are again picked up, brought to the centre of the cavity and crushed. This process is repeated variously according to the condition of the stone, which is reduced to so small fragments which would easily pass through the eye of the evacuating catheter. The Lithetrite is then withdrawn and the canula is introduced and evacuator after filling with weak Condy's or boric lotion is adjusted to the canula. The fragments are removed by suction action i.e., by alternately compressing and releasing the rubber bottle. Sometimes the whole stone is not removed and some fragments are left inside large enough as not to come in the eye of a canula. The whole process is repeated until all the fragments are removed. In some patients the meatus is very narrow; it should be enlarged to allow the introduction of the proper sized canula and lithetrite. This operation should never be considered complete as long as the bladder is not searched by means of cystoscopy, because sounding the bladder at the end of the operation is not at all reliable.

(1) **Complications.**—The lithetrite may break or it may become clogged. In such a case bladder must be opened suprapubically and the condition relieved. (2) Sometimes if the operation is conducted by the untrained hand severe cystitis, uretritis and pyelonephritis may follow. (3) The bladder wall may be injured which may result in severe haemorrhage, or it may be ruptured and thus extravasation of urine may occur, and severe septic peritonitis may develop.

After Treatment.—Usually very little bleeding occurs but if it is severe and there is danger of the bladder becoming distended by blood clots; it should be irrigated several times by introducing bigger sized canula so that blood clots may be evacuated through its eye. Sometimes the condition is so severe that suprapubic drainage becomes essential. The patient should be kept warm for 3 or 4 days. Light diet and plenty of warm fluids should be given. As to the medicines, urinary antiseptics are only needed.

Suprapubic Lithotomy.—This is the removal of stone through an opening above the pubes. This is the most common and satisfactory method of removal of stones. The patient is prepared in the usual way. The lower part of the abdomen is thoroughly shaved, cleaned and covered with antiseptic dressings. The patient is brought to the operation table and anaesthetic is given. The bladder after repeated washings is distended. A vertical incision is made in the middle line for about three inches just above the

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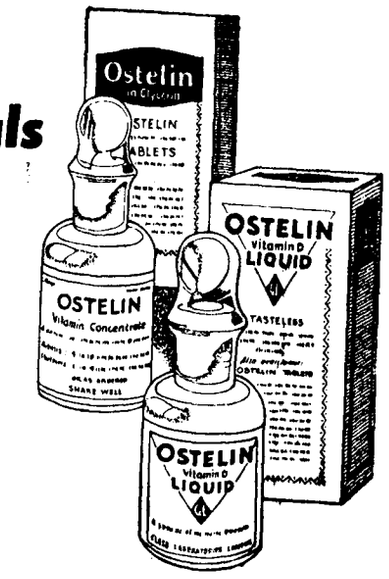

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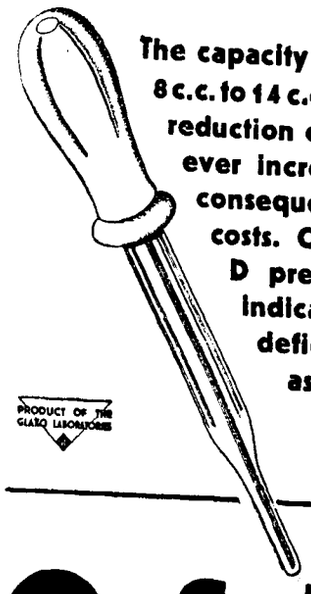

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pubes which cut through the linea alba. The rectii are separated and extraperitoneal fat is pushed upwards with the fingers. The distended bladder containing about ten ounces of fluid will be visible. The reflection of the peritoneum will be seen passing from the bladder to the anterior abdominal wall about two inches above the pubes. When this is pushed up out of the way, the nonperitoneal surface of the bladder will clearly come in front. It can be recognised owing to its reddish brown colour having large veins over its surface. In some cases in which the bladder wall is so contracted that the bladder cannot be distented up to the required extent rectal bag is used to lift the bladder. The bag after being disinfected, is lubricated with sterilized oil and is introduced in the rectum quite empty and in a folded way. It is filled with fluid and the tube is clamped by means of forceps. In a child 2 to 4 ounces of water is injected into the rectal bag while in grown up persons about 10 ounces would be needed. Most of the surgeons instead of introducing rectal bag, instruct their assistants to introduce the index finger of the right or the left hand in the rectum and keep the bladder pushed up as long as it is necessary. Thus the index finger of the assistant serves the purpose of a rectal bag for the surgeon. Having exposed the bladder two catgut sutures are introduced in the bladder on either side of the middle line. The assistant holds these threads and fixes the bladder or it may be fixed by a sharp hook and then it is opened by a vertical incision avoiding veins if possible starting from the middle of the distended bladder towards the pubes. The finger is introduced inside the bladder. Explore the bladder and remove the stone or stones by means of forceps or spoon or by fingers. Introduce a drainage tube and suture muscles and apply stitches to the skin interruptedly. Some surgeons close the bladder wound altogether. This is not always safe as there is danger of complications starting and resulting in death. When the bladder is stitched it is necessary to introduce a rubber catheter and keep it in constantly for 4 or 5 days to drain the bladder. When the catheter is removed, the patient should be instructed to pass water every two hours for a couple of days. The bladder wall should never be closed if there is even slight suspicion of cystitis or pyelonephritis. When the conditions are so favourable that it is decided to close the bladder wall, it should always be sutured with catgut sutures. Some surgeons have used silk for this purpose and the result is that a stone has again formed around an unabsorbable silk. The operation of suprapubic cystotomy is so simple that it should not take more than a few minutes. I have

often finished this operation in about five minutes or so from the skin incision to the last stitch.

After Treatment—The bladder should be drained preferably by siphon action in a bottle containing some antiseptic fluid. Change the dressings as often as they become wet. Dust dusting powder around the wound and on the back. Take out the tube on the 5th day and allow the wound to heal by granulations. In about ten or twelve days the patient will commence passing urine from the urethra again and the suprapubic wound will heal gradually. The wound usually takes about three weeks to heal.

Complications.—If the operation is conducted by a trained hand and absolute care is taken during the course of after treatment, the wound usually heals without any complication. Sometimes complications do arise and carry away the patient by septicæmia, secondary haemorrhage, pelvic cellulitis, peritonitis and suppression of urine. In many cases urinary fistula forms and lasts for a fairly prolonged period.

The other methods of removal of stone have been discarded now on account of various complications and other untoward effects. The chief methods are lateral Lithotomy and perineal Lithotomy. These are not always safe as dangerous complications are apt to follow. Thus profuse haemorrhage from the deeper arteries or from prostatic plexus may start. The rectum may be damaged during the operation which consequently results in recto-vesical fistula. Pelvic cellulitis with extravasation of urine may develop. Sometimes inflammation may close the ejaculatory ducts and cause sterility for ever. In fact these operations possess more disadvantages as compared with suprapubic cystotomy in which the drainage is not better as compared to these operations. Hence these are totally discarded.

THE NASAL TREATMENT OF ASTHMA*

BY

DR. CH. S. JOHN, M.B.,B.S.,

Ear, Nose and Throat Specialist, U.L.C.M. Hospital, Nidadavole.

SINCE the days of Aurelian some connection between Asthma and the nose has been recognised by various writers, but it was not until Voltolini in 1871 published eleven cases of relief of asthma by removing nasal polypi, that any great attention was paid to this connection.

There are two commonly accepted theories of the connection between Asthma and the nose.

* Specially contributed to the 'Antiseptic'.

(1) That Nasal obstruction by interfereing with the nasal respiratory function prevents the inspired air from being either properly warmed or purified before entering the bronchi and the lungs. Consequently the delicate mucus membrane is exposed to changes of temperature and to the irritation of various inspired particles. Bronchial catarrh results and this in turn produces asthma

(2) That certain nasal lesions act as the sensory exciting cause of a reflex, which manifests itself as an asthmatic paroxysm.

Comment.—It is very doubtful whether the mere freeing of the nasal passages itself ever relieved an asthmatic condition. Of course a number of cases can be quoted in which Asthma disappears after making the nasal passages free by the removal of the polypi, spurs, turbinated bodies, adenoids etc., but there is strong evidence to show that it was not the restoration of nasal respiration alone that stopped asthma. There are many cases in which asthma becomes aggravated after the nasal passages are made free. As a matter of fact, from one's experience of Asthma, it is seen that in the great majority of cases the nasal passages are mechanically free. The polypoidal condition of the nose and asthma are dependent upon some common vasomotor condition rather than that they have any causal relationship. The fact that the more normal the nasal mucus membrane, the better is the prognosis as regards asthma, shows that the nasal lesions are not the cause of asthma.

"Septal spurs, crests, ulcerations, hyper-sensitive areas of mucus membrane, enlarged turbinated bodies and adenoid vegetations are accredited with being asthmogenous points, and cases can be quoted where the treatment of such conditions has resulted in relief of asthma."

The chief ground for belief in this theory is due to the assumption that mucus polypi are frequently found along with asthma and that asthma can be relieved by the removal of the polypi. Renewal of polypi by no means relieves asthma. Not infrequently the asthmatic condition becomes worse after the removal of pelypi. Occasionally asthma makes its first appearance after the removal of polypi. When asthma and polypi occur together, they are more probably the result of some common factor than that they have any causal relationship.

Vasomotor Origin of Asthma

Asthma is not a disease due to any specific poison, but is a symptom of instability of the vasomotor system. An almost infinite

number of irritants are capable in certain cases of affecting the Vasomotor centre; and the cure of asthma will not be affected until it is possible to make the Vasomotor system impervious to any such disturbing poison.

The new method can be summed up in a few words.

(1) By lightly cauterizing the nasal septum, it is possible to give complete relief in the majority of cases of asthma of all kinds.

(2) The more free the nose is from gross lesions and hypersensitive areas, the greater is the prospect of affording relief.

(3) Cases associated with nasal polypi are the most difficult to deal with and the least hopeful as far as permanent relief is concerned.

This theory can be made clearer in the following way:— Asthma is a Vasomotor neurosis; it is due to a reflex spasm of the bronchial tubes, the irritations originate in the nose; asthma is not directly due to any mechanical obstruction of the nasal passages and is not commonly caused by any gross nasal lesion; some part of the nasal apparatus has a controlling influence upon the respiratory centre; there is in the nose an agency through which the afferent impulses must pass

That the irritation may originate in the nose is to be inferred from:—

(1) The intimate association between Hayfever and Asthma.

(2) The very common record of excessive sneezing at some period in the previous history of asthmatic patient.

(3) The not infrequent alternation between asthma and sneezing.

Experiment.—1. Touching the septal mucous membrane instantly induces bronchial spasm, which is as quickly relieved by painting the part with a solution of cocaine.

2. Mr. V. Patient suffering from severe dyspnœa and was quite unable to breathe through the nose. On examination the nostrils were completely blocked by engorged turbinated bodies. Adrenalin was applied and the engorgement disappeared. Still the patient felt no improvement. The part of his septum was painted with a drop of cocaine solution and instant relief was the result. I cauterized the septum before treating the turbinates with the result that his dyspnœa was relieved before his nasal passages were free.

Some authorities consider that any abnormality in the nose

such as hypertrophic rhinitis, spurs, deflection etc., is a possible cause of asthma, but Sir. St. Clair Thompson states "Deflection and the spurs can be left alone, unless their removal is required for other reasons"

Mr. Herbert Tilley says "We may sum up by saying that asthma is a respiratory neurosis, and is probably caused by a reflex spasm of the bronchial muscles, with associated vasomotor changes in the bronchial mucous membrane. Among the most important afferent impulses are those which have their origin in the nasal cavities". In Mr. Tilley's simile the afferent impulses only supply the spark which explodes the gun powder. The gun powder lies in the vasomotor centre, and if we would devote our attention to removing this "Explosive" which we could do by making the vasomotor centre stable, we might confidently anticipate that the relief would be more permanent.

Whatever the state of the nose, free or obstructed, with healthy or unhealthy mucous membrane, the great majority of asthmatics, be their asthma catarrhal, spasmodic or cardiac, are to be cured by cauterization of the septal mucous membrane opposite the outer end of the middle turbinate bone. Parker's experiments are very interesting in that they show that inspired air travels through the middle rather than the inferior meatus. The interesting phase of the whole phenomena of asthma is that the nose should have the power of influencing afferent impulses to the respiratory centre. If it be so it matters not whether the offending irritation be bronchial, gastric, cardiac or renal, the resulting spasm can be profoundly affected by intranasal treatment.

Irritants.—As asthma depends upon the instability of the vasomotor system, it is important to investigate the various irritants that are capable of affecting the vasomotor centre. These are many and may affect the centre through different channels. Emotions, certain smells, eye strain, certain articles of food, emanations from cats, horses, dogs and feathers, pollen of grasses and flowers are some of the numerous possible irritants. Climate, affect of a severe strain, and intestinal toxæmias are among others.

The real treatment of asthma consists in *Stabilizing the Vasomotor system. The all important* question now is "how is the vasomotor system to be stabilized? By far the most important method of stabilizing the vasomotor system is by the direct action on the sympathetic nerve running in the mucous membrane. Any mucous membrane can be made to serve the purpose but the most accessible and responsive is that covering the nasal septum. There are areas in the nose, especially on the

septum, which are closely connected with the centre controlling the calibre of the systemic blood vessels. On touching certain spots with galveno-cautery a marked drop in systolic blood pressure is produced. If the pressure is reduced by a vaso-dilator drug, it is likely to rise to its original level as soon as the drug is discontinued: but the affect of reducing it by acting on the mucous membrane is in great measure permanent. It is probably in consequence of this fact that the stabilizing affect is produced. The object aimed at is not the reduction of blood pressure, but the stabilizing of the vasomotor centre, so that irritants can no longer produce erratic vaso-constrictions and vaso-dilatations.

Apparatus Used.—Fischer's Diagnostic and Cautery transformer supplied by Messrs Malgham Brothers and Company, Bombay.

Results.—Cases treated 20.

Complete relief 16 or 80%.

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ANTIMONY PREPARATIONS IN THERAPEUTICS*

BY

MAJOR B. G MALLYA, M.D. F.R.C.S., (EDIN.). I.M.S.,

Superintendent, Chittagong Medical School.

MANY diseases which were considered incurable at one time are now cured, thanks to the recent discovery of various antimonial preparations by research workers. I like to record here some diseases in which antimonials have been found to give beneficial results in their treatment.

1. **Kala-azar.**—The specific action of antimonials in the treatment of kala-azar is too well known to be discussed here in detail. Kala-azar cases treated in our hospital are classified into the two following groups :—

(1) Cases that need hospitalization and

(2) Cases that can attend the outdoor for treatment. Antimony preparations used in kala-azar, are urea-stibamine, neostibosan, neostam, and sodium antimony tartrate (S.A.T.). Our outdoor cases get S. A. T. The indoor cases are treated with urea stibamine. We give them intensive treatment of urea stibamine by daily injection for a week and if the patient is free from fever and otherwise fit for discharge, we let them go home and advise them to report to us after a fortnight.

* Edited from a clinical lecture delivered at the Chittagong Medical School, and specially sent to the Antiseptic for publication.

2. **Oriental sore.**—We have no cases of oriental sore in the Chittagong General Hospital. The disease is also known under the name of *Delhi Boil*, or *Leishmania tropica* or *Dermal Leishmaniasis*. The treatment recommended consists of intravenous injection of antimony preparations, local application of X-ray, Co_2 snow or weekly injection of $\frac{1}{4}$th gr. of berberine sulph. in 1 c.c. of sterile water for two or three weeks. The best treatment, in my hands at any rate, has been intravenous injection of urea stibamine. The sores heal up without any appreciable scarring and this is important in view of those sores being present in mostly exposed parts of the body.

3. **Infective granuloma.**—I have in my hospital a case of infective granuloma. The etiology of the condition is unknown. We have not found any Leishman-Donovan bodies in the scrapings removed for examination. Nevertheless the treatment adopted by me consists in giving a course of urea stibamine intravenously and daily antiseptic dressings.

4. **Pityriasis Nigra.**—The disease causes considerable irritation and worry due to vesicles bursting and the chronicity of the condition. Lotio calamine is applied locally to allay the irritation. A course of urea stibamine is given intravenously by the intensive method. Later on, the patient is put on thyroid extract by the mouth.

5. **Filariasis.**—In this disease antimony though not curative is about the best drug at our disposal at present. A few injections administered intravenously during the acute attacks do good. The dramatic results of antimony injections are seen in cases of chyluria in which a single injection of urea stibamine turns the milky urine into the normal clear one.

6. **Bilharziasis.**—This disease can be cured by injections of antimony. Urea stibamine is the preparation of choice for the treatment of the disease and the injections should be given over a long period.

7. **Egyptian Splenomegaly.**—It is a disease supposed to be caused by schistoma infection. Antimony injections are indicated in its treatment.

8. **Trypanosomiasis.**—Antimony has been used in the treatment of trypanosomiasis with good results.

9. **Progressive muscular atrophy.**—Antimony injections have been administered with beneficial results in certain cases of progressive muscular atrophy, though it is not known how it acts. It probably stimulates metabolism and thus ensures the well-being of the patient.

Externally antimony ointment may be used as inunction in cases of kala-azar and oriental sores. Antimony wine is seldom administered by the mouth in bronchial affections. Antimony is not used as an emetic on account of its profound depressant effects on the heart.

Among other conditions in which antimony has been used more or less successfully may be mentioned, syphilis, yaws, chancroid, American Leishmaniasis, espundia, trichinosis, keratitis, leprosy, relapsing fever etc.

Our thanks are due to the Brahmachari Research Institute for a liberal supply of urea stibamine placed at our disposal at the General Hospital and the Medical School, Chittagong for the treatment of our cases.

Cases and Comments

FOREIGN BODY IN THE LEFT BRONCHUS

BY

DR. M. SANJEEVA RAO, M.B., B.S.,

Hony. Asst. Surgeon, E. N. T. Dept. General Hospital, Madras.

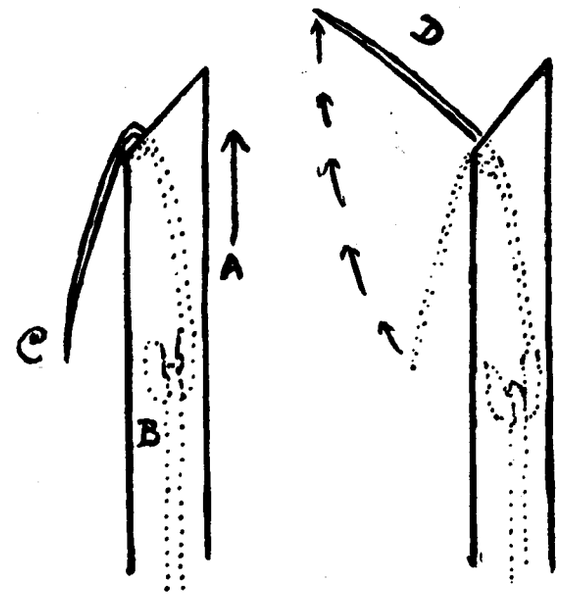
GOVINDAMMAL, aged 14, a Mill-Cooly at Madura, was admitted to the General Hospital, Madras on 14-10-'34, with the history of having swallowed a safety pin at Madura at 7 p. m. on 13-10-34. She had been X-rayed at Madura the same day and the pin was reported to be in the chest at the level of the aortic arch. She presented no physical signs or symptoms on admission beyond slight cough and deglutition was painless. She was X-rayed after admission at G. H. at 10-30 on 14-10-'34, and the safety pin was located at the level of the 6th Dorsal Vertebra, well to the left of the median line, and corresponding in position to the left bronchus. This finding was confirmed, and the relation of the pin to the oesophagus ascertained by X-raying her again on the following day, with a Reits tube passed through oesophagus, down to the stomach.

A.P. View.—Open Safety pin in left Bronchus.

Side view.—Open Safety pin in left Bronchus.

To Face Page 33.

The two pictures taken (front and side views) are annexed here, showing an open safety-pin, point upwards, slightly in front of the œsophageal level on the left side of the 6th dorsal vertebra, about an inch from the median line (Trachea bifurcates at the upper border of 5th D. V.) Bronchoscopy was done by the E. N. T. Surgeon on 17-10-34. The patient was anaesthetised lying on her back, with the head supported on a head rest in Tucker's position and the neck flexed at the occipito-attoid joint sufficiently back to obliterate the oro-pharyngeal angle. The tongue was drawn out and a lubricated 8 mm. bronchoscope was passed down from the right angle of the mouth, successively on the under surface of the epiglottis, and through the glottis, while at the same time the head-end of the table was tilted down, the body-line making an angle of about 30° with the horizontal. The tube was passed down to the bifurcation, and with a gentle swerve to the left was insinuated through left bronchus. At this stage the pin could be dimly seen through the semitransparent mucus surrounding it, which in turn was cleared by a long suction tube attached to an electrical exhaust. With the pin in clear view, the difficult problem of safe removal was tackled by firmly grasping the keeper end with long bronchial forceps, and after steadying it, the lip of the bronchoscope was pressed down over the sides of the keeper and the point straightened as shown in the illustration.



Straightening the pin against the tube mouth by pushing the tube mouth down over the pin, as indicated by the arrow A, the

pin being held stationary by the bronchial forceps B. The point C. if traction is carefully avoided, becomes "a trailing point" in sweeping safely backward to the position D. It was then safely drawn into the tube and removed. "Advancing points perforate; trailing points do not." Finally with pin firmly held in situ within the bronchoscope, the latter was withdrawn. The safety pin was of the cheap gilted variety about one inch long. The patient was kept in Hospital for another week more, but made an uneventful recovery, and was finally discharged on 25-10-'34.

There are many interesting points in the case, which is the first of its kind reported in India *e. g.*

(1) Foreign bodies slipping in from the mouth usually go into the œsophagus, rather than into the larynx or trachea.

(2) From the trachea itself, they invariably slip into the *right* rather than the *left* bronchus, the former being larger, and more in continuation with the trachea. The left bronchus makes a distinct angle of about 75° with the vertical and hence the difficulty of access both to the Surgeon and Foreign body.

(3) An *open* safety pin, with the point *upwards*, in the *left* bronchus is the most unfavourable position for removal.

(4) The successful operation lasting about 10 minutes followed by an uneventful recovery.

(5) If perchance, the girl had suppressed the history out of fear of punishment or otherwise one is left wondering how symptoms, which were invariably bound to follow, could be interpreted barring a routine X-ray examination which again is useful only in cases of opaque foreign bodies. This certainly suggests a further scope for Bronchoscopy in the investigation of definitely vague cases of dyspnoea, bronchiectasis or suspected non apical Tuberculosis of lungs without Tubercle Bacilli in the sputum.

In conclusion, I must tender my thanks to Dr. P. V. Cherian E. N. T. Surgeon for having given me all facilities, including the two photographs, for reporting this case.

CARBON TETRACHLORIDE POISONING: REPORT OF A CASE

BY

L. B. CARRUTHERS, B.A., M.D., C.M.,

American Presbyterian Mission Hospital, Miraj, India.

IN view of the recent interest in carbon tetrachloride poisoning that has been evidenced in the literature, the following case is reported, developing after a therapeutic dose of the drug and showing the unusual feature of early kidney involvement.

A. L., Case No. 58167, aged 48, European, female, wife of a practicing physician, was admitted to the American Presbyterian Mission Hospital, on Feb. 28th, 1934, at 2 a. m. She was complaining of suppression of the urine for the past 2½ days, inability to retain anything by mouth, drowsiness, itching of the whole body and diarrhoea.

The family history was negative. Economic status and living conditions were excellent. Previous history was irrelevant up until October, 1933, when she was diagnosed as having tape worm and was treated unsuccessfully with extract of male fern. No further attempt at treatment was made until Feb. 23rd, 1934, five days before admission.

At 10 a. m. Feb. 23rd, the patient received one dram of extract of male fern, followed by magnesium sulphate on a fasting stomach. The resulting stool showed segments only. At 4 p. m. she had a light meal of tea and toast only. At 6 p. m. she received 2 c.c. of carbon tetrachloride followed by magnesium sulphate but again passed only segments. The patient slept well that night and the next day complained only of anorexia and weakness.

On the morning of Feb. 25th, the patient complained of scanty urination. She passed some 250 c.c. in all of turbid urine, containing .2% albumin and granular casts but no red blood corpuscles. At the same time she had diarrhœa of moderate severity with several "foul and fatty" stools. In the afternoon she began to vomit and thereafter, until admission, retained nothing by mouth. At this time she again passed 200 c.c. of urine, the last passed until on the train being brought into hospital. At this time, also small petechial spots were noticed over the back of the hands and the dorsum of the feet. On Feb. 26th, she complained of generalized soreness all over the body and over the abdomen. The abdomen was somewhat distended and emesis of everything taken by mouth continued. No urine was passed at all. Alkaline

diuretics, sweatings and liver extract per hypo were given. On Feb. 27th, the generalized soreness had gone and had been replaced by generalized itching and jaundice was noticed. The emesis was less and the patient did retain some fruit juice. Intravenous glucose was given and sweating and dry cupping were administered. No urine was passed all day long nor could any be obtained by catheterization. Patient entrained for Miraj at 10 p. m. and arrived there at 2 a. m. on Feb. 28th. On the train, the patient received morphia, Grs. $\frac{1}{4}$, and passed about one dram of urine spontaneously, the first passed in nearly 60 hours.

On admission, physical examination revealed a well developed, heavy set female, irrational, quite drowsy but answering simple questions. Breathing was Cheyne-Stokes in type and there was a slight icteric tint to the conjunctivae. The temperature was 99.2 degrees, respirations varied 12-16 and the pulse was 80, full and strong. Pupils were contracted, the tongue was dry and heavily coated and the teeth were covered with sordes. The respiratory system and the heart showed nothing worthy of note. The blood pressure was 120/70. The abdomen was moderately distended and there was tenderness on palpation over the descending colon and in the hepatic and splenic regions. Neither the liver nor the spleen were palpable. No alteration in the size of the liver could be made out There were small petechial spots over the backs of the hands and around the ankles. All reflexes were normal. The urine obtained by catheterization was of a dirty yellow, aromatic, acid in reaction, containing traces of sugar, 0.15% albumen, many granular casts, renal epithelial cells and white and red blood cells. The blood urea was 100 mgms.

The patient was immediately put on glucose intravenously and by mouth, calcium intravenously and intramuscularly, liver extract by injection and salines intravenously, subcutaneously and by rectum. Abdominal distension was treated by high enemas and by pituitrin. On the fourth day, coramine was started and dry cupping and sweatings were used. These latter were discontinued the next day when they were found to be too weakening and were not giving the desired effect.

On the 2nd day in hospital, the patient was drowsy and irrational, with decreased emesis but gradually increasing jaundice. Pupils still remained small and fixed. There was some slight cough and a few rales at either base. The liver was at the lower border of the sixth rib in the mammary line and definitely reduced in size. On the third day after admission, the pulse was weak and dicrotic and there were occasional extra systoles. The liver

appeared to be slightly larger but the patient was considerably distended about which she complained greatly. She was quite lucid during the morning but drowsy and irritable again in the afternoon. On the 4th day, she remained lucid all day long. The pulse was 74 and strong. Extra systoles still occurred occasionally and the blood pressure had risen to 150/85. The heart showed no enlargement. Fine crepitations still persisted at the bases and the patient complained of the severe distension. On the 5th day in hospital, œdema had appeared to a slight degree over the sacrum and the ankles. The blood pressure had risen to 160/90 and the apex was about $\frac{1}{2}$" out. The crepitations at the bases had increased. The upper border of the liver was at the lower border of the 5th rib in the mammary line but the distension still remained severe. The pulse was 84. On the 6th day, the heart appeared to be still larger and systolic murmur could be heard at the apex. The jaundice did not seem so pronounced. Blood pressure had continued to rise to 170/95 and the patient was drowsy again. Towards evening the pulse rose to 120 and was very weak but fell back to 100 after the distension was relieved. During the night, for the first time in hospital, she passed four drams of urine spontaneously. On the 7th day after admission and the 12th day after receiving the drug, the pulse was 100, the patient was drowsy and restless and she passed small amounts of urine twice when at stool. The blood pressure, was 170/90 and the jaundice was definitely worse. Emesis, which had not been present except occasionally since the third day, was severe again. The drowsiness rapidly deepened to coma, the pulse weakened and the patient expired at 2 p. m.

Urinary output, always by catheter except after the sixth day, varied from 17 drams the first day in hospital, to 4 drams on the third day, to 7 drams on the fifth day, to approximately one ounce on the sixth day. The albumin content remained at 0.15% and casts, red and white cells persisted in each specimen. Segments of tape-worm were passed from time to time after enemas. The blood urea rose to 140 mgms. on the last day. Autopsy was refused.

TWO CASES

Illustrating the Importance of the Rabbit test for the Detection of Abnormal Chorionic Proliferation

(As seen in cases of vesicular mole and chorionepithelioma)

BY

S. B. ANKLESARIA, M.D. (Bom.),

Hansraj Pragji Thackersey Prince of Wales Fellow, of the University of Bombay, for 1934.

I shall first describe two cases referred to me in private practice for the performance of the Rabbit Test and then briefly summarize the importance of the modern biological tests of pregnancy in these cases.

Case 1.—Irregular uterine hæmorrhage treated by curettage; microscopical report on the same—atypical chorionepithelioma Rabbit Test negative. Patient menstruating normally and otherwise healthy 4½ months after curettage at the time of reporting.

Mrs. P. D. S.; age 36; 9-6-34.

Complaint.—Irregularity of menstruation.

Menstrual History.—Regular 6/24 type, the periods started 4 months after the birth of her last child 2½ years ago. The rhythm and amount being as usual for her.

Last regular menstruation period 26-2-1934 to 2-3-1934. Later periods till the time of attending the clinic were as follows:

Absence of periods till 14-4-1934.

14-4-1934 to 7-5-34 bleeding
15-5-34 to 19-5-34 „
1-6-34 to 9-6-34 irregular bleeding

On 23-5-34 she had severe pain in the left lower abdomen for 2 hours after a fall.

Obstetric History.—married 14 years ago; 5 living children, last child 2½ years ago.

P. V. Cervix directed downwards, uterus slightly enlarged, in good position. Left ovary tender, probably cystic.

Recommended dilation and curettage.

Pathologist's report on curetted material :—

Atypical Chorionepithelioma.—2-7-34 Rabbit Test Negative: 16-7-34 Rabbit Test Negative; Radical treatment postponed.

Periods after curetting

23-6-34 to 29-6-34 Menstrual Period
1-7-34 bleeding for one hour.
20-7-34 to 26-7-34 Menstrual Period
17-8-34 to 23-8-34 „ „
13-9-34 to 19-9-34 „ „
9-10-34 to 15-10-34 „ „

The patient is quite healthy in every other way.

Case 2.—Uterine enlargement greater than the period of amenorrhœa (4 months), obstinate vomiting and inability to detect fœtal parts-vesicular mole? Rabbit test showed normal amount of hormone. Patient quickened later.

The patient had an enlargement of the uterus upto the umbilicus though she had an amenorrhœa of 4 months only.

The fœtal parts could not be made out and the fœtal heart was not heard.

Coincident with the rapid enlargement of the uterus the patient had a rather obstinate vomiting, palpitations and a look of toxæmia generally with a trace of albumin in the urine.

The obstetrician in charge wanted to exclude a vesicular mole.

The Rabbit Test showed that the amount of hormone excreted in the urine was normal (not increased).

The patient had quickening a few days later and is being traced.

The Rabbit Test proves useful in the following:—

(1) In diagnosing normal pregnancy from a vesicular mole as in case 2 above, by quantitative estimation of the amount of hormone excreted in the urine. Between the sixth and the tenth week of pregnancy I have found however, that the amount of hormone excreted as estimated by my method in the rabbit comes up to the same level as in cases of vesicular mole or chorionepithelioma. The exact method followed by me, its limitations and more cases of normal pregnancy thus diagnosed, in one of which the X-ray picture showed no fœtus, will be described in the report to be submitted as the Dr. Mangaldas, V. Mehta Research Scholar, University of Bombay.

(2) In differentiating chorionepithelioma from simple placental retention or other conditions resembling it microscopically as in case 1 above. In another case

(to be published in the above mentioned report) I could diagnose a chorionepithelioma where the pathologist did not find sufficient grounds histologically to warrant its diagnosis.

(3) In following up a case of vesicular mole or chorionepithelioma after expulsion or removal of the abnormal chorionic tissue. I might just mention here that a gradual fall in the quantity of the hormone and the amount of hormone at any particular time are the only criteria on which I would rely and not on the time at which the reaction becomes negative.

It is worth noting here that if a mass of fibrin separates a mole from the uterine wall and thus forms a biological contact with the maternal blood stream, the biological tests may be negative. (Important in considering the nature of a uterine swelling).

It is also important to remember that chorionepithelioma may arise primarily outside the uterus and would give a positive biological test (Important in considering the nature of an abdominal swelling, with a positive biological test).

For the case histories and the permission to utilize them, I am grateful to Major S. B. Mehta, I.M.S. (Retd.), F.R.C.S.E., Hon. Associate Professor of Midwifery, Grant Medical College and Hon. Obstetric Physician Motlibai and Petit Hospitals.

For allowing me to perform these tests in his laboratory I am thankful to Dr. P. P. Gharpure M. D. (Bom.) D. T. M. H. Professor of Pathology, Grant Medical College, Bombay.

DOUBLE AMPUTATIONS UNDER LOCAL ANÆSTHESIA

BY

KHAN SAHIB ALIBHAI D. PATEL, S.M.S.,

Medical Officer 1/Ch. Dispensary, Nandurbar, W. K.

A Hindu boy aged about 10 years was brought to the Dispensary on 20-8-34 at 3 p.m. for the following injuries.

(1) A compound comminuted fracture of Carpal, Metacarpal, and Phalangeal bones of right hand with laceration of all structures.

(2) A compound comminuted fracture of last two Phalanges of middle finger left hand; wound extending about two inches on the palmar surface and about one inch on the dorsal surface in the line of the middle finger.

It was stated that the boy was sleeping on the Railway track with his head on the line and body on the footpath running with the course of the Railway lines. The Engine Driver of the passenger train coming to Nandurbar from Surat, saw the boy sleeping on the track and blew up the whistle. The boy got up from his sleep and began to look towards the direction of the train, keeping his both hands on the line; by the time, the engine passed crushing his both hands as stated above. The train was stopped and the boy was given first aid by the Guard and was brought to Nandurbar by the same train.

Immediately on arrival at the Dispensary, he was given Morphia sulph $\frac{1}{4}$ gr. combined with Atropine 1/200 gr. subcutaneously.

The Novocaine Solution of a strength of four grains to the ounce was prepared and boiled for ten minutes. Two drops of Adrenalin solution 1/1000, to each ounce of the Novocaine Solution was added.

After making all preparations for an amputation, the patient was put on the operation table. After sterilizing the skin on both sides, the pieces of cloth, used as tourniquets by the Guard, were united and the sterilised tourniquets were applied on both the forearms at their middle parts before injecting the Novocaine Solution, to ensure safety from any toxic effects from absorption of the solution.

The subdermal infiltration was carried out first about three inches above the wrist joint, right side, with an ordinary 10 c.c. record syringe with finger bars and local anaesthesia long flexible needle. Through an intradermal skin wheal the needle was introduced and advanced encircling the forearm beneath and parallel to the skin, depositing the solution all the way. 20 c.c. of the solution was used in subdermal infiltration. The needle was, then, withdrawn and the transverse infiltration was carried out by the same syringe and needle. The needle was first introduced in front and outer side of the forearm through the skin at the line of subdermal infiltration and was first gently advanced perpendicularly upto the periosteum of Radius and then horizontally through all structures upto the periosteum of Ulna, depositing the solution as the needle advanced. The same procedure was adopted in anaesthetising the back part of the forearm. 20 c.c. of the solution was deposited in carrying out this procedure and in all 40 c.c. of the solution was used for the right forearm.

The skin incision was made two inches below the line of subdermal infiltration and the amputation of the right forearm an

inch above the wrist joint, was performed. No reinforcement of the anaesthetic solution was required.

After the last skin stitch, the Nurse was entrusted with the dressings etc., and the work of anaesthetising of the other side was taken up by me.

The same procedure was executed on the other side except that the subdermal infiltration was done just above the wrist joint, and the same amount of the solution was used.

In all, for both sides, 80 c.c. of the solution was used.

The amputations of the middle finger, at the first phalangeal joint and of the index finger, at the last phalangeal joint of left hand were performed. The wounds of palmar and dorsal surfaces were stitched.

The chief object of this article is to show the technique of local anaesthesia and its results only and hence the details of the operation are omitted altogether.

Suffice it to say that the anaesthesia was quite satisfactory and the patient, aged 10 years, enjoyed every moment of the operation and he quietly walked to the ward from the operation Theatre.

The tourniquets were removed after an hour of the operation as a large quantity of the Novocaine solution was required to be injected at a time as both hands were involved in the accident requiring amputations. The toxicity of the solution depends upon the rapidity of absorption and hence the longer the tourniquet has been kept, the less will be the danger from absorption.

The patient was discharged cured on 14-10-34.

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Editorial

THE NEW YEAR

ANOTHER Year has rolled by and our 'Antiseptic' has completed 31 years and has entered on its 32nd Birthday on the 1st of January 35'. By way of retrospect, we would mention that the service done by the Antiseptic to the cause of medicine during the year, was simply unique. The publication of 'The Madras University Extension Lectures' orginated in 1933 was continued and the issues of February, March and April '34, contained verbatim reports of the lectures delivered by the eminent Physicians, Surgeons, Radiologists, Dermatologist, Anaesthetist, Physicist etc., attached to the General and Royapuram Hospitals, Madras, and whose knowledge and experience in their special branches are too well known to require detailed description here. The publication of a 'Special Annual Number' was a new and novel feature of the journal, and the issues of May and June '34 were devoted entirely to the consideration of recent and up-to-date researches in the various branches of medical science. This is intended to make our constituents march with the times and keep them posted with the current knowledge of the healing art, thus preventing them from becoming back numbers. The usual publication of a Special Number was not, however,lost sight of and the October '34 Number dealt with the subject of 'Pediatrics' the subject of choice of the majority of our subscribers taken by ballot. Thus, one half of the 1934 numbers, were special issues, with more than the usual number of pages. Whether the service rendered was satisfactory or otherwise, we leave it to the verdict of our readers. Among medical events during the year, the opening of the five

year course for the Licentiates in the Royapuram Medical School the re-christening of that school as Stanley Medical School, the opening of the new additional buildings attached to the General Hospital, Madras, and the inauguration of the Indian Medical Council, are worth mentioning. The holding of the preliminary F.R.C.S., examination in Madras in December last, is another noteworthy event which paves the way for a bright future and a better status for our medical alumni.

By way of prospect, we find the world depression slowly, though surely, vanishing. Our Antiseptic is attracting more number of subscribers which is a wholesome indication of its strength and popularity. The policy of the Antiseptic will remain unchanged *i. e.*, fearless criticism of men and things and unstinted service to the Medical Profession. In the carrying out of this policy, we require the hearty co-operation of the medical profession, official and non-official, in India and abroad which we hope to get in a much more abundant measure in the future.

We wish you all a happy and prosperous "NEW YEAR."

The Late Dr. T. KRISHNA MENON, M.B.C.M., M.R.C.S., (Eng.) L.R.C.P. (Lon.)

The rejoicings of the New Year just commenced, have been marred by the sudden and unexpected demise of Dr. T. Krishna Menon, M.B.C.M., M.R.C.S., L.R.C.P., in the early hours of the morning of 11th January 1935 at his residence in Poonamalee High Road, of heart failure. It was really a shock to the medical profession in Madras, official and non-official alike, to hear of this sad occurrence, at the early age of 49, at the prime of life and in the pinnacle of his glory.

Dr. T. Krishna Menon was born in 1886, and belonged to the Thottakad family, an ancient tarwad of Ernakulam. After graduating from the Madras Medical College in 1910, he worked as Special Assistant to Col. Donovan, I.M.S., in Kala Azar Research. He proceeded to England the same year in pursuit of higher studies and passed the M.R.C.S., and L.R.C.P., examinations from Charing Cross Hospital. After completing his post-graduate work in Brompton Hospital and Mt. Vernon Hospital, for Diseases of the Chest, London, he returned to Madras in 1912 and set up private practice. When war broke out in 1914, he joined the 'Hospital Ship' which was equipped in Madras and served in it. He was on military duty from 1914 to 1921 and again

from 1923 to 1929 in the Indian Army Medical Corps. In 1924, he was appointed Hony. Surgeon Royapettah Hospital and later, Hony. Physician. In 1926, his services were transferred to the General Hospital where he served as Hony. Physician. He was also Lecturer in Cardiology and Hæmopoietic System at the Medical College and the Stanley Medical School till his death. He had a fairly good private practice and his efforts to improve the hard lot of the independent medical profession were indeed praiseworthy. He was connected with the South Indian Medical Union for a long time and was fair and fearless in his criticisms, which

The late Dr. T. Krishna Menon, M.B.C.M., M.R.C.S., (ENG.), L.R.C.P., (LOND.)

appeared now and then in the Union's Bulletin. His sound judgment and independent views secured for him many friends and admirers. This was evidenced by his recent election to the first Indian Medical Council by the graduate constituency of this Presidency by a large majority. In 1921 he was awarded the Kaiser-i-Hind Silver medal for his Public services. He was highly connected, having married the fourth daughter of the late Sir. C.

Sankaran Nair. He leaves behind him his wife and four children, (two sons and two daughters) and a large circle of friends to bemoan his loss. We offer our sincere condolences to the bereaved family.

Gleanings from Medical Press

SURGERY

Ligature of the angular vein in furuncles of the upper lip and nose.—H. Schaer (*Tentralbul, F. Chir*, Aug. 18th 1934 pp. 1907.) alludes to the not inconsiderable mortality, from thrombosis of the superior ophthalmic vein extending to the cavernous sinus and from basal meningitis, in pustules of the upper lip and nose. As a preventive measure he recommends, describing three illusrtative cases, ligature under local anæsthesia of the angular vein, which communicates with the cavernous sinus. He perfers an incision of 1 c.m. internal to the inner canthus—that is, considerably higher than that recommended by American writers: the vein may be superficial or embedded in the quadratus labi superioris muscle. In certain cases ligature of the anterior facial vein and/or the internal Juglar veins is called for in addition. The ligature is best done before the appearance of rigors. In one of Schaer's cases thrombosis of the anterior facial vein was palpable after a peri tonsillar abscess: it was divided with the cautery at the same time as a section of the angular vein was ligatured and excised.—*Through B. M. J. Dec, 8. 1934.*

Tonsils: Their Function and Indications for Their Removal.—L. W. Dean, St. Louis (*Journal A. M. A.*, Oct. 6, 1934), states that a study of the tonsil problem requires a consideration of all the lymphoid tissue in the pharynx. If, following the removal of the pharyngeal and palatine tonsils, the child suffers from acute exacerbations of systemic disease, and if, as is usually the case, the acute exacerbations are preceded by acute upsets in the upper respiratory tract, one must realize that there is some condition about the throat, nasal sinuses or ears that is responsible for these acute disturbances of the upper respiratory tract. The most important part of the treatment of heart disease, rheumatic fever, arthritis or choreia n children is the eradication of chronic infection about the upper respiratory tract. In toxic malnutrition,

secondary to infection of the lymphoid masses in the pharynx, the infection is the outstanding cause. Given a case of malnutrition secondary to infection about the throat with such symptoms as emaciation and interference with growth, if this infection is eradicated there is often a miraculous return to the normal. A child with rheumatic fever and no infection about the upper respiratory tract may develop fever which can be controlled by the use of salicylates. This is not the case when the fever is the result of infection of the lymphoid tissue. This does not signify that the primary consideration in the treatment of many of the systemic conditions is the eradication of infection about the upper respiratory tract. The removal of the larger masses of lymphoid tissue in the pharynx early in childhood does decrease markedly the incidence of scarlet fever, common colds and otitis. It decreases somewhat the incidence of rheumatic fever, chorea and heart disease in children. It is particularly beneficial in reducing the incidence of cervical adenitis. Because of the importance of determining all sources of chronic infection about the upper respiratory tract in children with such diseases as rheumatic fever, chorea, hemorrhagic nephritis and Still's disease, the author always makes an examination of the nasal sinuses at the time of the tonsil operation in this class of cases. The lymphoid masses of the pharynx have a decidedly important physiologic function. There is no agreement among physiologists as to the function of the tonsils. The lymphoid tissues of the body are all actively functioning in infancy and in early childhood and they continue to function until involution occurs. It may be assumed that before involution occurs, the tonsils have performed their main function. The author believes that the tonsils in infancy and early childhood are a part of the defense mechanism of the body.—*North West Medicine.*

The Chair Test in examination of Affections of the Sacro Iliac Joint.—The following clinical test is suggested by R. M. Yergason, in *Journal of Bone and Joint Surgery*, Vol. XIV., No. 1 as an examination for sacro-iliac conditions particularly when there is a question of injury or the actual existence of pathology.

"The patient, who is standing before an ordinary chair firmly held, with the surgeon extending the hand for the patient to grasp, is asked to step up into the chair. It is surprising how many patients accomplish this act with the attention centred on the up-stepping leg which naturally seems to be the one in which the

examiner is the interested. With the direction then to step down, the surgeon, still holding the hand, exercises a slight push through the forearm so that the patient steps down unexpectedly, producing a very slight jar which is transmitted upward through the weight-receiving extremity. The Surgeon then changes his hand upon the chair and extends the other, repeating the procedure with the opposite leg of the patient.

"The test has several interesting features. Patients who are un-cooperative in many tests seem to have an interest in this. The chair being large and firm, gives a sense of security, and the aid given by the surgeon's hand adds to the feeling of confidence. Practically all patients can accomplish this effort and, without instructions, the patient invariably puts the best foot forward, which means he steps up with the leg which has the best hip joint the best psoas, or the best glutei. Further, the patient's attention is concentrated on the up stepping leg and without attention to the aftercoming extremity.

"In this test, when the patient stands upon one foot, the muscles of the leg and the thigh are engaged in maintaining balance. The abductors and extensors of the hip joint (the glutei and the hamstrings), inasmuch as their insertions are fixed and their origins are movable, act very powerfully in this reverse direction to fix the pelvis in respect to the femur and even incline it somewhat so as to bring the centre of gravity nearer to the weight-bearing hip. The spine assumes a balancing scoliosis position, convex toward the weight-bearing side, which is accomplished in part by the opposite psoas which is acting to flex the opposite thigh. Since the Y-ligament is a sufficient antagonist for the glutei, the psoas on the weight-bearing side is comparatively relaxed.

"In this position, all the weight of the body, inculding that of the opposite lower extremity is transmitted to the weight-bearing leg through the sacro-iliac joint on the weight-bearing side. It is under such conditions that only minimal, if any, musculature is available as a protective medium to the ligaments of the sacro-iliac joint.

"Until the up-stepping foot is placed upon the chair, the weight-bearing sacro-iliac joint is under condition of pressure and of sheer. The sheering stress is greatest when the pelvis is nearest to the horizontal plane, and lessens with corresponding increase of the factor of pressure the more the pelvis is inclined, for this position makes the weight-bearing more direct from the sacrum to the ileum. The muscles of the up-stepping extremity are at a complete disadvantage, and before they can be

of assistance, a definite upward push must be made by the weight-bearing leg. When the push occurs, considerable inertia of the body is overcome, but not without definite pulsion of the ileum upward, increasing the sacro-iliac sheer. Until the after-coming foot has risen several inches from the floor, the up-stepping extremity has done no real propulsive work, but is in the status of recovery in readiness for the effort. It then assumes all the work, and the relaxed after-coming extremity returns to its usual hemi-weight-bearing function and the sacro-iliac joint is then relieved of the unusual mechanical stress.

"If the patient steps down with the foot which was last placed in the chair, the weight is received by that extremity with a slight but definite shock, which increases the sheering stress of the sacro-iliac joint on that side,—a down-coming shock wholly passive, whereas the up-going one is due to muscular effort.

"With bona fide joint trouble, the patient can hardly be expected to perform this test without complaint. If the surgeon will keep in mind above outlined physiological mechanisms, he will discover that the sacro-iliac malingerer will step down hard on the foot of the 'affected side' without pain."—*The General Practitioner, Australia.*

MEDICINE AND THERAPEUTICS

Bile Salts in Empyema.—The solvent action of bile salts upon pneumococcin and other organisms has been known for some time, and treatment of pneumococceal empyema by aspiration of pus and injection of a solution of sodium tauracholate has been described by several workers. Sworn and Cooper (Stafford) report the successful use of this method in three cases, but they employed sodium desoxycholate instead of taurocholate, having found by experiment that its lytic action on the organisims was much more powerful. Care must be taken, however, not to inject this salt into an empyema until the presence of frank pus shows that a definite abscess cavity has been formed. The presence of pneumococci in the pus having been confirmed, the cavity is aspirated again and as much pus as possible is drawn off with the needle still in position, 5 to 20 ml. of a 5 per-cent solution of sodium desoxycholate is injected, and the process is continued daily or every other day according to the condition of the patient and the result of examination of the pus. Anderson and Hart (London) find that the dose of desoxycholate of Sodium

may be considerably reduced provided that the concentration of sodium chloride is at least 1.5 per cent. Sodium chloride augments the lytic action of the bile salts.—*The Prescriber, December, 1934.*

Prolonged Influences and Complications of Intestinal Amebiasis.—Kenneth M. Lynch, Charleston, s.c. (Journal A.M.A., Oct. 13, 1934), states that once present in the intestine, the duration of parasitism by Endameba histolytica is indefinite, the possibility and actuality of its influence therefore being characteristically prolonged. An understanding of what may occur during its course is necessarily dependent on knowledge of the behaviour of the ameba in its natural habitat, the large intestine. The clinical picture is indefinite, constituted mainly of a below-par state, usually with abdominal soreness, tenderness, or pain, perhaps with neuritis, neurosis, joint and muscle pains, and other vague and indefinite symptoms. In its evaluation, roentgen study of the colon is most important but not in itself conclusive, while sigmoidoscopic examination is of great advantage in determining involvement of the lower intestine. Prolonged amebic colitis commonly exhibits recurrences of the active dysenteric state, often, however, of comparatively minor character. The subject of such an infection is in danger of more aggressive invasion and of serious complication at times unforetellable and is therefore practically constantly menaced. In the more aggressive prolonged disease there are periods of active and extensive ulceration and dysentery with intermissions of arrest and healing, leading into possible cicatrix production, stricture and colonic deformity of permanent and function disturbing proportions. In the colon of prolonged amebiasis after extensive fibrosis, the product of healing and segregating reaction, with variable ulceration, contracting scars, strictures and dilatations, the difficulty or impossibility of cure of such a condition is appreciated, even on the eradication of the ameba. Positive diagnosis of intestinal amebiasis can not be made without determining the presence of Endameba histolytica: no diagnosis of chronic amebiasis or of any of the complicating events can or should be maintained without this information.—*North West Medicine.*

Mistaken Diagnosis in Headache.—G. Voss (*Deut. med. Woch.*, August 25th, 1934, p. 1278) considers that idiopathic neuralgia of the first branch of the trigeminal is so rare that it should never be diagnosed until all other possibilities have been eliminated. He has known patients suffering from diseases of the frontal sinuses or ethmoid

cells to be treated with all the standard remedies for trigeminal neuralgia, including injections of alcohol, on the assumption that the symptoms were due to supraorbital neuralgia. It should be noted that although the supraorbital nerves are tender on pressure in one as well as in the other condition, this tenderness is limited to the nerves themselves in neuralgia, whereas it often extends to their neighbourhood when the symptoms are due to disease of the sinuses or of the neighbouring bones. As for the headache following accidents, it is the rule, in this automobile age, for the subjects of head injuries and concussion to consider themselves privileged and almost under an obligation to suffer henceforth from headache, even for years. There is nothing so difficult as the distinction between fictitious and real headaches in this class; but it is very suggestive of real post-traumatic headache when the patient, on being asked to look upwards, does so with an expression of pain on his face. There is another kind of headache which seems to have become comparatively frequent of late. It is the sequel of acute or subacute serous meningitis in the posterior cranial fossa. After a feverish onset due to a sore throat or influenza, the patient complains of rather sudden attacks of severe pain in the back of the head and the nape of the neck. There are few positive clinical findings; slight stiffness of the neck and tenderness over the occipital region and of the muscles of the neck are apt to give the mistaken impression of muscular rheumatism. Other signs may be moderately contracted pupils and nystagmus. The symptoms include pain, giddiness, and an inclination to vomit. Under treatment, which includes the exhibition of quinine and salicylates, the symptoms begin to clear up in eight to ten days.—*B. M. J.*

Malaria in Drug Addicts.—J. A. Bradley (*Journal Tropl. Med. and Hyg.*, August 15th, 1934, p. 241) records six cases of malaria in drug addicts, and points out that the infection is very liable to be transmitted by the use of contaminated intravenous syringe outfits. Treatment must be immediate and energetic, for coma follows swiftly on the onset. Intravenous quinine therapy should be continued until the danger period has passed, and glucose injections be begun at once if no glucose is present in the urine. In some cases blood transfusion is imperative. Bradley considers that all cases of malarial infection in drug addicts should be regarded as potential cerebral malaria. He attributes the spread of the disease in some cases to pedlars of narcotics travelling through anopheles-infested areas, and cites evidence in support of this view.—*B. M. J.*

Proceedings of Conferences, Societies, etc.

TRICHINOPOLY DISTRICT MEDICAL ASSOCIATION

The opening Address by Dr. T. S. S. Rajan on the occasion of the 5th Annual Gathering and Conference of the above Association held on 20th Dec. '34.

Dear Comrades,

I thank Dr. Norman, the President and Dr. Raghavan the Secretary, for their very kind indulgence to me in asking me to open this Conference. I am not vain enough to think that the Conference will not begin work of itself but for a formal opening function in the way of a speech by me. But I think that it is the desire of the authorities of this Conference to associate me prominently with this function and it is why I am here in the role of an opener of the Conference.

Happy Family

Encouraged by the last year's success of the Conference, the Secretary has made himself bold in getting up a two-days function this year. I should in the first place congratulate the Association on its successful effort to get together a number of prominent Medical men from all over South India to participate in this year's Conference. Their presence in our midst to-day is a good augury for the future of our profession in South India. For, in this assemblage we have representatives of all the Medical and Sanitary Services both high and low, the Railway Service and the Medical practitioners. Let me say, as is often said of the Madras Government, that we are no doubt a happy family —not a happy family of divergent interests opposed and incompatible with each other, but a happy family with unity of interests—the well—being of the nation.

The Task before us

Indians and those to whom Indian life is entrusted cannot afford to remain content with giving Medical relief to those that may need them. This is perhaps the least that is expected of a modern medical man and woe be to those that do this perfunctorily. But over and above this, I believe the responsibility of a medical man consists in the well-being of our nation and humanity at large. Health, disease, diet and longevity of life, those and other factors that contribute to the national well-being are a few of the many problems that await the earnest attention of the medical men today.

The Age question

I have heard old people often make the remark that we are getting to be a short-lived nation. They say that in olden days people used to live commonly upto 80 and 90 years of age and it was not an uncommon sight to see centenarians in our country. We of the present generation are hard put to demonstrate the truth of this statement. But it is plain enough that the average age limit is very low indeed in India. A 23 year average life period is no credit to any country. We are in our graves before we are men. With this short span of life where is the future for us? We are also told that a very high birth rate and an equally necessary high death rate is an indication of a low order of civilisation. If age periods are an index of any civilised nation we are certainly in a very low level. In spite of this very high birth and death rate, our population has increased by leaps and bounds during the last decade from 330 millions to 360 millions. Has this addition increased our national strength, health, wealth and happiness or has it added more to our grinding poverty, misery, ill-health and decay? If census reports are records meant for no other purpose than that of mere information the money and efforts spent on their production is a mere waste. But if a study of these facts urges us to some definite positive achievement, we should have done justice to our profession. If we could by our constructive efforts raise the age of our nation to something similar to that of Britain which is twice that of ours we should be deserving our place in our national life. For, remember that barely three centuries ago, the age limit of the British people was not much higher than that of ours today. If, by multiplicity of national endeavour, England could double the age of her people, it would certainly be possible for us to do so. The share of the medical man in such a consummation is no mean one.

Economic Values of Life

The national income represents the sum total of the earning of the individual members that constitute the nation. The earning capacity of the individual depends chiefly on good health, freedom from disease and fairly long life. A short lived member is not only a burden to himself but a burden to the country and the nation. He is economically not only unproductive but he is a distinct loss to the wealth of the country measured in terms of loss of labour which means loss of wealth. Any increase in the longevity of our life coupled with freedom from disease must become a potent factor in our increase of national wealth. If

the average income of the population be two annas per head with a national life span of 20 years, it is easy to imagine what it would be in an average life period of 40 years. Human life must always be considered in terms of national wealth apart from other considerations. Any attempt in increasing the age period will necessarily bring in its wake increased national wealth. Government to-day is devoting large sums of money in the development of agriculture in expectation of a good return in the way of taxes. I very much doubt whether they have correctly assessed the human life value in this bargain. If the money sunk is put on a business proposition it is incumbent upon them to safeguard the health and life of those who by giving their life to the work, will give to the investors the profit they look for in their investment. So, even as a business proposition, the Goverment must interest themselves more in making us a longer-lived race than now, even as the planters are interested in providing healthy conditions of life and prompt medical relief to the labourers under their employ on purely economic grounds. The agency for this development is the medical service. Therefore any investment of money for the health of the race must be treated as a first charge on the revenues of the country. I would consider it even more important than the reserved subjects and safeguards in the coming Constitution. Our profession may well regret that it is not so.

Health Should Become International

Means of communication, rapid methods of transit have all combined in overcoming distance. Humanity all over the globe has been brought ever so much nearer together that side by side with the advantages of their nearness, the disadvantages of disease especially the epidemic and infectious forms of it have become too many. The instance of the spread of Yellow fever and the international efforts taken for its prevention and eradication is a thing which we may all well remember. The League of Nations nobly conceived after a devastating international war has no doubt made some attempts to realise the importance of human life values in relation to public health. But what a tiny speck of endeavour in a vast limitless sea of human suffering. Rocke Feller Foundation has realised this great idea no doubt and has nobly come forward with a bold programme for study, investigation and universal relief. But this is simply not enough. Countries like India, China and Far East are not isolated entities in the map of the world today. Not only are they becoming inter-dependent in commerce and trade but also in production and spread of disease.

Therefore there is greater need to-day for an international understanding and co-operation in matters of health than ever before.

Essentials Required

If this is the fundamental concept on which the usefulness of the medical service should be based, there are certain primary conditions necessary for its fulfilment.

1. It is the knowledge that all human bodies are similarly constituted all over the world in spite of climatic environments that produce apparent differences such as colour, shape, food and temperament. Theories as to the causation of disease and cure may be many, sometimes even conflicting. But Physiology, Anatomy, Pathology and Morbid Anatomy are all one and the same. There may be a few diseases peculiar to the tropics and some other peculiar to other regions. But human body is essentially the same all over.

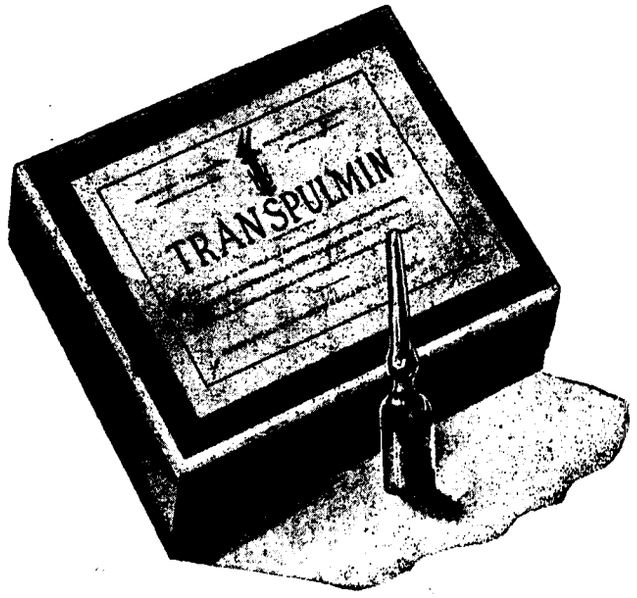
2. A standardisation of knowledge arrived at by observation, study, analysis and experience is the next step in the evolution of a universal endeavour for eradicating human ailments.

Whatever else a medical man may be, he should not be a fanatic. The heritage of human experience is rich and eternal. We cannot shut our eyes because a fact comes to us from a source with which we may not be familiar and if this were so, no progress is ever possible. Be ever ready to receive but let there be no hurry to believe unless what you receive is tested, tried, compared and recognised. If we could but remember the great benefit to humanity by the use of Cinchona and its alkoloids and the story associated with its find we would hesitate to throw away or treat light-heartedly a popular superstition which may have the germs of truth in it and which if investigated may confer lasting benefit on humanity.

3. A correct knowledge of human body both in health and in disease should be the minimum requirement of all those that take to the medical profession. In our country to-day there are different schools of thought that advocate different methods of training for a medical man. There is the Allopathic Western system with which we are all only too familiar. We have in a way established a common bond with the West by studying and practising the system of medicine with such modifications as may be necessary in our experience and that suit our needs. But some of us may not look kindly upon the indigenous systems that have been practised for ages by our people. We cannot by any means say that those methods practised by our people for the last so

many generations are a failure. They have served the needs of our people for ages past. It may be that progress in the development of indigenous systems of treatment has come to a standstill and no useful contribution has been made to it by the practitioners of that system. It is useless now to go into the causes that produced that stagnation in indigenous efforts. But suffice it to say that there are still a large number of people who have got treated and cured by practitioners of indigenous system and to that extent the practical results attained by them compare favourably with ours. We shall have no just reason for quarrel. But even there the progress of investigation has already begun and the schools of Indian medicine that have come into existence during the past few years have adopted a system of imparting knowledge which for all practical purposes is identical with that of our own. A knowledge of human anatomy, of human physiology and of morbid anatomy and surgery has become part and parcel of the instruction which is being imparted in those schools for our people. Whatever may be the theory with regard to the origin of diseases as described in Ayurvedic books, we have to-day the fact that Ayurvedic schools teach their boys human anatomy on the western lines. This is what it should be. It shall not be open to any practitioner of the western system to look down upon his brother who practises the indigenous system of medicine and internationally considered, Ayurvedic system of medicine is trying to get an international recognition by adopting a syllabus which is common to all humanity in all parts of the world.

If this is my view with regard to the medical men practising indigenous system, you may well imagine how abohorrent it will be in my opinion that there should be grades in the acquiring of knowledge of a professional kind. You do not find it in Law, in Engineering or in any other profession intended for the welfare of man. But this anomaly has been sedulously fostered in our country under the protecting wings of state patronage and deliberately perpetuated in the face of the unanimous protest of the profession of all grades. There should be one minimum standard of medical knowledge without acquiring which no man should be allowed to practise medical art whether the period of training is four, five or six years. It should be applied to all systems alike irrespective of emoluments. But the door for further acquisition of knowledge or further avenues of service should not be barred. In fact while the minimum qualification is the absolute essential, it should also open the first step in the ladder of knowledge and enable the seeker to go forward in his desire for service to



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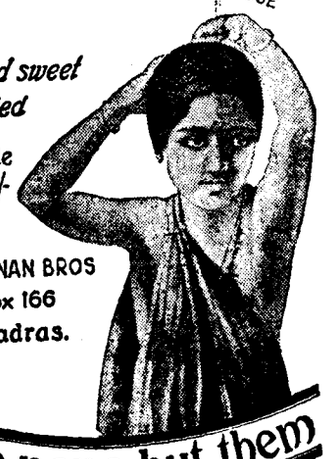

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humanity. This departmentalisation of graded knowledge by Government has unconsciously led the nation to a stand-still in its achievements in the way of any substantial contribution to the sum total of medical knowledge. There is no doubt that a few outstanding Indian names still figure in medical history. The works of Col. Chopra, K. Das and Brahmachari are a few of the additions made to medical knowledge but every one of us must confess that their number is inadequately small and awfully disproportionate to the size of the country which has in its compass one fifth of the human race.

The Food Factor

Given these essentials necessary for any study of medicine let us examine one or two outstanding factors with regard to our low life average. The food factor is perhaps the first that should be examined. Col. McCarrison by his life-long work in our midst has unearthed this fact that the South Indian dietary is the poorest with regard to its qualities. Human body has to live and grow on the food provided for it and if this fundamental requisite is defective it is impossible to have strength and vitality enough to resist disease and much less have long life. The question we have to put to ourselves is whether we medical men have the resources at our disposal to rearrange our national diet in terms of its nutritional requirements consistent with minimum health and well-being. The vitamins have come to play an abiding part in our food. It is no use to say that it is a figment of the imgination of a research enthusiast. The fact has been proved to the hilt and no sane medical man can dare question the importance of these indefinable vital things necessary for healthy life. That the South Indian diet stands in need of radical alteration and substantial addition is imperative and our duty in that regard is clear. A substantial addition of meat, dal, wheat, vegetables and fruits in due proportion is necessary. We have to approximate our diet more or less to the Punjabi diet which is the best in India and answers the test of physiological requirements.

Social Customs

Early consummation of marriage before the completion of the physiological development of the body is perhaps one of the commonest features of our national life that contributes to our low vitality and short span of life. Shastraic injunction is definitely clear on this subject and bears testimony to the scientific opinion on the question. But a variety of causes have operated on our

social fabric, and made our people gradually give up marrying adults and begin marrying children and the habit has become so ingrained in us that we have forgotten old texts and have forged new customs instead. Any attempt at reform in the direction of increasing the marriageable age of boys and girls is met with a blind objection on the part of the orthodoxy. Even to-day a small section of our people consider the age fixed by Sarda Act as too high and Legislators have even suggested an amending Act.

The next glaring evil is the indiscriminate consanguinity in marriage. In the Tamil country inter-marriage between cousins, uncles, nieces is the rule and we know how this vicious circle affects the length of human life by a variety of ways. Herditary transmission and interchange of diseases, perpetuation of defective mental condition and incurable habits are some of the evils that tell upon human life by such marital relations.

Military Training

The lack of opportunities for physical training of the adults of our country is yet another cause of our poor physique. Opportunities and facilities for Military training are denied to most of us. Careers in the Army and Navy are just now being thought of and niggardly provided for. At this rate it will take ages for a substantial number of our young men to get the advantages of a seasoned body by the disciplined training which the Army gives. If I were the Dictator for India, I should straightaway order conscription for all men and women of India for a period of three years commencing from the age of eighteen to the age of twenty one as a health law rather than as compulsory Military training. The money spent by the State on such a scheme will be worth it in the extended life average of our race which will result therefrom.

Compulsory Sanitary Laws

Sanitary laws have yet to be brought into the Statute Book in this country. The evolution of a sanitary conscience is a process of education. Our educational institutions have not yet fully realised the national value of health and that is why they have not thought it fit to put health as compulsory curriculum in the syllabus of studies that are prescribed for our educational institutions. A compulsory knowledge of Hygiene and Physiology is a necessity which ought to have been realised by our educational authorities long ago. Propaganda through schools with regard to matters of sanitation is an effective means of educating the future generation of this country. The development of sanitary know-

ledge and sanitary conscience will *ipso facto* follow the foot steps of such training given in our educational institutions. Then it would be easy work for the Legislature to bring in compulsory sanitary laws and at the same time get the acquiescence of the public in carrying out such laws. It is high time that our educational authorities realise this prime importance of a health curriculum in schools. Compulsory vaccination, notification of infectious diseases and a host of such things that ought to have found a place in penal laws are yet kept out of the pale of compulsion. It should be the endeavour of medical men to educate the public with regard to such matters. It will be the duty of the Legislators to frame such laws and regulations as are absolutely essential for the welfare of our race.

Physical Education

The training of the physique of the young men at the schools must also be a part and parcel of the general education given to young boys and girls. Generally the best portion of over 14 years of a growing child's life is entrusted mostly to the care of an educational institution and partly to that of its parents. With a compulsory system of education it becomes incumbent upon educational authorities to safeguard the health of children committed to their care and if as a result of a few years of a child's life in an institution, the child's physique should get deteriorated, the blame for such deterioration must necessarily be laid at the doors of the institutions themselves. Therefore the inaguration of medical inspection of school children has been begun too early. Such medical inspection has revealed the woeful state of health of the young boys and as one who has had a hand in the organization of a medical inspection work in schools and colleges about a decade ago, I can speak with personal knowledge of the condition of a good number of the young boys that attend our colleges and high schools. For a system of medical inspection to be of any use, it has to be followed up by the necessary treatment either in a school clinic or some other medical institutions provided for either by the state or by private philanthropy. If that were not done, the statistics so carefully gathered by medical inspection reports have absolutely no material value. Therefore I should urge upon medical men who happen to be medical examiners of schools and colleges not to be content with mere handing over of a medical inspection card to the children who are expected to deliver it either to the educational chiefs or to their parents, but to pursue their investigation further till the child is cured of its ailments or the environments in which the diseases

developed are radically altered. It must be the medical inspector's duty to so educate public opinion as well as opinion amongst educational institutions and Government authorities that medical inspection alone unaided by a school clinic is practically of no benefit either to the children or to the State. If this were done, something with regard to the health of these millions of young men whose future is being shaped in the anvil of our educational institutions would have begun.

Gentlemen, I have placed before you a few straight facts as they occurred to me in the very limited time that was at my disposal. I feel I have not done justice to the subject I have chosen to deal with But still, I have jumbled up a few facts as they occurred to me and I have placed them together in an endeavour to present to you what appeared to me the most vital necessity of our race. We should have done some service to ourselves and to the country we live in by stretching our leisure hours to a little beyond our purely professional work and tried to help our ignorant brethren into the healthy ways of life and existence. This piece of service that we do, will be more effective than any amount of medicine or surgical manoeuvres which we may employ in our efforts to relieve the sick and the ailing. It is any day better philanthropy and service to humanity to prevent diseases than cure it when it once sets in. After all, most of the diseases are very often due to violation of nature and disease is the penalty which nature inflicts for such infringement. But the right way of life lies in learning natural laws which conduce to the well-being of man. A knowledge of such laws will naturally lead one to avoid such conduct in life. The knowledge may be with regard to diet,. with regard to health, with regard to environments, with regard to occupation and with regard to many other such things which human life has got to contend with. So, it pays one in the long run if by a systematised process, man is made aware of things that he ought to know and I believe it is the duty of our profession to give a hand in such an endeavour. Therefore it must be an effort to extend the longevity of life in this country and then alone we as medical men would take our rightful place. I know these factors are not the subject matter of the discussion that you are going to have during these next two days. Nevertheless, I have thought it my duty to draw your attention to such facts that do not always lie in a grove before us. It does one good to go out of the beaten track and to explore regions which are not familiar. Clinical materials, methods of diagnosis, and systems of treatments are things with which we are familiar every moment of our existence

and it is but right that a Conference of medical men should devote most of its attention to such topics. But after having said this, I still believe we have got work in other spheres as well, and we are morally bound to take cognisance of such facts and give a helping hand in such a noble work. I do hope this Conference held in a mofussil place will still be able to provide you with some interesting items of knowledge and if we fall short of your expectations, I beseech you to extend your sympathy to us and fill up the gap with your abundant knowledge and experience. With this mutual exchange of ideas and experience, we shall be equal partners of the results that this Conference may produce.

And with this happy thought, I declare this conference open and wish you God-speed in the work that lies before you. I thank you once more for your patient hearing.

THE TANUKU TALUK MEDICAL ASSOCIATION

Tanuku, West Godavary District.

The members of Tanuku Taluk Medical Association were enfete on Sunday the 25th Nov. 34 when they celebrated the 4th Anniversary of their association with Dr. C. Ramanujaiya, L.M.S., District Medical Officer, West Godavary in the chair. The Bi-monthly meeting of The West Godavary District Medical Association was also held there on the same day.

The Campbell Hall at Tanuku was tastefully decorated with flags and festoons and the rows of motor cars surrounded by flowers and foliage added to the grandeur of the locality. About 80 doctors from all over the district attended the function and the members of the local association were at home to the guests. After refreshments which were served on a lavish scale the meeting commenced with introduction of the members of the various Taluk associations by their respective secretaries. The Secretary of the Tanuku Taluk Medical Association then read an interesting report narrating the different activities of the Association during the year 1933, which showed distinct all round progress in the working of the Association. The neucleus of a library formed, consisting of about 30 volumes of journals and text books was an enlightening feature of the report. The President congratulated the Members of the Association on their keen spirit of cooperation and good will and exhorted the other Taluk associations to copy the model.

The meeting of the District Medical Association began when resolutions were passed for starting a District Rural Medical

Practitioners' Association under the auspices of the District Medical Association. Resolutions were also passed protesting against the new scale of pay instituted under the new G. O. for Doctors under the employment of the Local Boards and also recommending to the District Board, West Godavary to start a Maternity and Child Welfare centre also at Tanuku, which is the Head quarters of the Taluk.

Five interesting papers were read on 1 Clinical notes of a case of Cancer breast by Dr. V. Ramadas, M.B.B.S., 2. Puerperal insanity by Dr. N. Rama Rao L.M.P. 3. Brahmacharya by Dr. T. Baskara Rao, L.M.S. 4. Medical Profession and Litigation by Dr. V. Purna Rao, M.B.B.S. 5. Preventive Medicine in rural areas by Dr. S. Satyanarayana, L.M.P. which were followed by discussions.

Cases of Diphtheritic paralysis of the palate, Xerotic ulcer of the Cornea, Sarcoma of the Choroid were also domonstrated. The meeting terminated with a vote of thanks to the President and the guests which was proposed by the Secretary of the Tanuku Taluk Medical Association. Dr. Ch. S. of Nidadavole responded on behalf of the guests.

After a sumptuous dinner at 8 p. m. the function terminated with a comic Harikatha Kalakshepam during the night.

XI ALL-INDIA MEDICAL CONFERENCE

The eleventh All-India Medical Conference, 1934, was held in Delhi during X-mas week and was presided over by Col. Bhola Nath I.M.S., (Retd.), C.I.E. The following are extracts from the Presidential Address:—

Army Medical Service

Speaking of the Army Medical Service. Col. Bhola Nath observed :—

"The medical organisation of the Indian army is out of date, inefficient and unsuitable for Indian requirements, both in peace and war.

For the benefit of the uninitiated it may be explained that the military sick in peace time are treated, in what are called station hospitals. The hospitals are classed first, second and third class according to the strength of the garrison in contonment on which the sick accommodation is based.

The station hospital system was only lately introduced in the Indian army, in imitation of the system which prevails in British Army in England and India.

The system may be suited to troops in England where the

climatic conditions are uniform and the country is not subject to the periodic visitations of malarial and other epidemics. In such ideal conditions the sick rate is constant and can be anticipated and provided for with precision.

In India the conditions are different. With the change of seasons and periodic visitation of epidemic disease the sick rate varies and the hospitals are full at one time and empty at other times of the year.

But the station hospital system being rigid and inelastic, the sick accommodation can neither be increased nor decreased.

This results in a good proportion of the hospital equipment and personnel lying idle for a good part of the year.

The station hospital system is supposed to train medical units for field service. But on mobilisation the hospital system is discarded and quite a different system is used in the field which bears no resemblance to the station hospital system.

In the field a practical knowledge of field sanitation is required. The laying of hospital camps, according to the lay of the land and climatic conditions, the disposal of night soil, and sullage in slush and mud, the supply of potable water where means of purifying the water are not available, the putting up of economical cooking places where firewood is scanty, the dealing with fly and mosquito pests, are some of the problems which the field units have to face.

These things, I maintain, cannot be learned in station hospitals. They have to be learned by bitter experience in the field and in the field they cannot be picked up in a day.

The field medical organisation of the army is no better. During peace time the field medical units are moribund. The equipment is carefully folded up and stored away in stations so far apart as Secunderabad and Alipore. The personnel is distributed for duty in stations as far apart as Bombay and Mandalay and as a matter of fact, field units have no personnel in peace time. It is created by collecting and detailing men from all over India.

On mobilisation being ordered, the equipment and personnel are collected and put together, before the unit can take the field. This takes time and means delay and expense.

I may be permitted to relate my personal experience to illustrate my point.

My hospital was mobilised in a certain month in a certain year. A third of the personnel but no hospital equipment could be collected. The menial hospital personnel was hastily enlisted from the sweepings of bazars without discipline and training.

In this state of unpreparedness, we were dumped down in the field, utterly helpless and useless as a field unit.

Would it be believed when I say that it took, the rest of full complement of personnel and equipment, months, to dribble down from India before the unit could be said to be mobilised.

This I submit is unpreparedness with a vengeance. All our past failures have been due to unpreparedness. These are serious defects in the medical organisation of the Indian army which I respectfully bring to the notice of H. E. The Commander in-Chief.

To rectify these defects, I suggest that the Station hospital system should be abolished and replaced by the field service system.

Base hospitals, stationary hospitals and Field ambulances complete with personnel, equipment forms and procedure should take the place of the present station hospitals and work in peace time as they do in the field.

The advantages which I claim for this change are :—

1. It is practicable and has all the advantages of the station hospital system without its disadvantages. It may need modification in minor detail.
2. It makes the peace and war time working of the medical units uniform and identical.
3. The field units will take the field at a moment's notice ready equipped with personnel and equipment in a working order as a team.
4. It will do away with the necessity of keeping two sets of equipment one for peace and another for war.
5. It will lend itself readily to combined administration of British and Indian units whenever found necessary.
6. It will result in a considerable saving in the medical budget of the army.
7. In one stroke it removes defects of peace and war organization.
8. The system being collapsible is most suitable to Indian conditions ".

Civil Medical Administration

With regard to Civil Medical Administration, Col. Bhola Nath said :—

" The one defect which stands out most conspicuously in the civil organization and which is the root cause of your troubles is the fundamental defect in the very structure of the civil machine.

This defect is the combination of the civil and military functions of the service.

So long as this defect is there the parts of the machine cannot and will not work smoothly.

However, in your zeal for reforms you should not lose sight of the fact that there are insuperable difficulties in the way of separating the civil from the military, however desirable it may be.

I would remind you that the Government of India, like other governments in the world, is a conservative Government ; it hates change of any kind ; the Government firmly believe that what is being done is the best that can be done, it is reluctant to move forward unless it is pushed by the sheer weight of a persistent and accumulated public opinion. The Government machinery is old and antequated and at the best of times it can move slowly on its rusty hinges. It is an alien Government, therefore it is naturally distrustful of every thing and every body, it is a bureacratic Government and therefore irresponsive to popular demand.

But with all these inherent drawbacks it must be confessed with gratitude, that in this particular instance, namely the separation of the civil and military functions, the Government of India have played their part and exerted themselves as much as they could be expected to do. They have made several attempts to separate the civil and military but unfortunately the forces of reaction have been too much even for them.

This defect, was so conspicuous and it so hampered the smooth working of the machine, that it could not escape the notice of administrators who were responsible for its working.

Administrator after administrator, both civil and military brought the defect to the notice of the Government and submitted proposals for its removal to relieve the civil department from the incubus of military encroachment.

The reformer inside the Government of India or the reformer outside has not been idle and has not lost hope. He has mobilised new forces and planned new attack on the stronghold from another direction. The forces of reform are marching with a sure and steady step. Some of the outworks have already been carried and the assault on the main position is being delivered ; it is a question of time as to how long the reactionary forces will last out before they finally lay down their arms ".

Medical Reforms

Col. Bhola Nath, continuing said :—

"I will describe to you now, that in the face of these difficulties, what the reformer has been able to achieve, what has been done, and what remains to be done and the steps which must be taken to gain the final victory.

First Step. Fist step on the road to reform was taken when health and education were made a transferred subject. This was a most important step. It tacitly admitted that the care of health and education is the peoples' own concern. If they prove themselves fit in this, they will be considered for fitness for other and more important things. This is an experiment and we are on our trail.

Second Step. The second step in the same direction is the provincialisation of the transferred subject. This step further assumes that health conditions are different in different parts of India. By provincialising the transferred subjects, each province is left free to work out its own salvation in the best way it can without dictation or direction from outside.

Third Step. The third forward step on the road to reform is the establishment of the Indian Medical Council ".

Fourth Step. The fourth step on the road to reform was taken in the year 1923 when the Secretary of State in Council under Rule 12 of the Devolution Rules checked the further encroachment in the civil department by the military officers by fixing their number to 268 appointments.

Fifth Step. The fifth step in the same direction was taken by the Government of India in their communique of 1928.

The communique provides, firstly that the present incumbents of these posts will remain undisturbed until such time that they are gathered to their fathers. It further provides that the next generation of I. M. S. who joined the civil department on the day of the promulgation of the communique will have prospective rights to these posts preserved for them till their generations too die out of natural death. The naivete of this scheme is equalled only by its diabolical ingenuity. The rest of the communique is plain sailing.

Having cheated the provincial services, it proceeds to still more systematically cheat men of the same service, the Indian I M. S. men. It introduces communal and racial discrimination in an imperial service and destroys that harmony, which is so very necessary for the smooth working of the service. Suffice it to say that the spoils of the civil department have been unfairly and unequally divided, between the Indian and British Officers much to the disgust and discontent of the former ".

The Independent Medical Profession

Lastly, coming to the Independent Medical profession, he observed:—

" Organise and consolidate medical opinion in your province. Don't permit cleavage in your ranks into official and non-official medical profession. I am aware that the service man fights shy of the Indian Medical Association. He would rather stand aside and let somebody else do the dirty work for him and he to enjoy the fruits of your labours.

Having secured the solidarity of your profession you set to work. The ministers are your own men, the provincial legislature is your own, secure their good will and support. Then you have the public opinion and public press, secure their co-operation and support also. Having made sure of your allies and support, convince them that in matters of medical relief and sanitary reform the co-operation and help of the Independent Practitioner is most essential in order to popularise and extend the state measures of medical relief especially in times of great national disasters such as floods, earth-quakes, famine, epidemics and great wars.

To be able to render assistance to the government of your province I should advise you to organise medical relief measures, enlist freely for army reserve forces.

Your offer of honorary services as surgeons and physicians in provincial hospitals and dispensaries will be most welcome. You will be most useful as registrars of birth, vaccinators and health officers in rural areas. The Municipal bodies and District Boards who generally live from hand to mouth will be only too glad of your voluntary services.

Your willing co-operation will help to enlarge the scope of medical relief and result in economy.

There is enormous scope for work in maternity, child-welfare nursing, first aid, health inspection of school children, sanitation and so on.

To enable you to render professional services efficiently to your country and the state, you demand the recognition of your status. If the registration of qualification imposes certain obligations on the recepient it confers on him certain privileges also. These privileges are your due as registered private practitioners,

such as the granting of certificates for recruiting, invaliding of civil servants, of examining medicolegal cases.

You should further demand that the undue and unfair competition which is going on, at present between the struggling private practitioner and the salaried state medical man should cease by confining the latter to the consulting practice only".

The following is the list of resolutions passed at the above Conference and the number of delegates that attended the same :—

1. This Conference places on record its deep sense of loss at the untimely demise of Drs. H. L. Mitra, P. Naidi, Ranganathar, B. C. Chatterjee, P. C. Bhattacharya, B. Ram Singh and Dr. Bhajekhar and conveys its heartfelt sympathy and condolence to the members of the bereaved families. (from the Chair).

2. This Conference condemns the Indian Medical Council Act 1933 and calls upon the Members of the Indian Legislative Assembly to take early steps, so as to provide therein amongst other things a more suitable arrangement for reciprocity, a large number of elected Members on it and the inclusion of Licentiates in its purview.

Proposer: Dr. K. S. Ray, Calcutta.
Seconder: Dr. S. C. Sen, Delhi.

3. This Conference strongly resents the appointment of a non-Indian as the Secretary of the Medical Council of India.

Proposer: Dr. De Silva, Jubbulpore.
Seconder: Dr. G. N. Mukherjee.

4. This Conference disapproves of the appointment of the Secretary of Medical Council of India as an Inspector of Examinations and of the Courses of Instruction, and it condemns the action of the Members of the council, particularly the elected, which, ultimately made such an appointment possible in June 1934, thereby reversing the decision of the Council in this connection arrived at its meeting held in March 1934.

Proposer: Dr. Atal, Lucknow.
Seconder: Dr. Chamanlal Mehta, Bombay.

5. This Conference is of opinion that the recommendations of the Drugs Enquiry Committee be given effect to, and a bill for that purpose be placed before the legislature at an early date.

Proposer: Dr. J. N. Mehta, Bombay.
Seconder: Dr. Kedar Nath, Delhi.

6. This Conference recommends to the Government of India the inclusion in pharmacopœa in use in State hospitals and dispensaries of such drugs of indigenous origin whose value has been scientifically established in the treatment of diseases prevalent in India.

Proposer: Major Chatterjee, Delhi.
Seconder: Captain P. B. Mukherjee, Patna.

7. This Conference strongly recommends to the Government of India, the Provincial Governments, and Local authorities not to curtail financial grants necessary for scientific medical research and for medical relief in the country.

Proposer: Major Chatterjee Delhi.
Seconder: Dr. S. N. Kaul, Lahore.

8. This Conference strongly urges the necessity of amending the Provincial Medical Council Acts so as to ensure a majority of elected Members in their constitutions and invites the Indian Medical Association to take necessary action in this respect through its Provincial Branches.

Proposer: Dr. P. W. Patel, Bombay.
Seconder: Dr. J. N. Basu, Calcutta.

9. This Conference if of opinion that the demand by the various Governments or bodies under State Control for counter-signature on Certificates issued by registered medical practitioners is uncalled for and inequitable, and urges its abolition immediately.

Proposer: Dr. J. P. Modi, Lucknow.
Seconder: Dr. Bhupal Singh, Meerut.

10. Bearing in mind such necessary requirements of medical practitioners as conveyance, medical books, surgical instruments, and such other appurtenances as are necessary to an adequate discharge of their duties towards their patients, this Conference is strongly of opinion that the Central Board of Revenue should issue directions permitting legitimate deductions from income-tax assessments on charges borne by medical practitioners for purposes such as those stated above.

Proposer: Dr. A. C. Sen.
Seconder: Dr. J. P. Modi.

11. Resolved that this Conference endorses resolution No. 4 of the U. P. Medical Conference, held in Meerut in October last and is of opinion that the recent amendments to the U. P. Poisons Act and the subsequent drafts contained in U. P. Gazette, dated 8th September 1934, Part I, page 919, are derogatory and detrimental to the interests of medical practitioners possessing registrable qualifications.

Proposer: Dr. Bhupal Singh.
Seconder: Dr. Bagchi.

12. The Joint Parliamentary Committee's Report. This Conference, after a careful perusal of the contents of the Joint Parliamentary Committee's Report (November 1934) places the following on record :—

(*a*) This Conference is of opinion that the continued appointment of Members of the Indian Medical Service to the civil side, as contemplated by para 299 of the Report (Part 1—Volume 1) is entirely unjustified and uncalled for.

(*b*) This Conference concurs with the view expressed in the Report (para 299—lines 26 to 30) of the Services Sub-Committee of the First Round Table Conference that there should in future be no Civil Branch of the Indian Medical Service, that the Civil Medical Service, should be recruited through the Public Services Commission.

(*c*) This Conference expresses the opinion that the present method of recruiting officers for the Indian Medical Services by selection is undesirable and unsatisfactory, and reiterates the resolutions passed at the previous meetings of the Conference that the system should stop and that an open competitive examination to be held in India be adopted.

(*d*) This Conference is of opinion that all I. M. S. Officers employed in the Civil Medical Department, must be wholly under the Control of the Minister-in-Charge of the portfolio.

Proposer : Dr. K. S. Ray.
Seconder : Dr. J. Mehta.

(*e*) This Conference is of opinion that the right of appeal sought to be given by the Report to the Privy Council (Para 364, lines 9 to 14 on page 215, volume 1 part 1) from the considered decision of the Indian Medical Council as approved by His Excellency the Governor General-in-Council in India is a direct infraction of the provisions of the Indian Medical Council Act of 1933; and as such a right conflicts with the autonomy professedly enjoyed by the Indian Medical Council, this Conference strongly condemns this recommendation of the Joint Parliamentary Committee, depriving as it does the Indian Medical Council of the right of reciprocity with other countries as to the mutual recognition of the respective medical degrees and diplomas conferred by the said Act.

(*f*) The Conference dissents strongly from the proposal in para 365 of the Report (Vol. I part 1) entitling Members of the Indian Medical Service, the Royal Army Medical Corps, the Royal Air Force Medical Service to practise in India merely by virtue of the Commission they hold ; thus infringing upon the right of reciprocity granted to the Council as per sections 13, 14 and 17 of the Indian Medical Council Act of 1933.

Proposer : Dr. C. P. Chaube Delhi.
Seconder : Dr. J. Mehta, Bombay.

13. Resolved that this Conference offers its grateful thanks to the President, Col. Bhola Nath, to the Principal and authorities of the Hindu College and St. Stephens College for allowing us the use of their premises for the holding of the Conference and also Lala Raghubhir Singh for placing his Guest House at our disposal.

14. Resolved that this Conference offer its grateful thanks to the Chairman and Members of the Delhi Municipality, the Delhi Health Department and the Boy Scouts Association for giving us all the facilities for holding the All-India Medical Exhibition.

Mover : Dr. M. A. Ansari, Delhi.
Seconder : Dr. G. N. Khanna, Delhi.

List of Delegates

Reception Committee Members. (Delhi) 83 : Benares. 2 ; Cawnpore. 7 ; Dharampore. 2 ; Ambala. 1 ; Agra. 5 ; Delhi 18 ; Poona. 1 ; Multan. 1 ; Sialkot. 1 : Bombay. 8 : Bengal 14 : Meerut. 12 ; Jhansi. 1 : Blundhshar. 4 : Gwalior. 1 ; Ghaziabad. 3 ; Ludhiana. 3 ; Nagpur. 2 ; Lucknow. 1 ; Muzafarnagar. 2 ; Bhowali. 1 ; Karachi. 1 : Mainpuri. 1 ; Lahore. 7 ; Patna. 1 ; Bharatpur. 1 ; Deharadun. 2 ; Amritsar. 3 ; Etawah. 1 ; Nainital. 2 ; Aligarh. 1 ; Mussoorie. 2 ; Hasanpur. 1 ; Balia. 1 ; Srinagar, Kashmir. 1 : Saharanpur. 2 ; Jagadhri. 1 ; Moradabad. 1 ; Jaipur. 1 ; Jubbulpore. 1 ; Mussafarpur. 1 ;

Acknowledgements

Cow and Gate's Milk Food Calendar, 1935.—We acknowledge with thanks, the receipt of a general wall Calendar for 1935, also a deluxe hanging Calendar published by Messrs. Cow and Gate Ltd., Guildford, England. The former entitled "The Proclamation" is a clever coloured sketch by the well known artist Miss Madge Williams and the latter 'The Outdoorlook' is specially intended for distribution to the medical profession. The get-up is excellent.

Dr. A. Mathuram's Calendars.—We have also received a Calendar for 1935 from Dr. A. Mathuram of Guru Medical Hall, Trichinopoly for which we offer our thanks. It is really nice and useful.

The Asian Poultry Research Institute Experimental Farm, 11, Cannaught Road, Poona, have been good enough to send us their Calendar for 1935. We understand that this is an organization intended to educate poor farmers free of charge, in poultry culture. The Calendar is good and we thank them for the same.

Burmah Shell Oil Storage & Distributing Co. of India, Ltd.—We acknowledge with thanks the receipt of two picturesque Calendars for 1935 from the above firm, the one depicting the historic scene of Krishna-Arjuna Samvada in the battle-field of Kurukshetra and the other an aeroplane display, as strange contrasts of ancient and modern methods of warfare. The get-up is excellent.

Messers. Francis Klein Pharmaceuticals Ltd., P. O. Box 777, Bombay.—We have received a nice Calendar from the above firm, for the year 1935 and thank them for the same. The pictorials are of special interest to the medical profession and the paper and printing leave nothing to be desired.

The Indogiston Manufacturing Co.—We gratefully acknowledge the receipt of a nice Calendar for 1935 from the above firm.

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