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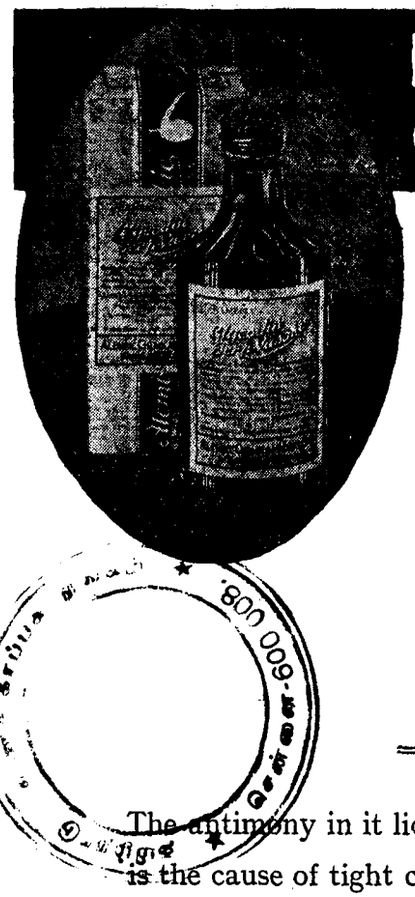

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MEDICO-SURGICAL SUGGESTIONS

VOL. V NOVEMBER 1936 NO. 11

Original Article

SALPINGITIS

BY P. H. VITTAL RAO, M.B., B.S., D.G.O.,

Guntur.

(Continued from the October 1936 issue)

CHRONIC SALPINGITIS.

Chronic Salpingitis is one of the bugbears to the general practitioner as well as the surgeon. It presents a fairly definite picture of symptoms, and in practice it is much more common than acute salpingitis.

Pathology:—The pathological changes are much the same as in the acute variety. However, the serous exudate has been largely absorbed, and all active infection is confined to one or more areas which are surrounded by plastic exudates. Any collection of pus is well walled in, and in some cases it is sterile from long standing. The adhesions, which were fibrinous, have now become organised and contain fibrous tissue and even small vessels. Due to movements of organs they may even become stretched. The tubes are thickened and their distal extremities are closed by adhesions. The tube and ovary are frequently matted together, forming a tubo-ovarian mass, which may be adherent to the posterior surface of the broad ligament, uterus or the cul-de-sac, while the omentum is usually adherent to the pelvic structures. The body of the uterus is frequently displaced backwards and limited in motility due to dragging and fixation by the adhesions to adnexal structures. The degree of permanent damage from infection is indicated by the position and fixity of the uterus. These conditions in the pelvic organs may persist for years, with occasional exacerbations at irregular intervals, usually in association with menstruation.

The cases may be divided into: 1. Mild Salpingitis. 2. Salpingitis with exudate. 3. Pyosalpinx. 4. Diffuse pelvic suppuration. 5. Tubo-ovarian abscess. 6. Hydrosalpinx. 7. Nodular Salpingitis. 8. Adhesions. In this last type, the tubal trouble is slight or has largely disappeared but the resulting peritoneal adhesions are extensive and troublesome, dislocating the tubes and ovaries, and holding them firmly in abnormal positions. In such cases all active infection might have disappeared leaving only sequelae, consisting of exudate, adhesions and distortions.

Symptoms:—History is usually that of an acute illness, at some period, with pain in the pelvis, fever and peritoneal irritation. It presents a fairly definite picture *Pelvic Discomfort*, which at times amounts to severe abdominal pains. The abdominal discomfort in the multipara dates back usually in a full time labour or miscarriage, and in the nullipara to a menstrual period. *Pain in the lower abdomen* commonly described as a dull ache or a dragging sensation, is almost a constant symptom. Some even assume a stooping or bowing posture on walking or standing (due to peritoneal adhesions.) *Backache* is a common complaint, as well as *pelvic pressure*; sometimes there may be a radiation of discomfort down the thighs; and all these tend to be exaggerated at the time of the menstrual period.

These symptoms may disappear for a time but exacerbations are common, especially after menstruation, sexual intercourse, excessive activity or curettage. Some complain of dyspareunia.

In very few cases can a history of gonorrhoea be elicited, and in many the onset is so gradual and the active stage so slight that the condition may be described as chronic from the start. Very suggestive in this class of cases are those who give a history of ill health dating back to a miscarriage, especially if the general health and menstrual functions were absolutely normal prior to miscarriage, for there are very few lesions except those of an infective nature, which definitely follow miscarriage.

One very constant feature is recurrent attack of abdominal pain, variable in their intensity and frequencies. In some they come after exposure to cold, over exertion, long walks, fatigue and constipation. The pain is in the lower abdomen, referred more to one side than the other and always to the same side, where frequently a more tender spot can be made out over the affected tube.

Menstrual pain, another almost constant symptom is pre-menstrual pain. A day or two before menstruation distinct discomfort is felt all over the pelvis, increasing until the flow starts. With free discharge the pain usually goes, and the patients usually state they feel better when menstruating and during the following week than they do at any other time. Some complain of pain again after the period. The menstrual discharge is increased and the period of flow is longer. On the other hand amenorrhoea, scanty and irregular

menstruation may occur from the first or after some time. The cirrhotic changes in the ovary explain these.

Leucorrhoea is always present in the intermenstrual period. The co-existent metritis, endometritis and cervicitis explain these symptoms.

Digestive Symptoms:—Others complain of digestive symptoms like bloating, nausea. Constipation is usually present, sometimes painful defecation due to pressure. Some complain of irritability of the bladder or even cystitis.

In addition, the general health of the patient suffers considerably. Headache, backache and digestive disturbances make her life miserable.

Sterility is common and if pregnancy should occur, the possibility of an ectopic gestation is increased, while if an intra-uterine pregnancy results, there is apt to be a flare-up of the infection after confinement.

At times a periodic discharge of fluid or pus may occur through the vagina, followed by relief of symptoms. This is from the spontaneous discharge of a tubal abscess or one from the uterine wall, but the relief got from such an occurrence is only temporary.

Neurasthenia comes on latter and may become a prominent symptom. It is a sad story when one thinks of the mental state of the childless mother, who suffers for no fault of hers. The disappointment of the unhappily mated, or of the barren woman in the unsatisfied maternal instinct, are some of the instances in which "the woman pays."

Diagnosis:—Diagnosis is made by the history of the patient and a pelvic examination. Abdominal palpation may not throw much light, except that an area of tenderness over the grossly affected tube may be made out. In vaginal examination the points to be noted are: (1) The leucorrhoea and cervicitis if present. (2) The fixation of the uterus, usually slightly retroverted. In some cases it is even difficult to define it clearly, as it is retroverted and bound down by adhesions. It is important to emphasize the fixation, because only in the infective diseases and malignant growths of the uterus does this occur. We should not forget pelvic endometritis in this connection. In addition to the fixation of the uterus a swelling behind or to one side of the uterus is usually present, and the swelling may be very tender to the touch especially when one places a finger on the cervix and tries to move the uterus. This swelling consists of the matted tube and ovary, but in very chronic cases in the quiscent stage it is less sensitive. The size of these swellings are variable and seldom equal on the two sides. When the tubes are sealed and sclerosed (as in nodular salpingitis) they are felt as small irregular swellings closely adherent to the fixed and

backwardly displaced uterus. Very rarely are they to be felt in front of the uterus.

Differential Diagnosis:—The above points make the diagnosis of chronic salpingitis anything but difficult although occasionally, dermoid tumors, myoma uteri, extra-uterine pregnancy, endometritis, pelvic cellulitis, chronic appendicitis, syphilis and tuberculosis of pelvic structures and endometromosis have to be excluded. The Wassermann reaction has to be done as a routine, to exclude syphilis.

1. Fibromyoma uterus: No history of miscarriage etc , fever or of pelvic peritonitis. Symptoms: Gradual onset, consist usually of menorrhagia, backache. Local examination: Uterus easily made out. The mass is hard, has a definite and rounded outline and intimately connected with the uterus and not attached to the pelvic wall.

2. Ovarian and broad ligament tumours: History. No history of fever or attacks of pelvic peritonitis. A large tumour may be moved about in the lower abdomen. Vaginal examination: Large tumour, no fixation, no tenderness, distinct fluctuation sometimes felt without tenderness.

3. Syphilis of pelvic structures: History of syphilis. Evidence of tertiary lesions elsewhere, genitals and in rectum. Onset of symptoms gradual. Fever less. Local tenderness less. Extensive adhesions binding the organs together in such a way as to form distinct masses which may be mistaken for masses of plastic exudate. Wassermann reaction is conclusive.

Before operation, try antiluetic treatment if necessary.

4. Chronic appendicitis: History of acute attacks of pain, fever, etc., No history of sepsis, gonorrhoea, etc. Abdominal examination: high location of the painful area at MacBurney's point. No exacerbations during periods. Local examination. No evidence of leucorrhoea or endometritis. High location of mass of exudate, not felt so easily as mass due to Fallopian tube.

5. Mucous colitis: Sometimes mistaken. 1. History of crampy pains extending throughout the lower abdomen. 2. Passage of characteristic mucous stools. 3. Absence of any palpable local lesions.

6. Pelvic cellulitis.

7. Pelvic endometriosis: This condition is coming to the forefront and much work is being done on it. It is more common than is supposed to be. Sampson, who has his own views regarding the nature of the condition, found it in about 42 per cent of abdominal operations between ages of 30 and 50. This condition occurs in child bearing period with a period of sterility preceeding the onset of symptoms, even years. The symptoms are those of chronic pelvic inflammation without any history or evidence of infection and pus formation. The bedside diagnosis of pelvic endometriosis is not easy, because the same symptoms and signs occur in other common diseases. There is pelvic pain, dysmenorrhœa premenstrual and

menstrual in varying intensity, the fixation of structures and induration and tenderness, and usually a definite mass as in inflammation. Consequently the more common disease is decided as diagnosed, and endometriosis is encountered unexpectedly at the operation.

Treatment of chronic salpingitis: At the very outset it should be impressed on the mind of the patient that the treatment will take a long time, before palpable results are obtained. Be cautious in promising her children at the very commencement. In all these cases when seen early, conservative treatment, as mentioned under acute salpingitis, should be started.

The principles of treatment are: *General.* 1. Rest (especially during periods). 2. Diet, depending upon the exact state of the patient and the stage of the disease. 3. Laxatives 4. Tonics containing iron and strychnine. 5. Specific measures; graduated doses of vaccines in gonorrheal cases or phylacogens. 6. Heat to the abdomen is not of much value. 7. Do a Wassermann for all cases and start antisyphilitic treatment whenever necessary. 8. Non specific protein therapy.

Local measures. Antiseptic or astringent douches are given. I do not think the usual antiseptic douches have any value in clearing up the cervicitis, It is better to apply 1 per cent mercurochrome after cleaning the cervix, and better still diathermy. Icthyol and glycerine (up to 5 or 10 per cent) tampoons act well. Pelvic massage is done to stretch the adhesions. The application of heat to the pelvis is a recent development. In cases with troublesome uterine discharge a dilatation and curetting can be done. This diminishes the menstrual suffering, and sometimes the adnexal too. Further, it gives a chance of a thorough examination under anaesthesia, by which the exact condition of the ovaries, tubes and uterus can be determined. Careful study should me made of the patient generally and of all the organs. Make sure that there is no second deep seated lesion except the pelvic one, to account for her symptoms and mental state.

Operative Treatment: If there is a collection of pus low down in the pelvis it can be drained by vaginal operation as mentioned under the acute condition. If there is an inflammatory mass high up, which probably contains pus or which continues to give trouble after a thorough trial of the general measures outlined above, then comes the question of an abdominal operation. But I wonder if the ordinary working class women in our contry can afford a trial of these conservative measures, covering over months. Now arises the important question, when to operate in such cases as well as in those who are not being benefitted by medical measures. In more than half the cases chronic suppuration in the pelvis, the pus is sterile at the time of operation, showing that the sterilization of the infected pus takes place automatically within a reasonable time in the majority of

cases. Abdominal removal of the mass after the bacteria are attenuated or dead, is almost never followed by infection, even though there is extensive escape of pus into the pelvis. Hence abdominal operation for this should not be undertaken before the period of probable sterilization, except in those cases where the very life of the individual is threatened by the severity of the infection and the infected focus cannot be satisfactorily drained extraperitonially. The time required for the death of the germs varies greatly in different cases.

For this cases can be divided into two types. 1. Gonorrhœal. 2. Streptococcal. In the gonorrhœal variety, the germs are dead or attenuated to practical sterility within a period of three or four months, but in the streptococcal they live and retain their virulence indefinitely, even for two or three years, sometimes Hence abdominal section for a mass of streptococcal origin is never safe, and if undertaken even after some years, may be attended with grave results.

These two types can be distinguished before operation by (*a*) Mode of onset of symptoms. (*b*) Location of the lesion. (*a*) Mode of onset and the history of the case is known. (*b*) Location of lesion. Gonococci have predeliction for tubes first, while streptococci invade primarily the parametrium producing parametritis, and then invade the tubes.

In a doubtful case, in which the abdomen is opened on the supposition that the mass is tubo-ovarian, and it is found before adhesions are disturbed, that the mass is principally in the parametrium, the route of attack must be changed to extra-peritonial (per vagina or above Poupart's ligament) and the abdomen closed.

The nature of abdominal operation varies with each individual case.

In those cases where all active inflammation has disappeared, leaving only adhesions, near the fimbriated end, salpingolysis or freeing the adhesions and opening the abdominal ostium of the tube is the operation. Results are encouraging and pregnancy has occured up to thirty per cent of cases, in whom this is performed. Perhaps this is the simplest type of case.

In more complicated cases, views as to the exact nature of the operative proceedure to be adopted are varied. Some believe in the preservation of as much as healthy ovarian tissue to continue menstruation and enough Fallopian tube to make pregnancy possible, when the patients are below 40 years of age. Even if pregnancy does not take place, the simple fact that it may take place, that it is possible, leaves the patient in a better state of mind.

The other school of gynaecologists are agreed on two points, namely :—(1) Conservative surgery in chronic disease of tubes and ovaries is very disappointing. (2) If both tubes and ovaries

are implicated so much as to require operation, the uterus also should be extirpated. Their contention is that often a women in admitted with symptoms of salpingitis, and the medical treatment having failed, her abdomen is opened. Only the diseased tube and perhaps the ovary of that side are removed and she is discharged cured. She returns at least after some time with recurrence of symptoms and she wants some relief. Salpingectomy will be done She is lost sight of, perhaps for a couple of years, only to come back, complaining of persistant uterine discharge and discomfort, and the result is a third operation, namely hysterectomy. A leading authority like Munro Kerr says that the above cycle of events is usual with many cases who came under his observation. Hence the pendulum has now swung to the side of panhysterectomy, when once operation is decided upon. He says "This is radical but is best in the long run". The surgeon under whom I worked as a house-surgeon used to adopt the same proceedure.

After results : What are the ultimate results? They differ in various cases, but in order to answer this question the cases can be divided into two classes.

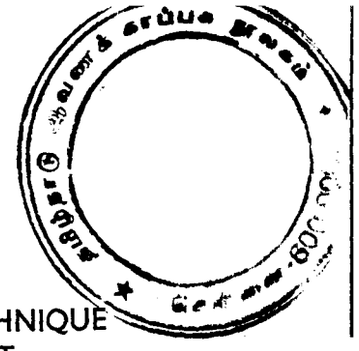
(1) When the lesion in the pelvis accounts for all the symptoms and the patient is otherwise in good health. In these cases proper treatment will effect a cure In any case it will extend over months and even after operation the patient requires careful after-treatment to return to her normal health.

(2) In cases where there is no marked pelvic lesion or in addition to a marked lesion there are symptoms not accounted for by pelvic disease, the prognosis is uncertain. Many symptoms especially nervous symptoms, apparently not closely connected with the pelvic disorder, may disappear after cure of the pelvic conditions. While in some, marked nervous symptoms, apparently due to the pelvic lesion, persist even after the operation. These may be caused by some other hidden factor, or by the pelvic condition itself, but the symptoms having been present for some time, persist even long after operation. There are instances where even insanity resulted as a sequel to chronic pelvic inflammation, and in a few instances even after the operation for the pelvic condition. This may be due to the strain of the operation. These are exceptional circumstances but are mentioned just to show how many things the physician has to think of, what a comprehensive view of the subject he must take in giving a prognosis as to the ultimate result.

In conclusion I wish to recapitulate the following points: 1. Salpingitis is fairly common in incidence. 2. In our country gonorrhoea and pelvic sepsis rank foremost, but within recent times faulty method of use of contraceptive appliances is becoming a factor in the etiology. 3. This condition must be treated as one of the preventive diseases, and to mention some of the measures, (*a*) Proper

management of cases of labour and abortion, especially those requiring obstetric interference. (*b*) Observance of thorough asepsis in instrumentation of uterus or operations on the cervix. (*c*) Teaching of the proper way of using the contraceptive appliances. (*d*) The thorough local and general treatment of the male consort for gonorrhoea; he should be warned as to the sequelae of indiscretion. 4. It must be impressed on the patients that the treatment is a prolonged one and the results slow. 5. Be cautious in prognosticating as regards chances of pregnancy, because she might have been living on the fond hope of the assurance first given and the disappointment at the end may sometimes precipitate a nervous breakdown.

[*Paper read before the Guntur District Medical Association on the 27th June 1936*].



Selected Articles

TRACHEOTOMY: INDICATIONS, TECHNIQUE POSTOPERATIVE MANAGEMENT

BY ROLAND D. RUSSEL, M.D., F.A.C.S.

Chicago.

It is hoped that I may be forgiven for bringing up a subject that is by no means new, tracheotomy having been practiced, according to Sir St. Clair Thompson, for over two thousand years, but when one considers the reluctance, on the part of many physicians of having the operation performed on their patients, and the disastrous results following the operation, when too hurriedly or improperly performed, one may perhaps be pardoned for reviewing the subject and adding what he can to it. One sees cases of laryngeal stenosis, in which the patients have suffered more or less constantly for want of oxygen for days, weeks, or longer, when the margin of safety between life and death from suffocation scarcely exists.

These patients with laryngeal stenosis may breathe fairly well when perfectly quiet, but, if slight added congestion about the larynx occurs, or if for any reason, such as excitement or exertion, the organism requires more oxygen than may be obtained readily, the patient's face assumes an expression of anxiety, inspiration becomes noisy, often with typical larngeal stridor, the supraclavicular and intercostal spaces are retracted, the accessory muscles of respiration stand out sharply defined in the neck, and the skin becomes moist, pale, and often cyanotic.

In contrast with this state of affairs, the immediate improvement in the patient's condition after tracheotomy is usually dramatic. The patient has a short attack of coughing with the expulsion of some blood and retained secretions or exudate, followed by tranquil breathing, return of color to the skin and lips, and more often than not by a smile of relief.

I do not mean to give the impression that tracheotomy should be undertaken lightly, or that it should be undertaken for the relief of slight and transient dyspnea, above all tracheotomy should be avoided in cases of dyspnea due to cardiac or pulmonary disease in which the mechanical factor of laryngeal stenosis plays little if any part. Also, it is not to be expected that tracheotomy will give relief to cases of foreign body in the trachea or bronchi below the site of operation.

The causes of laryngeal stenosis for the relief of which tracheotomy may be required are many.

One may mention :

1. Spasmodic forms of stenosis.
2. Impacted foreign body.
3. Edema of the larynx which may be traumatic or inflammatory.
4. Stenosis may occur in diphtheria, either as a complication of the inflammatory stage, in the form of edema or obstruction by a membrane, or as sequel, in the form of ankylosis of the arytenoids, cicatricial changes, as adhesive bands and subglottic web formation, and postdiphtheritic laryngeal paralysis with the cords in adduction.
5. In typhoid, perichondritis with immediate obstruction from the swelling, or later stenosis, due to fixation of the arytenoids or other cicatricial changes, may occur.
6. Stenosis due to syphilis may be caused by gumma or, more frequently, by cicatricial changes.
7. Tuberculosis may give rise to obstruction from tuberculous infiltration, fixation of the cords in or near the midline, or cicatricial changes.
8. Perichondritis, in addition to the causes enumerated above, may arise as a result of trauma, or from infections the source of which one may be unable to determine.
9. Hypertrophies or hyperplasias of the tissues in or about the larynx ; those which are supraglottic are usually polypoid.
10. Neoplasam in and about the larynx are fibromata, myxomata, chondromata, and sarcomata, which are relatively rare, and carcinomata and papillomata, which are relatively common.
11. Pressure of enlarged cervical glands, usually due to tuberculous or carcinomatous involvement.
12. Bilateral laryngeal paralysis may be caused by bulbar lesions or tabes, or may follow thyroid operations. When this condition occurs immediately after the operation, it is due to injury of both inferior laryngeal nerves, when it occurs a few hours later, it is due to edema, and when it occurs weeks later, it is due to contraction of scar tissue about both inferior laryngeal nerves.
13. In addition to the causes of cicatricial stenosis cited above, are those due to trauma, the most frequent causes of which is high tracheotomy or laryngotomy.
14. Watkins reports a case of chronic enlargement of the tonsils requiring tracheotomy.

One may summarize by saying that tracheotomy is indicated as a temporary measure where intubation is impracticable, as in impaction of a foreign body in the larynx, and where there is not sufficient time for obtaining an intubation tube and someone competent to introduce it, and, as a permanent measure, when the stenosis of the larynx is more or less permanent.

There has been much discussion about the advantages and disadvantages of high and low tracheotomy, and the definition of what constitutes high and of what constitutes low tracheotomy seem to vary. Some speak of high tracheotomy as an operation through the cricothyroid membrane, which is in reality a laryngotomy, others designate operation above the thyroid isthmus as high tracheotomy, while still others define high tracheotomy as an operation through the first two tracheal rings. As to the relative merits and demrits of the two procedures, some claim that there is less danger of haemorrhage, in high tracheotomy ; others that there is less danger of haemorrhage in low tracheotomy. Some point out that high tracheotomy, owing to the more superficial position of the upper part of the trachea, is more easily performed others point to the proximity of the tracheal wound to the laryngeal lesion, the frequency with which high tracheotomy is followed by cicatricial bands and web formations in the glottis, and to the frequency with which one is obliged to do a low tracheotomy as preliminary to the treatment of these cicatricial changes later, and to the fact that high tracheotomy is more difficult to conceal by the clothing, thereby producing an economic and social disability, as reasons for preferring low tracheotomy. In recent years, there has been a gradual inclination on the part of laryngologists toward low tracheotomy, until today many laryngologists practice it exclusively. Indeed, Jackson states that high tracheotomy, even for dire emergency should not be taught. He has described a method for use in such cases, which consists essentially in cutting down on the trachea without regard to haemorrhage and with the finger in the pool of blood incising the trachea, introducing the tracheotomy tube, and then arresting the haemorrhage.

The care with which a tracheotomy is done will vary with the urgency of the particular case. One may be called upon to perform the operation on the bed or on the floor with a pen knife, or whatever sharp instrument happens to be at hand, and without regard to asepsis. Usually one has sufficient time to do the operation under proper surgical conditions.

Morphine and other opium derivatives are contraindicated preliminary to operation because of their depressing effect on the respiratory center. General anaesthesia is contraindicated for obvious reasons.

The operation which has been the most satisfactory in my hand is carried out as follows :

Under favourable conditions, after preliminary infiltration of the operative field with 1 to 2 per cent. novocain solution to which a few drops of adrenalin have been added, a horizontal incision is made through the skin and superficial fascia just above the sternal notch. Bleeding vessels are caught with haemostats. Blunt dissection is now carried out by separating the scissors pressed on the tissues in

the midline until the trachea is reached, a wide exposure of which is not practiced in order not to open up spaces for infection. The inferior thyroid veins or thyroid ima artery may be encountered in this dissection, and, if they lie so that they may be eroded by contact with the tracheotomy tube, they should be ligated. The thyroid isthmus may rarely be so developed or so low as to require division and ligation; the writer has not encountered such a case since he has been practicing this particular method. At this stage slight extension of the neck is advantageous. A few drops of 5 per cent. cocain solution are injected into the tracheal lumen, and while waiting for the cough to subside, bleeding vessels are ligated, and skin sutures of silk are placed but not tied. The trachea is now pulled upward with a hook and a vertical incision is made from below upward and as low as is practicable in the midline of the trachea. I have not found it necessary to remove a crescentic margin from the incised tracheal rings, as advocated by some surgeons; indeed, it is sometimes a distinct disadvantage, as it may give rise to a troublesome oozing of blood which is difficult to control. A tracheotomy tube which is neither so large as to cause erosion of the trachea, nor so small as to render the expulsion of secretions difficult (a number 6 is usually the most satisfactory for adults) and which is passed through a sheet of rubber dam (in order to protect the wound from the secretions), is introduced into the trachea. A tracheal dilator facilitates the introduction of the tube. The skin sutures are now tied, and small gauze dressings are placed over the wound. The strings, which have been previously attached to the tracheotomy tube, are tied snugly, but not tightly, about the neck, and the rubber dam secured with adhesive. Before leaving the table a rubber catheter attached to a suction machine is run into the trachea, and secretions and blood aspirated.

The operative procedure outlined above has the advantages of being applicable to practically all cases requiring tracheotomy for which there is time to do a fairly deliberate operation, of opening up a minimum of space in the deeper planes for infection, and of producing very little bleeding; in a number of cases in which this method was used, no ligatures were necessary. The horizontal wound closes much more readily than a vertical one, healing usually occuring by primary union.

The local anatomical conditions may call for some variations in technique. The trachea may be pushed to one side by masses in the neck or pulled to one side by scar formation. (In these cases, an x-ray film is of great value in locating the position of the trachea.) An unusually high position of the innominate vessels calls for a higher location of the tracheotomy incision.

The after care of the patient is very important in order to prevent pulmonary complications. A special nurse or trained attendant

should be present constantly for the first few days. The inner tube should be removed, cleansed thoroughly, sterilized, and replaced every two hours, at first, or oftener if necessary, for secretions are expelled more easily over the smooth surface of a clean tube than over a sticky coating of partially dried secretions adhering to the tube. As time goes on such frequent changing of the tube is no longer necessary. The outer tube should not be changed, ordinarily, before five to seven days; it is then changed daily. In some cases, fibrinous or haemorrhagic plugs, too large to pass through the tube may obstruct it. In that case the patient is told to cough, and at the moment the plug strikes the tube, both inner and outer tubes are withdrawn together, when it will be found that the plug follows the tube. In the cases in which there is a tendency to the formation of these plugs, the instillation of an ordinary medicine dropper of mineral oil occasionally sometimes helps to prevent their formation, and makes the expulsion more easily accomplished. Frequent and prolonged use of this agent is not advised, for it is not absorbed by tissues and may accumulate in the lungs. The author has seen one such case at autopsy. A sterile catheter connected to a suction machine should be ready in the patient's room at all times for instant use when his breathing indicates that secretions are accumulating. The attendant is instructed to wipe away secretions during cough, before inspiration takes place, thus preventing the reaspiration of the expelled secretions. At first the head and shoulders are elevated, unless the patient is in shock, in order to lessen the danger of haemorrhage and to aid the expulsion of secretions. Morphine and other opium derivatives are to be avoided, for if the cough reflex is inhibited the secretions accumulate and pneumonia, lung abscess, or atelectasis may occur.

[*Illinois Medical Journal Vol. 68, No. 6, Dec. 1935*].

STERILITY.

P. N. CHARBONNET, M.D.
Tulsa.

One of the strongest links in the chain binding Obstetrics and Gynecology is the condition of sterility. For many years efforts have been made, at various times, to divorce Gynecology from Obstetrics; Gynecology from Surgery. The consensus remains that Gynecology and Obstetrics should be more closely associated than any other two branches of medicine. The very poor results obtained by the majority of general surgeons, who have no knowledge of Obstetrics, in treating Gynecological conditions, is one of the strongest arguments in favor of this union.

Sterility is a disease. It is a disease which brings to the office of the Gynecologist, almost, and this sounds ludicrous, as many seeking relief for this condition, as those who come for the purpose of

obtaining contraceptive information. The number of households that have been made miserable by the inability of the parents to procreate is attested by the large numbers of foundlings taken out for adoption, from the various institutions serving that purpose.

Sterility, as any other disease, is one that can and should best be approached from a standpoint of prevention rather than of cure. This care should begin in adolescence, by the teaching of the principles of health and hygiene to the future fathers and mothers of the nation. Young men and women approaching marriage should be told something of its duties and its functions. Treatment of adolescent girls should be carried on with a view to forestalling genital hypoplasia. Efforts should be made to eradicate venereal diseases. Instructions should be given, not only when indicated, but when asked for, concerning the use of harmless forms of contraception. This latter is very important because one cannot be so blind or so stupid as not to realize that a large percentage of married couples practice contraception in one form or another during various periods of their lives; and that improper harmful methods of contraception can and do predispose to a high incidence of sterility.

S. R. Meaker, in his clinic in Boston, has done more towards shedding light on the obscurity, formerly clouding this subject, than any other single individual. He finds that absolute causes occur in about thirty per cent of clinical cases of sterility. In the remaining seventy per cent this is due not to a single abnormality but to a multiplicity of factors any one of which could be of importance.

It has been demonstrated that about thirty per cent of all cases are due to the male. Local genital factors play a comparatively small part. The most common causes are: ignorance; impotence; excessive coitus; absence, scarcity of or abnormality of the spermatazoa. There are possibly many other causative factors in the male, as diet, alcoholic excesses, endocrine disturbances, etc. It is not my purpose to delve more fully into the aspects of this subject, but merely to point out that in all cases of sterility the examination should begin, in my opinion, with the male and this to be done preferably by a competent Urologist.

In the female, excluding some of the rarer conditions, the most common contributory factors to infertility are: genital hypoplasia; diseases of the cervix, producing abnormal changes in the secretions of this organ; tubal obstruction; and mechanical impediments to ovulation.

The first of these factors, female genital hypoplasia, has in the past yielded rather disappointing results as to treatment. It is possible that the newer developments in endocrine therapy may prove of assistance in the relief of these cases. At the present time the best results are obtained in the field of prevention rather than cure.

Abnormalties of the cervix have practically all their origin in infections. The old forms of operations as advocated by Dudley, Schroeder, or Sturndorf, have practically been abandoned in favor of treatment by the electric cautery; or in the more extensive conditions by conization, with the high frequency current as advocated by Hyams.

Some individuals have disparaged the latter forms of treatment, claiming that they would result in stricture of the cervix, which would in turn render labor difficult. I have delivered many patients, in whom one or other of the above methods had been used, and found evidence of stricture in only a very few; these patients, specifically, giving a history of repeated cauterizations. It has been my experience that those individuals, in whom the cauterization is done too slowly, with extensive searing of the tissues, are those in which scar tissue is produced. Too frequent repetitions of cauterizations give the same result. It is better, therefore, when the disease of the cervix is extensive, to do a conization by the Hyams method rather than repeated cauterizations.

There has been a great deal of controversy as to the part played by backward displacements of the uterus as a cause of sterility. Unless these displacements are associated with some degree of genital hypoplasia or other abnormalities, I am compelled to concur in the opinions of those who do not believe that these malpositions are a cause of sterility. I do believe, however, that retro-displacements, uncorrected in the early months of pregnancy by exercises, pessary or a combination of these methods, predispose to abortion.

Probably the most valuable contribution made in recent years to the study and therapeusis of sterility, has been tubal insufflation, as originally introduced by I. C. Rubin. In a series of five hundred sixty cases of sterility using his original technique, I have found that forty per cent showed closed tubes; and that of these, twenty per cent became permeable.

It is not intended here to repeat, but the essentials of Rubin's method. I use carbon dioxide gas for inflation of the tubes. If these show evidence of being closed, I follow this after the next succeeding menstruation, by an injection of Lipiodol, with x-ray photographs; this in order to determine the point of obstruction. If the later shows that one or both tubes are closed at, or near, the uterine insertion, future treatment, by insufflation, is useless. Should the closure be in the fimbriated portion, the prognosis as to restoring permeability by repeated insufflations or by operation is fairly good.

My preference to the gas insufflation, over the oil, is, that use of the former is simpler, less painful, and far less dangerous. Numerous reports of oil being forced into the circulation, oil embolism, etc., as compared to the very small number of accidents

reported following air injections, strengthen my opinion. I have had occasion to open the abdomen, in several cases, in from several months to over a year after oil injections had been used, and found evidence of peritoneal irritation, encapsulated globules of oil and adhesions. Some individuals are now using Neo-Iopax instead of oil, and claim that it is not irritating. My experience with it has been limited, but the assumption appears to be correct.

After the determination that both tubes are closed, the question arises as to the advisability of operation. This has been the subject of arguments for many years. Many operators have published series of cases with conflicting results. I believe the consensus of opinion is now that in those cases in whom adhesions about the fimbriated extremity of the tube fail to yield to repeated injections of air by the Rubin method, operation is admissable as yielding a fair prognosis.

Numerous operations have been devised, when it was found that the obstruction was present in the interstitial, or isthmial portions of the tubes. In a recent paper,, Bethel Solomons publishes the result of three hundred sixty-six cases of tubal resection. In this series thirty, or 8·2 per cent, became pregnant, and ninety-eight, or 18.5 per cent, either became pregnant or showed evidence of tubal patency, after operation. In my personal series of thirty-one cases, five per cent show patent tubes after operation, but pregnancy has not occurred in a single case.

It is my opinion, that, unless the patient is fully advised of the facts of the comparatively small percentage of pregnancies that follow these operations, even if the tubes become permeable, and in spite of these, for one reason or another, decides of her own free will upon an operation, that operations on the tubes, for the purposes alone of relieving sterility are, at the present time, unjustifiable.

With the recent studies of Frank, Novak and others, the endocrine aspects of sterility have assumed great importance. Novak's studies, revealing the rather startling fact that menstruation can occur regularly, in a certain proportion of women without the occurrence of ovulation, throws light on some of our heretofore unexplained sterilities. He believes that by studying the endometrium just before an expected menstrual flow, it can be determined whether or not the epithelium exhibits evidences of secretory activity. If it does, it denotes the presence of progestin, presupposes a corpus luteum, and therefore that ovulation has taken place. He has recently devised an ingenious hollow curette for use with suction, as an aid to securing these specimens without the necessity of hospitalization or anaesthesia.

The condition of amenorrhea associated with sterility has been found to yield, in a certain number of cases, to treatment with the

various hormone of the anterior pituitary gland, although, on the whole the results have been disappointing. The various harmones have been marketed under a galaxy of names, and with extravagant claims based on animal experimentations. The results have not justified these assertions. The only product that so far appears to have very definite favourable effects, in the treatment of sterility, is thyroid extract; and this appears to be of benefit, even in those cases in whom the Basal Metabolism is normal. It is hoped that continued research in this field will aid us in obtaining more potent and reliable extracts.

Uterine fibroids are of importance as a possible cause of sterility. They occur in a surprising number of comparatively young women. In properly selected cases taking into consideration the type of tumor, its size and location, Myomectomy has been followed by a high percentage of pregnancies.

SUMMARY AND CONCLUSIONS.

1. Sterility is a disease which can be prevented by proper instruction in adolescent years.

2. A large percentage of sterilities originate in the male and treatment of the condition should begin with, or at least include that sex. This part of the examination is best conducted by a competent Urologist.

3. After prevention, the best results to date, in the treatment of sterility, have been obtained by the elimination of infections of the cervix and the opening of the closed tubes by air insufflation.

4. Hormone therapy, with the exception of those cases yielding to thyroid extracts has been disappointing.

5. Salpingostomy yields fairly good results in the fimbriated end occlusions; very poor results when this exists in other portions of the tubes. The decision, for this type of operation, should be left to the patient after full explanation of the possible dangers and of the comparatively small percentage of pregnancies that occur as an end result.

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THE TREATMENT OF ACNE VULGARIS

BY COSBY SWANSON, M.D.
Atlanta.

The condition known as acne vulgaris is a chronic, inflammatory disorder of the pilosebaceous follicles, characterized by comedones, papules, pustules and cystic nodules. The most common locations are the cheeks and forehead. In many cases all parts of the face, chest, upper arms, shoulders and back are involved. In the severe types the lesions often extend to the back and buttocks. In a few cases the face is not involved, the lesions are found only on the

chest, shoulders and back. It is one of the commonest and most polymorphous of skin diseases, usually manifesting itself at the age of puberty, most frequently in those who have coarse, oily, seborrheic skin of the face and seborrhea of the scalp.

The lesions usually present are comedones, papules and pustules; they vary greatly in shape, size and number. In severe cases the pustules especially vary in size, shape and depth. In a few cases, inflamed nodules, deep granulomatous infiltrations, pustular cystic lesions, atrophic and hypertrophic scars are also encountered.

Acne is thought by the majority of physicians to be due to changes in the consistency of sebaceous secretions. It is often spoken of as the disease of the adolescent, the majority beginning at puberty when all the glands of the body, including the skin are hypersensitive. The increased activity of the endocrine system, gonads, thyroid and other glands affect the secretions of the sebaceous glands. This relation is also manifested during menstruation, preceding and following which time the eruption is likely to be aggravated.

This hyperactivity and enlargement of the glands of the skin cause the formation of comedones and their subsequent infection. In those with lowered resistance from this infection there follows the development of the different types of inflamed lesions found in acne. The inflammation from the infection often causes destruction of the tissues of the skin which heals with the formation of scars.

Acne is considered by most dermatologists to be a syndrome and not a disease. In the majority of cases there are a number of contributing factors. The advocates of primary local bacteria (acne bacillus) as a cause has not been proven after many years of careful research by the leading men of this and other countries. Opinions differ as to the primary cause of the pustules and abscesses found in acne. All agree as to the type of organisms found, staphylococcus and acne bacillus. These organisms are present at all times in persons with normal healthy skin and it is only when certain conditions are present that they form the inflamed lesions found in acne.

Why some have and others do not have the disease we do not know, so we use the terms, lack of resistance and predisposition; therefore some unknown cause or causes are present other than the abnormal conditions found. When more is known of the action of the hormones, we may then have more knowledge of the cause of acne.

Clinical observation has led the majority of observers to contend that while there is a certain inherited predisposition to acne (large pored oily skin) along with certain internal factors such as the physiologic and pathologic activities of the internal secretions taking place at this time, there are in the majority of patients other disorders present, such as constipation, so-called intestinal toxemia, foci

of infection, error of diet, over-eating, especially excess of carbohydrates derived from sweets and cold drinks; lack of outdoor life, exercise and sunshine; diseases such as the anemias, tuberculosis, malaria, diseases of the liver, kidneys, spleen and toxic states in which no particular disease can be located.

In the majority of cases of acne the symptoms vary and they are usually classified accordingly. In acne sexualis the eruption is limited to the face, especially the cheeks and chin; seborrhea is slight or absent; menstrual disturbances are usually present and new lesions of acne nearly always occur at the menstrual period. In acne intestinalis the lesions are found mostly on the trunk; constipation, intestinal toxemia, colitis and diseases of the digestive organs are the most outstanding symptoms. In seborrheic acne, as a rule, all locations on which acne occurs are involved, face, chest, shoulders and back; we find oily skin, a very large number of small lesions and often hyperactivity of the thyroid glands. Neurotic acne occurs in persons who have unstable nervous systems; the majority of cases seen are in young girls and an acne phobia usually is present. Nervousness and undernourishment are the outstanding symptoms. Patients with this type of acne continue to traumatize the lesions by picking and scratching with their finger nails, causing more infection, ulceration and scarring. Acne artificialis usually develops in persons as a result of external irritants connected with their occupations or the taking of drugs especially bromides, iodides and many of the hypnotic and sedative drugs; there is a difference in the appearance of the eruption from other types seen. Pustular acne develops after adult age, twenty-three or more years. In this type of acne no comedones and very few papules are found. The majority are due to foci of infection or so-called intestinal toxemia, or both. In acne cacheticorum the lesions are indolent, deep seated, purplish, nodular, pustular, healing with scars; they are found on various parts of the body especially shoulders and back. As a rule marked symptoms of cachexia, error of diet and foci of infection are present. The majority have, or have had infection of the lungs or pleura or both.

Of the different types of acne there are all stages of the disease from the mild to the very severe types; the different types often merge making it difficult to classify.

Acne is a chronic and obstinate disorder, prone to relapse and recurrence. In a few cases it disappears without treatment after adult age is reached; this is true only in healthly individuals. Others improve, but a large number of neglected cases persist well into middle life. To get the best results it is necessary to continue the treatment for several months and the general hygiene and diatetic treatment for years. When we consider the many conditions that enter into the causes, and complications that are associated with

acne, it is obvious that the treatment of acne cannot be accomplished by any one formula if the best results are to be obtained. To prevent disfigurement and often an inferiority complex, treatment should be begun early in the disease; for instance, in the indurated and large pustular types of acne, more or less permanent scarring will take place if effective treatment is not begun early.

The choice of treatment has to be selected after analyzing each individual patient. In the treatment of acne the most important points to be considered are the type of the disease and the severity of the case, age of the patient, occupation, habits as to exercise, diet, bathing and use of cosmetics; systemic condition, such as foci of infection, anemia and condition of the gastro-intestinal tract, especially the eliminative organs.

Vaccine therapy has been more widely employed in the treatment of acne than in any other disease and the results have been disappointing. The general accepted opinions at present by the majority of dermatologists are that vaccines are worthless in the treatment of acne. An occasional patient with the pustular type of acne improves while vaccines are being given, later to recur. In my opinion acne vaccines have done more harm than good. They have given patients taking them false hopes, causing them to neglect other known effective treatment, until permanent scarring has taken place.

The local treatment of acne consists of cleansing with soap and water, removal of comedones, draining pustules, using astringent, antiseptic lotions, abstaining from the use of creams and many cosmetics, x-ray, ultra violet ray, and sun-baths. In selected cases small repeated doses of x-ray not to exceed two to three skin units over a period of two to four months. In giving x-ray treatment one should remember that it is a powerful agent and over treatment should be guarded against, as over treatment is often as disfiguring as the original condition.

Conclusions.

The cause of acne has not been definitely established. Many conditions enter into the cause. The patient with acne should be treated rather than the disease. Best results are obtained by removing foci of infection, treating abnormal conditions found, giving laxatives and alkalies when indicated, regulating the occupation and diet and by using local drying applications, ultra violet ray and x-ray.

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THE DIAGNOIS AND TREATMENT OF MINOR RECTAL CONDITIONS.

A. Dickson Wright, in "St. Mary's Hospital Gazette," October, 1935, said that the anal region is a particularly sensitive portion of the human anatomy and for that reason the staunchest of friends or the bitterest of enemies are made of our patients according to how we manage their painful rectal complaints. A too vigorous attack upon an anal fissure will destroy the long-established confidence of our most loyal patient.

Rectal complaints are very common; there are many other besides "that distressing and almost universal complaint—the piles" and it is fortunate that most of them yield to simple measures within the skill of almost everybody except a psychiatrist.

Infants.

Here there is only one rectal trouble, viz., *prolapse*, born of faulty methods employed by mothers who make their children strain too long on the commode. This is a passing rectal phase which disappears as the child grows older, but it is so unpleasant while present that it is well worth while to try to anticipate events with the help of a little treatment.

Under a light anæsthetic with plenty of straining, a thing not difficult to obtain, the rectum is induced to prolapse with the help of a finger withdrawn from the rectum. Then a circumferented wheal is raised in the prolapsed submucosa with 10 cc. of a 5 per cent. almond oil solution of phenol. The rectum is returned and the buttocks strapped together with one strip of 3 in. elastoplast which is renewed as often as necessary. After two weeks the condition will be cured as a rule, and no restrictions required except to instruct the mother to reduce the length of the "commode vigil."

Children.

Two rectal conditions occur in childhood.

1. *Rectal Polyp* is most commonly seen at this time of life and produces rectal bleeding and the appearance af a fleshy tumour at the anus on defaecation. The treatment is simple and consists in passing a Perrin's speculum, with or without anaesthesia according to the disposition of the child, and tying a stout silk ligature arround the pedicle. The polyp is left to slough off, and confinment to bed is not necessary after operation. It should be mentioned that these polypi often fall off during defaecation from attenuation of the stalk and so the child diagnosed in out-patients sometimes has disposed of his polyp by the time his turn on the visiting book comes round.

2. *Pruritus ani* from threadworms is common in children and hard to treat, and sometimes the abrasions from scratching lead to

ischio-rectal abscess and fistula. The treatment of threadworms is difficult to carry out in children, and consists in giving rectal injections of 4 ounces of 5 per cent. saline every night before bed, using a child's enema bulb of this capacity and changing the underclothes every day, and sleeping clothes every night and attending to the cleanliness of the hands so as to stop "the parasites lost, parasites regained" cycle from anus to mouth.

ADULTS.

Before discussing the various conditions we have to deal with here, I would like first of all to deal with the technique of rectal examination.

Krecke, the world-famous surgeon, in his thoughtful and human book "A Doctor and his Patients," has stressed the importance of washing the hands *before* commencing a rectal examination. We all feel, or ought to feel, a strong urge to do this afterwards, but not quite the same inclination to do it before. It is a strange thing, but the woman patient is often very fastidious about this ritual. Then with a piece of lint or gauze in each hand the buttocks are separated, the patient lying in the left semi-prone position, and the anal skin inspected under the light of a head-light. This careful inspection is most important and one looks for the sodden rugae and skin cracks of pruritus, the painful peri-anal haematoma, the sentinel tag of fissure and occasionally as a special treat one catches a threadworm. One can make a note of the cleanliness of the patient and the presence of mucous discharge. Having completed a thorough inspection of the external skin, and the last half-inch of the anal canal, and satisfied oneself that *no fissure is present* the internal examination is commenced. A glove is worn. The fingerstall is an unclean thing, and the petticoated finger-stall is clumsy and thick and some tactile sense is lost. I prefer to wear the glove smooth side out, and make a point of lubricating the whole finger and I think it best to use vaseline; some of the substitutes such as lubafax are not good enough and add a little to the discomfort. One must be generous with lubricant and use the greatest gentleness in overcoming the sphincter resistance and if there is a painful lesion such as an abscess, it is wise to lean away from it a little, while inserting the finger. Once inside an estimate of sphincter spasm can be made and piles can be occasionally felt when thrombosed or fibrosed from long duration. The prostrate is felt for growth, inflammation and calculi, all of which may produce rectal symptoms. A careful search is then made for growth as far as the finger can reach, and this is a little uncomfortable for the patient. Sometimes the actual tumour cannot be reached, but it can be felt through the rectal mucosa. I would like to stress the fact that all women except those who have had a total hysterectomy have a rectal tumour, the cervix. I would not labor this obvious point, if I had not on two recent occasions made a journey into the

country to establish this simple anatomical fact. In both cases the patient seemed relieved to hear it, and did not begrudge the cost of my expedition. The cervix might well be termed the Loch Ness monster of rectal diagnosis.

Another tumour which is frequently felt in women is a loose ovary in the pouch of Douglas, and it has been mistaken for a high malignant growth felt through the mucous membrane. At the completion of the examination it is worth while to wipe away the excess of lubricant and examine the finger for blood-stained mucus.

Haemorrhoids produce two main symptoms, haemorrhage and prolapse and both of these can be graded in four degrees.

Grade I. *Haemorrhage* occasionally occurring with defaecation.
Grade II. With practically every defaecation.
Grade III. With defaecation and when patient is walking about.
Grade IV. When patient is anaemic from haemorrhages.
Grade I. *Prolapse* is occasional and returns by itself.
Grade II. Regularly occurs with defaecation and prolapse has to be returned by patient.
Grade III. Occurs while walking and standing as well as with defaecation.
Grade IV. The prolapse is constant and irreducible. The haemorrhoids having lost the right of domicile.

It must be remembered that except for attacks of thrombosis, pain is not a symptom of piles, and if the patient's main complaint is pain, his trouble is not haemorrhoids.

Haemorrhoids are often diagnosed from the patient's verbal description without any examination, often with mournful results in cases of carcinoma. The very poor and the very rich suffer from this neglect, the former because the doctor is too busy, and the latter because he is too nervous. There was the case of the King quite recently dead from rectal carcinoma who was not examined because his doctor thought a rectal examination was too like *lese-majeste*. In most cases haemorrhoids can only be diagnosed with the rectal speculum when the purple varicosities can be seen contrasting markedly with the normal pink mucosa above. The treatment consists in injecting all cases but those showing the two major grades of prolapse. These latter should be recommended operation, and only if the patient refuses this, should they be injected, telling the patient at the same time that the prolapse will in all probability only be partially remedied. Active thrombosis of the piles is an absolute contraindication to injection, and if there is a fistula, abscess or fissure present, the patient should be recommended operation so that a complete job can be done and all the conditions dealt with. Hepatic cirrhosis, diabetes and other severe diseases contraindicate injections also.

With the patient in the knee-cheek position a well lubricated Perrin's speculum is passed. It is a kindness and a help to warm the speculum; the touch of cold steel is not pleasant in those circumstances. It is also very wise to pass the lubricated finger before the speculum to ascertain the direction of the canal and also by effecting a preliminary dilatation and lubrication to render the speculum less of an insult. Then with the speculam in situ 3 c. c. of oil are injected at the root of each pile at the level of the ano-rectal junctions, i.e., the point where the sphincter ceases to grip. The oil used is almond oil containing 5 per cent. of phenol, and it is injected into the submucosa and produces a characteristic wheal; the rectal mucosa is insensitive here and the needle-prick and the inflation of the mucosa are not perceptible. There are no instructions given after injection and as a rule there are no complaints when this high type of injection is carried out. The immediate complications are fainting at the time of injection and dizziness on the way home, but these are very rare, and I think are natural reactions in a certain type of individual and are not important. Sloughing and ulcer formation at the site of injection occasionally occurs, but does not produce pain and very rarely (never in my experience) causes any haemorrhage. When sloughing occurs in a low injection one needs to be a medical Machiavelli to appease the patient and his close relatives. The second injection is carried out two weeks later whether the patient has been cured by the first treatment or not and any non-indurated areas are injected so as to complete the ring of infiltration. At this time a little larger amount is injected, perhaps 12 cc. in all.

Two weeks later the patient is seen again and if the piles are not cured he is re-injected for the last time and if the three injections prove to be a failure, then operation is recommended. 80 to 90 per cent. of the cases are cured by injections alone. Altogether it is a comfortable procedure, not interfering with work or play; but its disadvantages are that it sometimes fails and even when a success recurrence may appear from one to three years later. The sensible patient will not complain much about this, especially if warned that reinjections might be necessary and just as successful on repetition.

Acute Thrombosis.

Thrombosed haemorrhoids ("attack of the piles") is an extremely painful condition with acute onset: often no cause can be found, but many cases may be traced to constipation, travelling (sea-sickness), over purgation and trauma from enemas and exposure to cold. The appearance is characteristic, there are two distinct anal swellings separated by a deep furrow, the smaller one is the prolapsed pile, purple or black from thrombosis and resulting gangrene, and the larger one is the adjoining perianal skin also as a rule containing

some thrombosed veins. The deep furrow is made by the ring of attachment of the longitudinal rectal muscle to the skin of the anal margin. The thrombosed pile cannot be returned to the rectum and this should not be attempted; it is a very painful manoeuvre and of no value. The proper treatment is to put the patient to bed with the legs raised on blocks for a week and apply frequently to the affected region iced Pond's Extract compresses, and prescribe liquid paraffin, two teaspoonfuls with each meal. The whole condition will subside in the most remarkable way and leave no trace but an external tag. It would be thought that thrombosis would cure the piles, but this does not happen because only one of the pile masses is generally affected and the remaining two keep up the symptoms after subsidence of the thrombosis. When all three are thrombosed the aspect is terrifying and used to be described as strangulation of piles and treated as a surgical emergency, but this is wrong. The condition is not a strangulation and subsides nicely with rest and treatment and naturally as all the piles are thrombosed, the case is cured by nature.

Fissure.

Here one has to tread warily. It is fatal if the patient's story of insufferable smarting, burning pain during and for some time after defaecation is discounted or ignored because there does not seem to be much wrong on cursory examination. If the sphincter is opened up a little by careful traction with a gauze swab on each side, the fissure can be seen in 19 cases out of 20 on the posterior aspect of the anal canal. As its bottom end is a sentinel pile sometimes large and sometimes so tiny that it is hardly noticed, and sometimes completely absent. Once the fissure has been seen no further examination is made but the injection is commenced. First with novocain and a fine needle a wheal of 2 per cent. novocain is raised half an inch behind the anal margin and then after a minute 15 cc. of N. A. B. A. are injected through this area with a three-inch No. 12 summit needle 5 cc. along the base of the fissure and 5 cc. out at an angle of 30 degrees into the sphincter at the point where its nerves enter. The object of the sphincter injections is to partially paralyse the muscle and thus alleviate the muscle spasm which helps to keep up the vicious circle of fissure. The needle is kept moving during the injection to prevent necrosis. The anaesthesia induced by the N. A. B. A. enables one to cut off the sentinel pile with scissors and the oozing from its base can be checked with a piece of cotton wool pushed into the anal canal and left to be passed with the next action of the bowels. The results from this treatment are very gratifying and in the great majority of the cases the patient is cured from the moment of the injection and remains so. A few relapse and a few do not respond. In the latter case I do the injection all over again

two weeks later and then operate if it fails this time; the great thing is to inject thoroughly, and then if not cured to recommend operation, because if one keeps on with ineffective injections the patient gets called away to the country eventually and goes to the other doctor. After curing the fissure it is well to look for piles and inject these if present.

PERI-ANAL HAEMATOMA.

This is a common condition and is a small smooth swelling suddenly appearing often without reason at the canal margin. It is very tender and impossible to forget as it hurts walking, sitting, or standing. It consists of a clot of blood in the subcutaneous tissues and although it resolves without complication in 10 days as a rule, the painful incident can be cut short by a small incision under novocain and evacuation of the clot. One peri-anal haematoma does not necessarily indicate the presence of piles, but their repeated occurrence does so.

PERI-ANAL SUPPURATION.

This can occur just under the skin and in the ischio-rectal fossa and in the submucosa. The first two types are drained by very free deroofing of the abscess with local novocain anaesthesia, gas, or low-spinal anaesthesia. It is not much more difficult to remove a two-shilling-piece of skin than to make a simple incision into the abscess and this free drainage will save the patient from future fistula operations. The appearance after the removal of a large piece of skin is terrible but it heals up to a tiny cicatrix and no painful plugging is necessary in the after-care.

FISTULA.

This is not a minor condition except in a few superficial tracks which can be opened up with local anaesthesia or ligated with a silk thread passed through the fistula. The external opening of a fistula is sometimes exceedingly small and requires a careful search with the headlight.

EXTERNAL HAEMORRHOIDS.

These tags appear after operations for piles, after peri-anal haematoma and after thrombosis of internal piles, as a result of pruritus ani and old-age. They worry the patient, render cleanliness difficult, and so dermatitis and pruritus are produced. The treatment is simple; under local anaesthesia they are cut off flush with the surrounding skin and no stitches are inserted and the bleeding is controlled by pressure with stryphnon styptic wool. It is annoying that the oedematous reactions after this operation some times lead to formation of some smaller tags, but as a rule the procedure is worth while.

PRURITUS ANI.

An extremely harassing condition which nobody attacks optimistically. At the outset four conditions should be ruled out;

diabetes, pernicious anaemia, cancer of the uterine cervix and threadworms. The last cause I have found but rarely in adults although some authors lead one to regard this as the commonest cause. The discharge from permanently prolapsed piles or from a fistula can produce a sodden rectal skin which becomes pruritic. The treatment of the piles or the fistula with the associated rest in bed will generally cure the pruritus. A temporary form of pruritus occurs often when the patient first gets about after an operation for haemorrhoids. This is the itching of healing and usually gets completely well. The infected Morgagnian crypts of American authors seem to me a fantastic hypothesis for the causation of pruritus. The pruritus ani may be part of a general pruritus perinei and this is most common in the female.

The first and last essential of all treatments is cleanliness, and the part should be washed in Mohammedan fashion after each defaecation, using a tar soap such as resinol and a soft sponge and the parts, after drying, dabbed with a powder puff, using a dusting powder of talc containing 10 per cent. of benzoyl peroxide. The washing should also be indulged in before retiring and in the middle of the day if possible. At night instead of the dusting powder the itching area should be dabbed with the glycerine of carbolic; it is important not to use the carbolic as a compress or sloughing of the skin will occur.

This will cure many cases, but some resist, and for these the following treatment is used. Three wheals of 1 per cent. novocain are raised, one behind and one on each side of the anus and from these points the whole of the lichenfied skin is undermined by an injection of 10-20 cc. of N.A.B.A. (proctocaine) given one-quarter of an inch below the surface, i.e., deep enough not to produce wheal formation with its danger of necrosis. This injection will be successful if it produces diminished sensation to prick.

If this fails or is impossible on account of the whole perineum being involved, then the next line of reserves, ultra-violet light and X-rays are called up. If all those fail it may be necessary to divide the pudic nerves to save patients from the coroner.

RECTAL NEUROSIS

These are of two kinds:—

1. The feeling of something requiring to be passed in spite of repeated efforts to do so. This feeling is akin to the sensation of foreign body in the throat which some women complain of for years. It is a hard thing to treat, bromides, valerian, reassurance and belladonna suppositories are the best line of treatment.

2. Proctalgia fugax is an excruciating cramping spasm of pain occurring suddenly in the rectum and only lasting a few seconds. It often occurs just after defaecation. Its cause is unknown and like

the last neurosis often associated with carcinophobia. There is no treatment of any real value.

In the twilight of life when the sphinters start to fail, prolapse appears again and partial incontinence becomes a nuisance. Both these conditions can be helped by tightening of the rectal canal by sclerosing injections of phenolised oil and by simple exercises for the anal sphincters. Large operations for removing the prolapse or tightening the sphincters should only be used if these minor measures fail, and if the patient is not too old and feeble.

The General Practitioner, Feb. 15, 1936.

Extracts

TREATMENT OF CHILDHOOD PNEUMONIA IN THE HOME.

(E. L. PIPER: *Pennsylvania Medical Journal.* 1936. xxxix. 231.)

The care of the pneumonia patient demands laboratory facilities (blood culture, blood counts), good nursing, ideal home environment, (fresh air, sunlight) and well kept clinical records.

Severe toxaemia may be prevented by the forcing of fluids, efficient elimination, hydrotherapy, mild alkalinization, a proper diet. In cough, expectorants are without value and may even be harmful. Small doses of codeine sulphate or phosphate, or camphorated tincture of opium usually give relief. When the cough has its origin in the nasopharynx, it may be controlled by a plain albolene spray.

The breast-fed infant should not be weaned. For lowered digestive capacity, it may be necessary to dilute the feedings. Older infants and children should receive a high carbohydrate, low total diet, and a generous fluid intake. If sufficient water cannot be given by mouth, it must be given by enteroclysis or hypodermoclysis with the addition of 5 per cent glucose in normal salt solution.

Oxygen therapy is indicated in respiratory symptoms of rapid, shallow respirations, anoxaemia and beginning cyanosis, with or without restlessness, delirium, hyperpyrexia and toxaemia. Oxygen should be used early, before exhaustion develops with marked cyanosis, and should be given continuously in oxygen tent or with intranasal catheter.

Intramuscular administration of whole blood, 20 to 40 cc., is of value in delayed resolution. One of the parents may be used as the donor; blood typing is not necessary.

RETROGRADE INTUSSUSCEPTION OF THE JEJUNUM FOLLOWING GASTRO-JEJUNOSTOMY.

(B. J. P. Becker: *South African Medical Journal.* 1936. x. 489.)

Retrograde intussusception of the jejunum into the stomach froms a rare but important complication of gastro-jejunostomy. It mostly follows posterior gastro-jejunostomy, and the etiology is obscure. The complication is always a late one, occurring 6 days to 16 years after the operation. The size of the stoma has no relation to its occurrence, and the amount of invaginated intestine varies from 4 cm. to 2 metres. The base of the intussusceptum may be at the stoma or at a distance of 3 to 50 cm. below the stoma. Only 38 cases of such occurrence have been reported so far in the literature since 1917, when the first case was reported.

Severe abdominal pain with vomiting and shock are always marked features. Haematemesis occurs late. A tumour may or may not be palpable. The condition is usually diagnosed as high intestinal obstruction. Early operation is nearly always successful.

The author reports a case of a farmer aged 35 who continued having sporadic attacks of pain and vomiting for nine months after gastro-jejunostomy was performed. He was getting repeated attacks of abdominal pain and vomiting, with periods of relief in between, and "very dark stools." On admission his general condition was good, abdomen was moving freely on respiration, and there was slight epigastric tenderness. A tentative diagnosis of stomal ulcer was made and he was treated with Sippy diet, Maclean's powders, and tinct. bellad. There was no change for a week, when suddenly he had severe epigastric pain, which continued in spite of treatment. Uncontrollable vomiting set in, his condition became rapidly worse: he showed severe shock. Next day a profuse haematemesis occurred, which could not be relieved, and he died. There was no epigastric tumour at any time. At autopsy, the stomach was dilated and contained a considerable quantity of changed blood. Lying in the cavity of the stomach was an intussusceptum 18 inches long, which contained 3 feet of jejunum and was cyanotic but not gangrenous. The intussusception had taken place through a stoma 4 cm. in diameter on the posterior wall of the stomach. The gastric mucosa showed no evidence of ulceration but was the seat of a chronic catarrh. The rest of the small gut contained old blood. The cause of death was retrograde jejunal intussusception with fatal haemorrhage.

It is clear that the actual intussusception took place only 3 days before death. It is reasonable to suppose that the spasmodic attacks of acute abdominal pain and vomiting with dark stools for the few months before his death were actually attempts at intussusception

which, however, relieved itself. If the condition had been recognised, early laparotomy might have been successful. It is noteworthy that haematemesis is a prominent but late symptom.

RESULTS OF ANTE-PARTUM ADMINISTRATION OF QUININE.

(P. J. GANNER: *B. M. J.* 1935. ii. 205.)

The tendency to the onset of premature labour is diminished by the ante-partum administration of quinine. The first and second stages of labour are accelerated without damage to the mother or the child. Inertia is not entirely abolished. The absence of cases of retained placenta or severe post-partum haemorrhage makes it impossible to decide whether the incidence of these conditions is reduced or not. Bearing in mind the increased activity of the uterine muscle during the first and second stages of labour, one would expect a similar increase during the third stage. There is no evidence of any direct influence on involution and the puerperium.

The results suggest that the uterine action is strengthened by giving small doses of quinine during the last month of pregnancy. If this fact is accepted, the method is surely to be recommended as a routine for use in normal, and especially in abnormal, cases, for there are few, if any, conditions in obstetrics in which good uterine contractions are not a valuable factor. A method that helps to secure these and is simple and safe enough for use in domestic practice appears to deserve more attention than it has had up to the present time.

BONE SYPHILIS.

(J. S. SPEED AND H. B. BOYD, *South M. J.*, April 1936, 29; 371).

The authors discuss bone syphilis in its relation to railway and industrial surgery. It is difficult to estimate accurately the influence of trauma in the causation of any bone lesion. The evidence is sufficient to indicate that in such conditions as acute pyogenic osteomyelitis, malignant bone tumors, and syphilis, trauma plays a definite role in the localization of the osseous lesions and in the onset of clinical symptoms. In the authors' series of 150 cases of bone syphilis, there was a definite history of trauma in 30 per cent. Neither clinical experience not scientific fact offers any support to the common opinion that syphilis exerts an unfavourable influence on the healing of fractures. At the Memphis General Hospital approximately 500 fractures are cared for annually. The vast majority of these patients are Negroes. About twenty per cent of the coloured patients admitted to the hospital have positive Wassermann reaction. No difference has been observed in the healing of these fractures and in those among the authors' private patients in whom the incidence of syphilis is about 2 per cent. Occasional exceptions to the rule that syphilis does not delay or alter the healing of fractures are found in the extremely rare instances when, as the result of trauma coincident to a fracture, a syphilitic osteomyelitis may develop in the fractured bone or those adjacent to it. The fracture itself heals, but the disability is prolonged by the bone infection. This condition is most often seen in the small bones of the hand or feet. The authors have seen one such case. They have often observed both traumatic and pathologic fractures in bones which were already the sight of a syphilitic osteomyelitis; union of the fracture occured promptly in these cases just as it does in pathologic fractures complicating pyogenic osteomyelitis. The effect of syphilis on nonunion of fractures was studied in 400 cases of nonunion in the shafts of long bones. The Wassermann reaction was positive in only four cases or one per cent; the incidence of positive reactions in cases admitted to the clinic for all causes is two per cent. In only two cases of this group of 400 was syphilis thought to be the cause of nonunion. These were in bones in which a sclerosing type of osteitis had developed as a result of a syphilitic infection of long duration. In these cases it appeared that the nonunion was the result of altered physical characteristics of the bony structures rather than to any active influence of the syphilitic infection.

Medical News and Notes

The XIII All India Medical Conference will be held at Karachi, on 18, 19, 20 December 1936. It is requested that all members of the profession should join the conference and take part in the deliberations. Dr. B. N. Vyas of Lucknow will be the President of the Conference. A Medical Exhibition will be held in connection with the Conference. There will be a Scientific Section at which original papers on research work, new methods of diagnosis and treatment of diseases etc., will be read and discussed. Subjects concerning the Vital interest of the medical profession in India e.g. rural medical relief, Health Insurance Scheme, Indian Medical Council Bill etc., will be discussed at the Conference. Branches desiring to move resolutions at the Conference are requested to send advance copies of their resolutions to the Secretary at the Head Quarters of the Association, 67 Dharamtala Street, Calcutta, sending at the same time a copy of the resolution to the Secretary, Reception Committee, XIII All India Medical Conference, Karachi. The next Annual General Meeting of the Association will be held at Karachi during the session of the Conference.

THE TRICHINOPOLY DISTRICT MEDICAL ASSOCIATION. A monthly meeting of the above Association was held at 5 P.M., on Friday the 23rd October '36 in the Mission Hospital Compound, Woriyur, Trichinopoly when about 35 members were present. Dr. Miss Edith,

Little was ' At Home ' and Dr. C. E. R. Norman presided. Dr.W. R. Aykroyd of the Nutrition Research Laboratories Coonoor, delivered an interesting lecture on 'Nutrition.' He said that the average Indian of the poorer classes suffered from Malnutrition. Malnutrition and hunger are not analogous as hunger could be satisfied without nourishing food. The effects of malnutrition are likely to be most severe in growing children, in the manual worker and the pregnant and lactating mother. Milk, meat and fish contain more proteins but are not usually within the reach. Animal fats such as ghee, cod liver-oil and butter, contain more vitamin A & D than vegetable fats such as gingelly oil cocoanut oil etc. Deficiency of vitamins causes various diseases. Lack of vitamin A causes Keratomalacia and certain skin conditions which are curable by the administration of liveroils and green vegetable. Lack of vitamin B1 causes Beri-Beri and Neuritis in lacttaing women, and lack of vitamin B2 causes sore mouth which is curable by yeast milk. Lack of vitamin C, leads to scurvy which can be prevented and cured, by the administration of citrus fruits such as lime etc. Deficiency of vitamin D causes Rickets and perhaps dental caries. Vitamin D is found in milk, fat, liver oil, and may also be obtained through the action of sunlight on the skin. Minerals especially calcium and iron are also essential and deficiency of these leads to various pathological conditions. Much anemia in pregnant women was associated with a deficient intake of iron. After the lecture there was an interestiug discussion in which many members took part. In a moving speech the Secretary proposed a resolution which was passed all standing at the sudden and untimely demise of Dr. M. K. Sambasivan, M.B.B.S., Chairman, Municipal Council, Kumbakonam and who was actively connected with the Association for a number of years.

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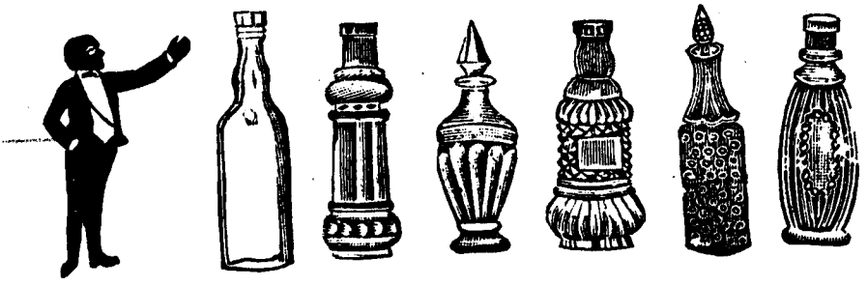

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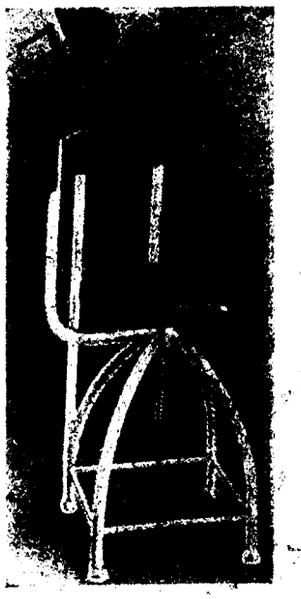
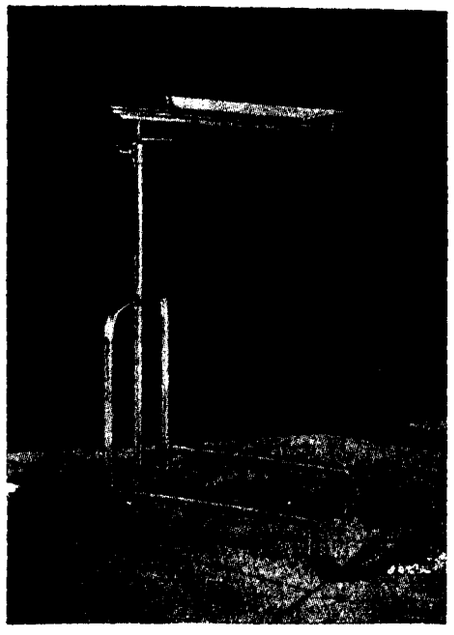


Specialists' Examination Stool with adjustable headrest and seat. This piece is very sturdy and useful for a consulting room. Seat and head-rest heavily nickel plated.



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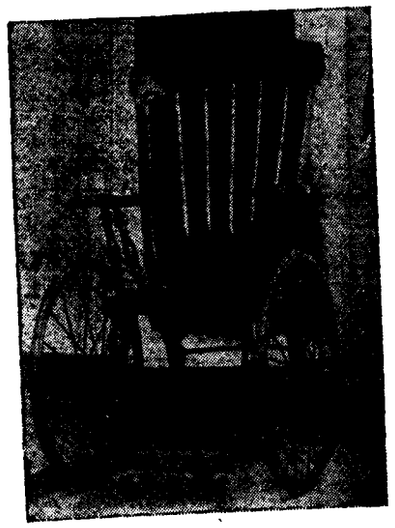

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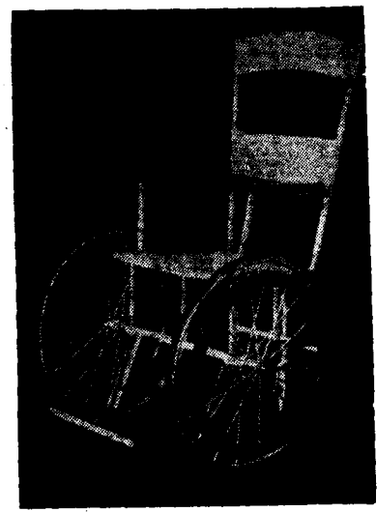

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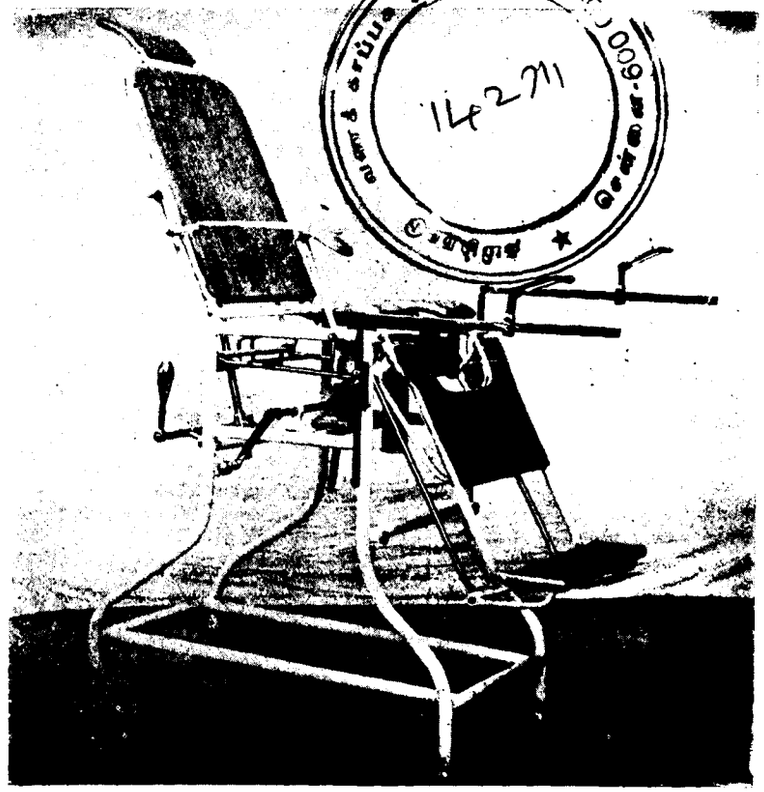

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