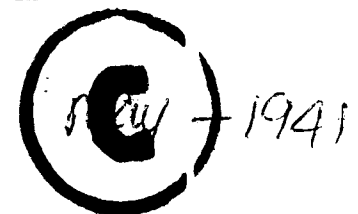


MEDICAL SURGICAL SUBSTITUTIONS

VOL. X

NO. 5



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VOL. X MAY 1941 No. 5

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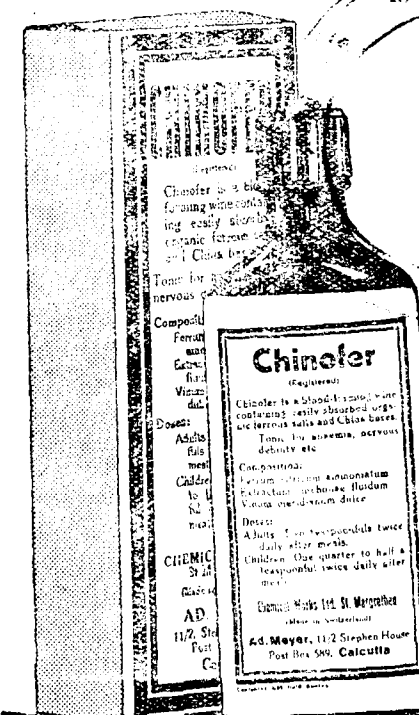
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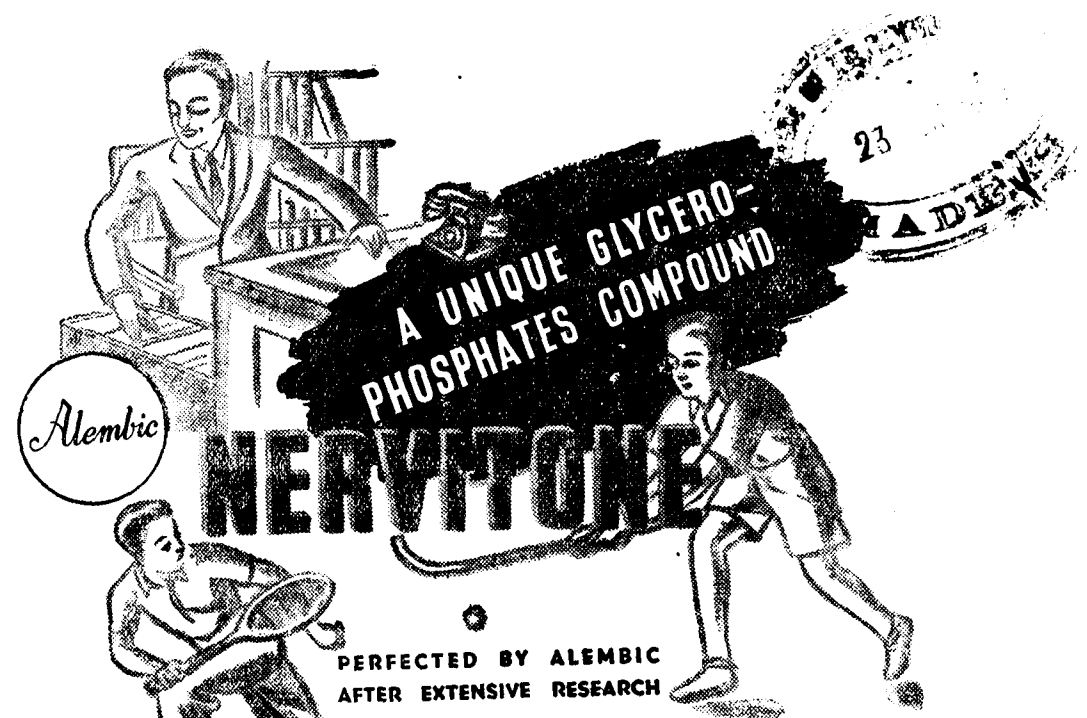
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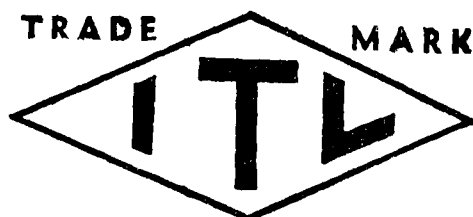
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NO. 5

"ON BLOOD FILM MAKING."

BY DR. S. K. GUPTA, B.D.Sc., B.O (PB.).
LABORATORY CLINIC, (ANALYST).

Pasrur (District Sialkot)

To have a good blood film for examination in the Clinical Laboratory and a satisfactory result after staining, the following technique should be observed very closely.

Necessaries:—1 Slides 2. Surgical Needle. 3. Rectified Spirit. 4. Spirit Lamp. 5 Sterilized Cotton. 6. Wax Pencil.

Selection of Slides:—Perfectly clean, grease free and well polished slides should only be used. Old slides, having *herring-bone scratches* should not be used for any purpose and should be destroyed when found. Such slides give many confusion to the beginners in the Laboratory works.

Cleaning of Slides:—Old slides should be boiled for some hours in an emulsion of country soap and soft soap in water, then washed very thoroughly in a running tap for hours to remove all traces of alkali; then stored in rectified spirit (never in Methylated spirit) in a glass jar. Before use they are removed from spirit, polished with clean, old, much washed cotton linen, silk preferable, as cotton linen may leave cotton fibres on the slide; these may become entangled in the film, take the stain and be mistaken for blood-inhabiting parasites. Pass it over a flame and place 4 or 5 slides flat on a clean piece of paper by the patient's bed-side.

Spreading of thin Films: Select the spreader—the best is a glass slide with a smooth, even end—test this by running it across the ball of the thumb or a hypodermic needle may be used instead (not satisfactory). In using the spreader, do not pick it up by the ends as this may deposit dirt from the operator's finger on the spreading edge; but hold it by the slides.

Pricker:—(a) Surgical Needle—the best.
(b) Hypodermic Needle.
(c) Capillary Glass Tube.

An ordinary Sewing Needle or an Office Pin not satisfactory and they are painful to the patient too.

Pricking:—Blood is usually taken from finger but it may also be taken from the lobe of the ear. Clean the part with rectified spirit or alcohol. Let it dry thoroughly. It is better to prick the dorsal aspect of the finger just below the root of the nail as this is less painful than the prick at the pulp of the finger or on the lateral aspect by the side of the nail. If the patient is perspiring, the part must be cleaned and dried. Never take blood from a wet finger or on a wet or on a stillwarm slide.

In an anæmic patient, you will experience some difficulties in making a good blood film, owing to the large proportion of plasma; which lead to slow drying, with consequent distortion of the blood cells. Make him forcibly flex the fingers on to the palm of the hand; this will ensure getting a good supply of blood. In extremely anæmic subjects, apply a tourniquet. Thin rubber tubing is the best tourniquet. The films should be made thin and dried quickly over a low flame.

Pricking and Spreading:—Give a short deep stab; pick up clean slides from the paper one by one, holding it with your fingers by the sides and not by the ends, invert them and bring the slide just into contact with the issuing blood. Take a small drop of blood about $\frac{3}{4}$ th inch away from the end of the slide. Place the *spreader slide* against the surface of the first at an angle of 45° , wait until the blood runs by capillary attraction between the spreader and the slide and then draw the film in the manner indicated.

It is very important that the blood should always follow the spreader and be drawn along behind it that the spreader should not push the blood in front of it. If the opposite method of pushing the blood in front of the spreader be adopted then as the spreader passes over the cells it greatly distorts or ruptures them. It is also equally important that the pressure should be slight.

The films should neither be so scanty that they can hardly be seen, nor very thick as to make the examination impossible.

The films can be made thin and thick by making a slight change in the angle between the slide and the spreader..... 45° angle is the bestless than 45° angle makes thinner films.....greater than 45° angle makes thick films.

Drying of the Films:—Now allow the films to dry in the air. A thin film, drawn at 45° angle takes about a minute or two to dry in a hot and dry weather, but in a wet climate, generally during monsoon periods, it should be dried by gently warming high above a flame of a spirit lamp: else there is every likelihood of the films being hæmolysed. Remember that curious appearance of healthy blood appears if films are dried by heat or if blood is spread upon a slide before it has time to cool.

Storage of Films:—Films must be kept away from flies——a fly can work havoc with a film in a minute. Apart from flies, as you

know, aerial contamination is very common. Fungi, aerial dust, yeast, bacteria etc., may rest upon a prepared film and when the slide is stained, they will lead you to a puzzle.

Labelling for Identification:—This can be done as soon as the film is dried, with an ordinary soft lead pointed pencil directly on the blood-film or with grease pencil, better on the opposite side of the slide at one end. The former method is recommended.

Fixing the Films:—Methyl alcohol is universally used to fix the films, but absolute alcohol is also equally satisfactory. Those stains which are dissolved in methyl alcohol, combine fixation with the staining process. It is always advisable to fix films when it is to be sent to a distant place by post or otherwise, particularly in wet season.

Thick Film Making:—Invert the slide and bring it to just touch the drop of blood and take such four small drops of blood on it at the corners of half inch square. The drop should be small and not large. Now with the surgical needle, pull the four drops into an even thick film covering the half inch square——it should not be too thick.

Drying the Thick Film:—It takes more than an hour to dry at room temperature and about half an hour in 37° C. incubator. Drying can be hastened by leaving the film under a fan moving in high speed. In patient's bed-side, have it covered with something such as a saucer to keep it from contact with flies and dust and leave instructions to send it after two or three hours, when it will be dried, to the Laboratory.

Combined Thick and Thin Film:—(Sinton's Method):—This is very nice. The thin is spread in two-third of the slide first and then a thick film is made at the other end of the slide.

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MODERN TRENDS IN THE TREATMENT OF ACUTE APPENDICITIS.

GEORGE S. POSTMA, M.D.

Denver.

In the entire domain of medicine and surgery, there is no therapeutic procedure attended with more brilliant results than those obtained by the surgical removal of the vermiform appendix in the early stage of acute appendicitis. The postoperative complications are few, the operative mortality is practically negligible, and the end-results are excellent. That such a happy outcome in the later stages of this disease does not always follow is evidenced by some 20,000 deaths from appendicitis each year in the United States, and this death rate is increasing.

Deaths from acute appendicitis are due to some phase of peritonitis. (1) directly from toxemia, profound sepsis, and ileus, or (2) indirectly from the later complications of peritonitis, such as sepsis, intestinal obstruction, intestinal fistulas, subphrenic abscess, empyema, or pneumonia. It is obvious the mortality is dependent upon the incidence of complications. If in all cases of acute appendicitis correct diagnoses were made and appropriate treatment applied early, the death rate would promptly fall to a low level.

That much can be gained by an active program of lay education has been demonstrated in Philadelphia where an attempt was made by the Department of Public Health to obtain early hospitalization of patients with acute appendicitis. The public was taught the importance of abdominal pain, the necessity of early medical consultation as well as the danger of promiscuous and common use of cathartics and purges. If the pernicious practice of purgation for abdominal pain could be abolished, countless lives would be saved.

The present high death rate of appendicitis is a challenge to the surgeon in his management of the ruptured case. In America the mortality rate for appendicitis with general peritonitis at present varies from 40 to 80 per cent; the mortality rate for appendiceal abscess from 5 to 10 per cent. There are a few men who have succeeded in keeping the death rates from 1.6 to 4 per cent in cases of appendicitis with diffuse peritonitis: Herrick of Cleveland reports a mortality rate of 1.84 per cent in 217 cases of ruptured appendix with peritonitis, and Jones a mortality rate of 1.4 per cent in 70 similar cases. These men, as well as C. R. Davis, Kogon, DeCourcy, Horsely, Pattison, Mont Reid, Alton Ochsner, Kirtley and Daniel, all of whom report mortality rates below 10 per cent, advocate early surgery. They state that delay in most cases makes things worse.

TREATMENT.

In acute appendicitis and in acute gangrenous appendicitis, which form the large majority of cases with which we are concerned,

immediate appendectomy without delay is the only proper treatment. If the diagnosis is clear, some type of muscle-splitting incision in the right lower quadrant of the abdomen is the approach of choice. If there is any doubt as to the cause of the acute symptoms, in women particularly, fewer mistakes will be made and an equally low mortality will be obtained if a low right rectus incision is made. In dealing with acute and acute gangrenous appendicitis, experience has shown that the appendix must be removed under direct vision, never by blind dissection, in order to prevent rupture during removal and to secure accurate hemostasis. This entails the making of an adequately large incision. In making a muscle-splitting incision, scrupulous attention must be paid to the preservation of the ilio-inguinal and the ilio hypogastric nerves. Injury to these nerves leads to a diffuse weakness of the abdominal wall in the right lower quadrant with the development of a large postoperative ventral herniation. In making a right rectus incision the muscle should be split in the directions of its fibers in its medial third, to preserve the nerve supply which enters along its lateral border. An incision through the lateral or middle third of the muscle does considerable damage to the rectus muscle for the extent of the incision. Recent studies have shown the muscle-splitting incision carries one-half the mortality as the right rectus approach, because the former incision prevents excessive handling of the small intestine, exposure of the general peritoneal cavity, and the spread of infection.

The majority of men still invert the stump. This technic is followed by a lower percentage of fecal fistulas. It is important when tying in the base of the appendix to use only fine plain catgut before inversion or not to tie at all. Tying with heavy catgut, linen, or silk, may be followed by the formation of a small abscess at the site of inversion. In addition to the inversion, it is wise to place two or three interrupted mattress sutures over the site of inversion, thus further guarding against perforation of this suture line with resulting peritonitis. If the stump is only tied and the patient becomes distended afterwards, there is a real danger of either a slipping of the single tie or of the tie cutting through the base of the already inflamed organ. Inversion of the stump should not be attempted when the cecum is the site of extensive inflammatory infiltration, or when it is a part of the wall of an appendiceal abscess, as in these cases inversion is impossible.

The treatment of cases of acute perforated appendicitis taxes the skill and surgical judgment of the surgeon. A ruptured appendix may present one of the most difficult surgical problems of the abdomen. Localization of and access to the appendix, non-disturbance of the gut, gentleness in delivery of the appendix with rupture and without further spread of the infection; when, how, and what to use for drainage; respect for the peritoneum; the

non-disturbance of intra-peritoneal pressure—all are important factors. A saline and glucose infusion of 1000 to 1500 c.c. is given before operation, particularly in any case showing acidosis or dehydration.

The muscle-splitting incision is the approach "par excellence." An effort should be made to approach the cecum by a laterally placed incision in the right lower quadrant, so as to reach the head of the cecum extra-peritoneally. Avoid exposing either the small bowel or breaking up adhesions already formed which have partially walled off this area from the general peritoneal cavity. If the appendix can be removed without breaking down protective adhesions or abscess walls, it should be done; otherwise only simple drainage is indicated. These patients should return two or three months later for a subsequent appendectomy which then only carries little more operative risk than the interval case.

The practice of walling off with gauze tapes or rubber dam is not advised since pus and infection may thereby be carried into areas we wish to protect and therewith brought into contact with loops of small gut. Through the small incision, pus or seropus may escape or be aspirated. The cecum or loop of small gut tends to present in the wound, thus partially closing the general peritoneal cavity without changing the normal intra-abdominal pressure. Inspection or exploration is never attempted. Knowing that about 66 per cent of appendices are retrocecal or retrocolic, the surgeon passes the exploring index finger lateral to the cecum where in these cases it encounters the familiar feel of the thickened appendix and inflammatory tissue; or he guides the finger along the trough of the iliac vessels where the pelvic appendix is found in 31 per cent of the cases. In both situations the cecum is displaced toward the midline, the meso-appendix and appendix being gently handled. Rough handling of the appendix or cecum is avoided and the danger of pylephlebitis is minimized. Thus we guard against spreading infection. We do not inspect to determine the extent of the peritonitis. If we are able to state accurately that a general peritonitis is present, we have markedly reduced the patient's chance of recovery. If safely possible, the appendix should be removed. When a ruptured appendix is left, there is a constant, potential, or active reinfection of the local peritoneum which contributes to extension of the peritonitis.

The muscle-splitting incision has other advantages which recommend it in this class of cases. It is the most advantageous approach for satisfactory drainage, and there is very little danger of evisceration or herniation following the inevitable infection of the wound. If the right rectus incision has been made and an appendiceal abscess is encountered in the right iliac fossa, the incision should be closed without disturbing the appendix. Then a

muscle-splitting incision should be immediately made over or lateral to the abscess and proper drainage instituted. Never drain an appendiceal abscess across the clean peritoneal cavity. Never break down protective adhesions to remove an abscessed appendix through a right rectus approach. Operative management of this type carries a formidable mortality, because it converts a local peritonitis into a general one.

The closure of an infected muscle-splitting incision should entail the fairly tight closure of the peritoneum about the drains. The various muscle layers are not sutured, but only several retention sutures are placed through the skin and into the external oblique aponeurosis to obliterate dead space in the wound. The skin edges are loosely approximated by a few skin clips. Suturing of the deeper layers of the incision will only lead to their extensive necrosis and sloughing.

DRAINAGE.

What is gained by closure of the abdomen based purely upon unsubstantiated theories of peritoneal resistance, except a risk? Recent statistics by Bauer, covering a group of 1000 cases of appendicitis with peritonitis closed without drainage, give a mortality too high for such cases. Limitation of the extension of infection by drainage seems always to be indicated. Reverse lymph flow (Horsley) as when stimulated by a foreign body aids in limitation of infection, elimination, and better localization. The general mortality rate goes up, nevertheless, while we attempt to determine by clinical experience in what conditions the peritoneum may be closed up. It is therefore advisable to drain all such cases. The reasoning that a drained cavity becomes walled off within twenty-four to thirty-six hours, and that therefore the drain may be safely removed, is fallacious, as a residual abscess frequently results. Therefore, until the temperature has touched normal and the patient is out of danger, we leave in all drains, loosening or shortening them from time to time. Only soft rubber Penrose drains without gauze wicks should be employed. Even these may occasionally corrode neighbouring vessels. In instances of a generalized or a diffuse peritonitis, drainage should involve the ileo-cecal area, the right iliac fossa, along the right colic gutter and towards the left pelvis.

POSTOPERATIVE CARE.

Allow nothing by mouth until the patient is able to pass flatus freely and the fever, nausea, abdominal distension and pain subside. In the interval before these events occur, fluids must be administered intravenously or by hypodermoclysis in sufficient amount to prevent dehydration and to maintain the glycogen reserve in the liver. For this purpose, use intravenous injection of 10 per cent glucose in normal saline in amounts of 2000 to 4000 c.c. daily. Protoclysis is definitely contra-indicated. Apply hot massive abdominal stupes

or dry heat to the abdomen by means of the electric lamps keep patient in the Fowler's position, give morphine without atropine to physiological tolerance, and the use of the continuous Wangenstein duodenal suction are valuable adjuncts to the successful care of these cases. Pitressin has given consistently good results. It may be used both before and after operation. According to Sollmann, morphine without atropine results in a contracted tubular gut; it lessens or obliterates peristaltic wave, and through intestinal muscle contraction it gives support to and lessens the volume of the intestinal circulation. Morphine, therefore, prevents intestinal circular muscle relaxation, vascular dilatation, increased blood supply, and increased retention of the blood in the intestinal capillaries. An increased blood content of the intestines results in diffusion of the blood gases into the gut with greater distention. With this increased blood content, the toxins of obstruction which are the result of putrefaction of the intestinal contents pass more freely into the general circulation, developing the lethal toxemia of obstruction. It is evident that the typical toxemia is not apparent when there is no paralytic dilatation of the gut. When the gut is contracted by use of morphine and decompressed by continuous Wangenstein duodenal suction, this toxemia does not occur. Therefore, before operation and immediately after operation, it is of great assistance if one can secure a contracted decompressed gastro-intestinal tract. If this preoperative and postoperative status can not be established and there develops a paralytic stasis of the gut with a toxemia of intra-intestinal origin as well as a toxemia of peritonitis, the outlook is grave.

ANAESTHESIA.

The choice is spinal anaesthesia. It gives complete muscular relaxation, a contracted gut, prevents the annoying bulging of intestinal loops into the wound, is not as commonly followed by retching and vomiting as is general anaesthesia. It gives ideal operating conditions. Pontocaine-glucose as advocated by both the Mayo Clinic and the Lahey Clinic is vastly superior to other solutions for spinal anaesthesia. Spinal anaesthesia thus helps to prevent the spread of infection as well as furnishing better operating conditions. In children, open drop ether is best, and in the aged, either spinal or local infiltration anaesthesia is safe.

THE OCHSNER-SHERREN TREATMENT.

Mont Reid warns against misinterpretation in the use of this conservative treatment. He fears the mortality rate of acute appendicitis will be increased unless the medical profession learns the indications for this delayed treatment. It has no place in unruptured cases or even in early ruptured ones. Wilkie, Bevan, Mont Reid, Kirtley, Alton Ochsner, Murphy, Babcock, Lord Moynihan, feel that the only indications for use of the Ochsner

treatment are: (1) those cases seen late who are already improving and forming a palpable mass in the right lower quadrant in which delay is safe; and (2) those cases of ruptured appendicitis with general peritonitis seen late on the third, fourth, or fifth day, who are critically ill, with pulse rate of 140 or more, a rigid abdomen and considerable abdominal distention. In cases with a mass in the right lower quadrant, which suddenly get worse, immediate surgery is advised. This is evidence that the walled off mass has ruptured and unless promptly treated surgically will cause a general peritonitis.

The Ochsner-Sherren treatment is a preparation for surgery in appendicitis rather than a substitute for it; the details of this treatment are identical with those which I outlined for the post-operative care of appendicitis with general peritonitis. With the use of this treatment, 65 per cent of cases will subside and will be ready for surgical drainage in from four to seven days.

SUMMARY AND CONCLUSIONS.

1. The present mortality rate of acute appendicitis with peritonitis is formidable, being about 40 per cent. By timely careful surgery, this may be reduced to 10 per cent.
2. The causes of this excessive mortality rate are:
 - (a) Self-catharsis for abdominal pain.
 - (b) Administration of morphine prior to surgical consultation.
 - (c) Operations by the occasional operator rather than by a competent surgeon.
 - (d) Delay in operating following the onset of appendicitis.
 - (e) Mistaken diagnoses and ill-advised incisions which convert a local into a general peritonitis.
 - (f) Extensive surgical procedures in gangrenous or perforative appendicitis especially in the aged.
 - (g) Injudicious temporizing or delay.
 - (h) Faulty postoperative management.
3. The diagnosis of appendicitis demands immediate surgery without delay, except:
 - (a) Cases with dehydration or acidosis, which should be given intravenous glucose and saline and then operated upon.
 - (b) Late cases that are showing improvement and possess a definite palpable mass in the right lower quadrant.
 - (c) Cases of ruptured appendicitis with general peritonitis seen late on the third, fourth, and fifth days, who have marked sepsis, a pulse of 140 or more, abdominal distention and rigidity of the abdominal wall.
4. In the two last-mentioned groups, the Ochsner-Sherren delayed treatment is definitely indicated.
5. Treatment:
 - (a) Spinal anaesthesia.

(b) Laparotomy by the use of the muscle-splitting incision laterally placed in the right lower quadrant. The operation itself should be carefully done, should be non-traumatizing and non-shock producing, and every precaution taken to prevent the extension of the infection.

(c) Most rigid postoperative care should be carried out—nothing by mouth; salines and glucose intravenously to physiological tolerance; modified Fowler position; Wangensteen duodenal suction continuously for distention; and hot stupes to the abdomen for distention.

6. If these factors are kept in mind, there can be but one result and that is a lowering of the prevailing mortality from appendicitis.

(*Rocky Mountain Medical Journal October 1940*).

MANAGEMENT OF LABOUR IN THE PRIMIPARA

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In considering this subject, we assume that good prenatal care has been done, the proper measurements taken, and that we are bringing a healthy mother and fetus to labor, that you have the ability to follow aseptic technic carefully and that you have with you, whether in the hospital or the home, sufficient supplies to handle the case. We also suppose that the doctor understands the mechanism of labor and has the ability to examine the patient first by rectal and later vaginal examinations and to evaluate his findings properly—thus having a clear mental picture of presentation, dilatation, effacement, station and later position and flexion of presenting parts.

The most important event and one which is premonitory of the type of labor is lightening. This occurs in the greater per cent of primiparas ten days to two weeks before the start of labor and is of such great importance that rectal examinations should be done frequently in the last weeks of pregnancy to determine whether it has occurred. In some cases this is known to have occurred by the patient and she describes it as a sinking of the fundus, ability to take a deep breath and inability to hold urine over a long period of time. The fundus actually does sink down, and often the full palm may be placed between the top of the fundus of the uterus and the ensiform process, the patient can take a deeper breath than for

several weeks because the compression of the lungs and the upward pressure has lessened and the bladder has less space usually left for the full bladder.

A rectal examination done at this time usually discloses the presenting part, usually the head, engaged and the cervix effaced or partly effaced. By an engaged head, we mean that the leading point is at an imaginary line between the ischial spines and also means that the greater bi-parietal diameter of the fetal head has just entered the pelvic inlet. Therefore we have, for the first time, in these cases proof that the head and the pelvis of this case are in proportion no matter what careful pelvic measurements have led us to believe as to the prognosis of the case, and it is with relief that we note this and know that we are dealing with a fairly normal case, for if the proportions were not correct the head could not be in the pelvis, but would be floating.

To me, these findings, as described above, are the most important information to be obtained and used in our evaluation of any one case. In the small percentages of cases where lightening does not take place, we may expect trouble, though some of these will progress to satisfactory conclusion if a true test of labor is conducted.

The length of labor varies, but most text-books give from twelve to eighteen hours of true labor for the average primipara and surely a true test cannot be obtained in less than half this time. Many factors play a part in length of labor even in those cases where lightening takes place and among these factors are type of uterine muscles, state of the cervix position of the fetus, degree of molding of the head and the form and elasticity of the pelvic floor muscles.

It is an undoubted fact that nervous tension of the patient's heredity and type of body play a part. Within recent years, sedation undoubtedly has become a contributing factor which in certain cases delays, and in others, hastens labor. As to sedation during labor, I believe that today every woman is entitled to both analgesia and anaesthesia during her labor. This may amount to only a few whiffs of ether as the head comes over the perineum or may include analgesia from the start of true labor. The secret is to use the medication that the attending physician understands, in the dosage that will accomplish the desired amount of relief from pain, without damage, to mother or fetus. The use of large quantities so the patients will say they never felt a pain, with loss of newborn babies or maternal damage is not good obstetrics, nor is the refusal by the attending man of any relief to the patient in a long hard labor, with severe pain, good practice. Ingenuity on the part of the attending physician can in many cases make up for well-equipped and well-staffed hospitals but the man who does not exercise this ingenuity and does not carry sufficient supplies to meet ordinary emergencies should not do obstetrics.

Shuman lists the following general principles concerning the conduct of labor:

1. Labor, being a process associated with traumatism and with the laceration of tissues, must be regarded as a surgical condition and must be conducted throughout in accordance with the details of absolute aseptic technic.

2. Every effort should be made to eliminate or minimize the suffering incident of childbirth.

3. Labor should be allowed to proceed and terminate spontaneously in every case wherein there is no definite indication of some variety of operative interference. The wise statement that the first essential for a good obstetrician is to have fat buttocks and and know how to sit on them, is attributed to Newell of Boston.

4. When an indication for interference arises, that form of delivery should be selected which offers the least danger of mutilation or mortality of mother or child.

5. Operative interference should never be undertaken to serve the convenience of an accoucheur or to satisfy the demands of a patient or her family.

6. On the other hand, in the presence of complications which render spontaneous delivery doubtful or impossible, bold interference should be practiced, before the resistance of the patient is lowered by exhaustion.

Watchful waiting should still be the battle cry—and this means intelligent observation and no unnecessary radicalism in any case, but, with the thought that procrastination and non-interference in the case where it is necessary becomes the worse kind of radicalism with, in the end, sorrowful results.

Rectal examinations are done primarily (in the early stages) because they give all the necessary information and are done with the minimum of preparation. Four things and four things only are to be determined—the presenting part, station, amount of effacement, and amount of dilatation. All this information can be obtained with a non-sterile glove by rectal examination without any other preparation. However, if a vaginal examination is to be made, the patient should be prepared for a sterile examination and the doctor should properly scrub his hands, put on sterile glove, cleanse the vulvar parts, and make a true sterile procedure out of the vaginal examination. With this in mind and properly carried out, vaginal examinations probably carry no more danger than rectals but each person should perfect himself in rectal examination so that he can do it quickly without the above time-consuming procedure. When it is determined by rectal examination that the head is engaged and cervix dilated, then a vaginal examination should be made to determine position, station, and condition of the pelvic floor. Vaginal

examinations done before complete dilatation certainly give information as to the above at a time when interference cannot be made, such as forceps application or version, until dilatation is complete.

I believe that the most common complication which gives us trouble is that of faulty position known as occiput posterior. It is so common and gets us into so much trouble that I believe any case that is delayed should not be thought of as a possible occiput posterior but should be considered an occiput posterior until proved either that or some other complication by careful examination. Delay of interference with sedation allows many posteriors to become occiput anteriors and the use of rotation in the true persistent occiput with the Kielland forceps solves this type.

The controversy still rages as to the use of episiotomy and prophylactic forceps. I think episiotomy is better than a deep ragged tear, and forceps at the outlet is better for mother and child than a long delay. But here again intelligent solution of the problem by the attendant is the proper procedure. Not enough attention is paid during labor to keeping bowel and bladder empty and many patients suffer from lack of fluids during a long labor. If unable to give fluids by mouth, certainly other means, even intravenous administration, is much better than to allow the patient to be dehydrated and damaged unnecessarily.

SUMMARY.

The primipara is safe with an intelligent doctor interested in the case (and if not interested he should not be doing obstetrics), adequately equipped to do a proper delivery, and neither too radical in interference nor too conservative when intervention is indicated.

(*Rocky Mountain Medical Journal* October, 1940.)

THE RECOGNITION AND TREATMENT OF THE VARIOUS FORMS OF PERICARDITIS

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Pericarditis, or inflammation of the pericardium, is a cardiac problem of some importance, and presents many difficulties of clinical recognition both in its acute and chronic forms.

Clinical records indicate that, in many instances, this condition, occurring almost invariably as a secondary manifestation of some primary cardiac or noncardiac disorder, is often obscured and hence missed by the clinician. In consideration of the various procedures

introduced during the last two to three decades designed for an adequate surgical approach to previously hopeless pericardial states the need for more prompt and accurate recognition of these elusive conditions is apparent. It is the purpose of this paper to demonstrate some of the more important characteristics of these conditions, emphasize diagnostic aids and important therapeutic considerations.

For purposes of this discussion, the inflammatory reactions of the pericardium are classified clinically into the following:

1. Acute pericarditis
 - A. Fibrinous pericarditis.
 - B. Pericarditis with effusion.
 1. Serous.
 2. Purulent.
 3. Hemorrhagic.
2. Chronic pericarditis.
 - A. Cases of little clinical significance in which the chronic process does not produce abnormal myocardial changes.
 1. Small localized areas of scarring, so-called milk spots.
 2. Localized loose adhesions.
 3. Generalized adhesions between the two pericardial layers without thickening.
 - B. Concretio Cordis—chronic adhesive pericarditis.
 - C. Accretio Cordis—chronic mediastino-pericarditis.

ACUTE FIBRINOUS PERICARDITIS.

Acute fibrinous pericarditis occurs more frequently than any of the other types of pericardial inflammation. It may occur as an isolated phenomenon, but it is often a pericarditis, and of adherent pericarditis in cases of survival from the primary condition. Several cardiac and noncardiac states are commonly associated with this form of pericarditis.

Rheumatic Fever.—Frequently in the course of acute rheumatic fever an initial pericarditis of this type occurs. Incidences as high as 55 per cent have been reported by Bland and Jones in postmortem records of 135 acute rheumatic fever deaths. Pericarditis may develop at any time during the active course of the disease, often appearing in the earlier weeks, and rarely complicating the convalescent period.

Symptomatic manifestations are commonly indefinite and often are indicated by an accentuation of the manifestations of the original state. However, pericardial pain of variable intensity and a hacking cough are often associated with its appearance.

The single objective finding of greatest importance is the friction rub. This appears as a faint to harsh rub heard best in the region of the left second and third costosternal junctions. This sound is most

commonly systolic in time but is often diastolic or to-and-fro in character. The occurrence of the rub in this area has been stressed by Wolffe and Digilio as an early and frequent manifestation of rheumatic infection. They attempt to account for it on the supposed collection of inflammatory material in the sulcus formed by the aorta and pulmonary artery with the production of a periaortitis and peripulmonitis. Levine stresses the frequency of occurrence of evidence of pericarditis in aortic valvular disease of rheumatic origin. Authorities indicate that this may arise as the result of direct extension through the thin aortic walls. Associated evidences of valvular involvement and disturbances of the conduction mechanism are valuable evidences, which, in the presence of a friction rub, suggest its rheumatic origin.

It is quite likely that the fibrinous state is often a transitory initiator of effusions in a large number of cases. After recovery from the initial process the pericarditis is overshadowed by the typical valvular lesions and their resultant effects on cardiac activity.

Therapeutic measures in acute rheumatic pericardial involvement of this type are those symptomatic measures employed in the treatment of acute rheumatic fever.

Pneumonia:—Both types of pneumonia and other intrathoracic infectious processes are often responsible for fibrinous pericarditis, which in numerous instances precedes the development of the more dangerous purulent type. In a series of 62 cases of fibrinous pericarditis reported by Smith and Willius 53.2 per cent of the group appeared to be associated with intrathoracic infections. Pneumonia appeared to be the most important etiologic type. Reimann indicates an incidence of 2 to 3 per cent of pericarditis in all types of pneumonia.

Fibrinous pericarditis may also occur as the resultant of generalized infectious processes varying from osteomyelitis to pyelonephritis.

Chronic Nephritis:—The fibrinous form of this lesion is a very common late-stage complication in chronic nephritis, and other renal lesions associated with marked nitrogen retention. In Bright's original reports of 100 renal cases, pericarditis was noted in 8. Barach in summarizing the literature of this condition indicated an incidence varying from 4 to 14 per cent.

The clinical diagnosis is made by the demonstration of the pericardial friction rub, nearly always in the absence of any complaints referable to the heart. It is a sign of grave prognostic significance, and death as a rule occurs within two to three weeks after its appearance.

Coronary Thrombosis:—When the area of infarction involves an epicardial surface an associated localized fibrinous pericarditis and often a friction rub are observed. In Stewart and Turner's series

of 60 necropsies in cases of coronary thrombosis, 80 per cent revealed pericardial involvement. The greater number of cases were those of localized involvement. The occurrence of generalized involvement obviates the oft repeated clinical observation that posterior infarctions never produce a friction rub. While effusions are very rare in this type of pericardial disease, adhesions may occur.

PERICARDITIS WITH EFFUSION.

This type occurs after an initial fibrinous pericarditis in many cases. The character of the fluid determines the type.

Serous effusions may occur with rheumatic fever, rarely with the pericarditis of coronary disease and uremia, but frequently as a result of tuberculous infection of the lungs or other organs.

Accumulation of fluid in the pericardial sac produces alterations in the size and shape of the heart and modifies the general circulation when rapid in development. Although the pericardial sac under normal conditions contains 10 to 50 c.c. of lubricating fluid, it is only after the accumulation of 500 c.c. that fairly uniform percussion and radiologic alterations can be demonstrated.

Certain well defined classical signs are only infrequently demonstrated, and it is probably in the demonstrable percussion and radiographic changes that one finds the best diagnostic aids. On percussion, the area of relative cardiac dullness is found to be pyriform with marked widening of the retromanubrial dullness. This area of dullness is markedly decreased when the patient assumes an upright position. This shift in dullness is the most reliable physical sign.

Ewart's sign, (dullness and bronchial breathing at the angle of the left scapula) is found with very large accumulations of fluid. It is a result of compression of the left lung. Other classical physical signs are either erroneous or very variable in their occurrence. The cardiohepatic angle is not obtuse as commonly described, but appears to be acute. The presence of a friction rub does not rule out an effusion. Distant and muffled heart tones are often suggestive of an effusion, but these may occur in other heart lesions as well. It is obvious that the presence of a large, tender liver is of little differential diagnostic import.

The radiologist offers some accurate aid in determining the presence of an effusion. The fluoroscope reveals the complete absence of pulsation in the presence of large effusions. Slight diminution of pulsations are noted in small effusions. The shadow on X-ray shows the rounded contours of the water-bottle heart in the upright position. In the recumbent position the basal shadow is markedly increased. The infallibility of the X-ray examination is subject to question when the shadow of a suspected effusion must be distinguished from that of a grossly enlarged and dilated heart.

Only when signs of circulatory embarrassment are present is any interference with the effusion indicated. The signs of the acute compression triad consist of falling arterial pressure, a rising venous pressure and a small, quiet heart. The compression force must be removed by introduction of a needle into the pericardial sac. There are various sites of approach. The puncture, whether performed close to the xiphoid, at the left side of the sternum, or on the right side in the second, third or fourth interspaces, holds some risk. Tears in the auricle or injury to coronary vessels may occur.

Pericardial paracentesis is performed with a long needle of average calibre, attached to a large syringe and with a 3-way connection which allows the fluid to be aspirated and discharged without disconnecting the syringe. The most commonly used site is in the fifth left intercostal space just inside the left border of percussion dullness. The needle is pointed backward and inwardly toward the spine. The average depth of penetration is 3 to 5 centimeters.

Aspiration as a rule does not have to be repeated. Generally, serous effusion subsides, and if the effusion is purulent surgical drainage is usually in order.

Purulent Pericarditis:—This form presents a problem in which early recognition is imperative in order to save the patient from the combined circulatory and toxic load. This condition is never primary unless it is produced by penetrating pericardial wounds. It is especially prone to develop in connection with such thoracic infections as pneumonia, empyema, and in bacteremia and septicemia associated with acute osteomyelitis or other severe infections.

The physical signs are usually more characteristic than any given set of symptoms. It is probable that the friction rub can be elicited at some time in all cases and it is often present even in large collections of fluid. Signs of cardiac tamponade depend on the volume and the speed of the collection of the fluid. The radiologic picture is that of any pericardial effusion. Shipley, Winslow and Bigger have indicated that adequate surgical drainage may reduce the mortality rate as low as 50 per cent in this almost fatal condition. Open drainage is the only adequate procedure. Various approaches are employed. Intercostal incisions, trephined sternal openings and epigastric approaches have been employed, but resection of one or more costal cartilages either to the right or left is the most successful approach.

In terminating our consideration of the problem of acute pericarditis one important diagnostic aid should be mentioned. Since the report of Scott, Feil and Katz in 1929, an electrocardiographic pattern almost pathognomonic of acute pericarditis has been developed. The typical pattern consists of an elevation of the RT segments in the three limb leads and in the chest lead 4 R (apex of heart to right arm). These elevations are inconstant as to size and

may appear with greatest intensity in lead 2 or in leads 1 and 2 together. These changes may be produced by any type of acute pericarditis but appear most frequently in cases of purulent carditis and hemopericardium. Significant electrocardiographic abnormalities occur with the greatest constancy in the acute types alone.

CHRONIC PERICARDITIS.

Only the clinically significant groups of this condition will be considered.

Concretio cordis or chronic adhesive pericarditis is characterized pathologically by marked thickening of the adherent layers of the pericardial sac. Calcification may also be a prominent feature. This form may arise as the result of a previous tuberculous, rheumatic or other infectious pericarditis, but end-stages of tuberculous lesions predominate.

Chronic constrictive pericarditis produces a series of interesting alterations in the normal cardiovascular mechanism which are capable of recognition as a definite clinical entity and are amenable to surgical relief. The symptom picture is characterized by manifestations of a failing circulation. They consist of dyspnea (only on exertion), swelling of the abdomen, weakness, cough, edema of the lower extremities, and discomfort in the upper abdomen. The objective findings are overwhelmingly those of systemic congestion. An elevated venous pressure which fails to lower on rest and digitalization differentiates this condition from alterations due to myocardial functional disturbances alone. The elevated pressure produces the marked distention of surface veins, engorgement of the liver, elevation of the spinal fluid pressure, edema, and ascites commonly observed in these states. The arterial pressure suffers marked diminution. The systolic levels and pulse pressures are often very low, and the pulse is subject to diminution on inspiration (the paradoxical pulse). Other manifestations of clinical importance consist of systolic retraction in the region of the eleventh and twelfth ribs posteriorly and laterally due to traction on the diaphragm (Broadbent's sign). The X-ray is often an aid in the diagnosis of adhesive pericarditis, and calcified areas may also be revealed in these studies. The X-ray findings consist of evidences of diminution in cardiac pulsation, particularly in the right border, and other features emphasizing the fixation of the heart. Little evidences of cardiac enlargement are obtained. Electrocardiographic findings are not diagnostic and consist of low voltage and fixation of the electrical axis in some cases.

Chronic mediastinopericarditis is even a more serious manifestation than the above. The signs of circulatory embarrassment are the same. Retraction of the interspaces and Broadbent's sign may or may not be present. If there are associated myocardial lesions, cardiac hypertrophy is often great. Cardiac changes on X-ray are

usually those already mentioned above, but evidences of mediastinal adhesions may be present.

The serious forms of this condition are amenable to surgical interference, and since Brauer's original operation of thoracolysis was introduced in 1902 more and more excellent results have been reported. The procedure of thoracolysis consists in the removal of several ribs and costal cartilages on the left side over the precordium. It was designed for cases with extensive adhesions to the thoracic wall. Pericardial resection is designed to remove a greater part of the constricting pericardial wall. The medical treatment of chronic pericarditis is obviously less hopeful, and the response to ordinary congestive failure regime is often poor.

The splendid work of Beck in perfecting the surgical treatment of constrictive pericarditis had made the original procedure more effective, and an increasing number of excellent therapeutic results are being reported in the literature.

(*Medical Annals of the District of Columbia*, December 1940.)

Extracts

CAUSES OF FAILURES IN THE TREATMENT OF OTITIS MEDIA.

Woodman (*Lancet* 1940:2:746) at a meeting of the section of otology of the Royal Society of Medicine observes that there are four chief causes of failure; infection in the mastoid air cells, infection in the postnasal space, disease in the attic region of the middle ear and unsuspected tuberculosis. The treatment of the first two conditions is along the usual lines but the third has been the subject of some conflict of ideas. A mastoid operation is the proper treatment for these cases. Layton thinks that the problem is largely bacteriological—the disease remains acute so long as the invading organisms are from the nasopharynx but becomes chronic where there is secondary infection by organisms from the skin of the meatus. Nutrition of the patient is of prime importance in the ultimate recovery of the patient. Among the causes of failure he puts early myringotomy, the use of wet-treatment and dirt, specially lack of control of hair. Sinusitis he does not believe to be as common in children as it is the fashion to suppose. In encouraging eustachian drainage movements of the palate, chewing and mild physical exercises are helpful. Adenoidectomy in the early stages of the infection is not useless but wrong because it exposes a raw area to hæmolytic streptococci and cannot remove the submucous lymphoid tissue of the cartilaginous portion of the tube which is the real cause of obstruction. When otorrhœa persists for longer than 6 weeks a mastoid infection is probably present and operation should

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be decided after considering the amount and nature of discharge, whether or not it is pulsatile, the degree of deafness and the x-ray findings. McIlaggan observes that failure is not confined to one set of surgeons, it is experienced by those who remove lymphoid tissue and those who preserve, those who drain sinuses and those who do not. Chemotherapy has certainly reduced the incidence of mastoiditis but it has not prevented the onslaught of otitis media. Myringotomy when properly indicated and properly done by experienced hands is not harmful. The incision in the posterior half of the drum as is recommended in most books is not advisable. Too much local treatment is bad. Hydrogen peroxide is sometimes invaluable to break up blood clots but should always be subsequently removed. A gauze wick in the meatus only acts as a dam.

MALIGNANT TUMORS OF BONE.

H. W. Meyerding, M. D., Section on Orthopedic Surgery: During the period of 1909 to 1934 inclusive, in the Section on Orthopedic Surgery we have encountered 424 patients suffering from primary malignant tumors of bone. We have made a thorough study of the cases and have been able to trace 98.3 per cent of the 424 patients for a period of three years, and 96.5 per cent of 371 patients for a period of five years following operation and first treatment. Believing that the classification and gradation of degree of malignancy are of the highest importance, we have reviewed the pathologic tissue in 85.6 per cent of 361 tumors that were available, since the site and grade of malignancy of such lesions frequently determine the type of treatment advisable and the prognosis.

Roughly speaking, the incidence of the various tumors of bone demonstrated that about half were osteogenic sarcomas; more than a fourth were Ewing's sarcomas, less than 10 per cent were fibrosarcomas, about 10 per cent were multiple myelomas, less than 2 per cent were giant-cell sarcomas (malignant) and there were less than 2 per cent concerning which a nonsurgical diagnosis of sarcoma had been made. More than two-thirds of the patients were males and less than a third were females.

The greatest percentage of the tumors (almost a third) occurred among those patients whose ages were between ten and nineteen years, whereas more than fifth of them afflicted patients between twenty and twenty-nine years of age; thus the majority of the tumors occurred among patients who were less than thirty years of age. Almost two-thirds of the tumors were situated in the extremities, the most common site being the femur and the second most common site being the tibia. Approximately 10 per cent of the patients had pathologic fractures, the frequency of which

occurred in the order given: first, multiple myeloma, then Ewing's sarcoma, osteogenic sarcoma and fibrosarcoma.

A positive history of trauma was elicited from about four of every ten patients. The question of trauma often is of medicolegal importance, inasmuch as the patient may associate the appearance of the tumor with an injury and may try, in many instances, to obtain compensation on the basis of an injury.

Of the 424 patients, about a third underwent amputation and about a fifth underwent excision. Following radical surgical treatment, irradiation, with or without the administration of Coley's toxin, was carried out. In a fourth of the cases biopsy and irradiation were employed; in the remainder of the cases treatment was by irradiation only.

Of those patients for whom surgical treatment had been carried out, about a fourth survived for a period of five years, whereas of those who did not receive such treatment, slightly less than 10 per cent survived.

We lay great emphasis on the value of roentgenology in the diagnosis, prognosis and treatment of malignant tumors of bone. It reveals important evidence as to site, size and character of the tumor, and gives us our first knowledge of the presence of pulmonary metastasis. We believe that the possibilities afforded by irradiation have just begun and that as knowledge of the therapeutic value of the procedure advances, it will have an increasingly important place in the treatment of malignant tumors of bone. However, surgical treatment is preferable in the majority of the cases. We believe that the co-operation of the surgeon and roentgenologist is of great importance and that treatment depends to a large extent on the site, size, type and grade of malignancy of the tumor.

Recognition of a malignant tumors of bone by the general practitioner, early consultation and co-operation of the surgeon, roentgenologist and pathologist, and their combined efforts, all will lead to an earlier diagnosis, earlier employment of therapeutic measures and a more favourable prognosis, than has been the case previously.

FIRST AID FOR INJURIES TO THE KNEE AND THE SPINAL COLUMN.

M. S. Henderson, M. D., Section on Orthopedic Surgery: The frequency of accidents on our highways makes it apparent that every physician should carry in his automobile an emergency kit containing morphine, sterile gauze, bandages, adhesive tape and an antiseptic such as tincture of iodine or tincture of merthiolate.

Injuries of the knee joint are fairly frequent in modern automobile accidents, particularly for those riding in the front seat—the so-called dashboard injuries. Fractures of the patella are common; fractures of the lower end of the femur and upper end of the tibia also may occur. However, the latter are more common in so-called bumper types of fractures. The injury may be simple or compound. When compound injuries occur, the hemorrhage must be controlled. If the hemorrhage is severe, a tourniquet must be used, but the danger of damage to nerves and muscles if the tourniquet is left on too long must be appreciated. It may be left on for fifteen minutes; it is then released until the blood flows from the wound again; then it may be reapplied for a like time if necessary. After the hemorrhage is controlled and the antiseptic poured into the wound, dressings and bandage should be applied and the leg splinted in the position of greatest ease. Often splints are not available, but for the knee joint, folded newspapers or magazines will serve for splints. After the leg has been splinted, all further treatment should be delayed until an accurate diagnosis can be made by aid of roentgenograms and so forth. Vigorous efforts to straighten the knee may result in real damage and should not be undertaken before the patient is properly examined and roentgenograms are taken. When the semilunar cartilages have been dislocated, I am sure many knee joints have been permanently injured by too vigorous manipulations which put the capsule and ligaments on strain and sometimes actually rupture ligaments not injured by the accident itself.

Injuries to the spinal column may be divided into those associated with paralysis and those in which no paralysis is present. The emergency roadside treatment is the same in either case. Such injuries are not compound and often are not associated with other serious injuries, but until proved otherwise, it should be assumed that a fracture is present. Fractures of the spinal column are commonly caused by the patient's being thrown against the top of the car. The region usually involved is either that of the fifth and sixth cervical vertebrae or the dorsolumbar region. The deformity is a flexion deformity and therefore means should be taken to prevent exaggeration of that deformity because it will only increase the danger of further damage to the spinal cord.

If a broken back is suspected, the spinal column should not be flexed and the patient should never be lifted by the shoulders and the legs. Place a blanket, folded lengthwise, beside the patient. He should be grasped at the shoulder and hip, then, without twisting the spinal column in any way, slowly and gently rolled over into the blanket so as to lie face down with the head turned to one side. When two men carry the patient, one stands at one end and grasps the blanket just above the level of the shoulders; the second man stands at the other end and grasps the blanket at the level of the

injured person's knees, then both lift together. When four men carry the patient (which is preferable), two men squat on either side of the injured person and the blanket is grasped just above the level of the shoulders, opposite the chest, at the hips and at the ankles; then all lift together.

If a broken neck is suspected, never bend the injured person's head forward, as even bending the head forward to give him a drink may destroy any useful remnant of the spinal cord which has escaped injury. Place a board or a plank beside the injured so that the board extends 4 inches (10 cm.) beyond the head. One man grasps the patient at the shoulder and the hip and places his foot against the board to prevent the board from sliding; a second man steadies the head and neck between his hands. The injured person is slid as one piece onto the board. His arms are folded and the sleeves pinned together. A strap is passed about the patient and the board to prevent him from slipping off. He may then be picked up by grasping the board at the head and the feet. If no stretcher is available, the patient, resting on the board, may be lifted onto a blanket and the blanket used as a stretcher. The blanket is grasped by four people and the patient can then be transported safely.

SOME OBSERVATIONS ON THE USE OF SULFANILAMIDE AS A PROPHYLACTIC MEASURE AFTER OPERATION.

R. B. Wilson, M. D., Fellow in Obstetrics and Gynecology, Mayo Foundation, and J. C. Masson, M. D., Division of Surgery: The care of the bladder postoperatively is of considerable importance to the gynecologic surgeon. Few of the operative procedures commonly performed in this branch of surgery fail to impinge to a certain extent on the anatomic integrity of the urinary bladder. Because of the frequent disturbance to the bladder and also because of reflex causes associated with operative procedures performed on the perineum, the use of the retention catheter and the performance of repeated catheterizations are necessary in a great number of cases. Aside from the usual reasons given we believe use of a retention catheter is justified because it prevents soiling of the operative field. The frequency with which infection occurs after the use of the catheter is well illustrated in the statistics which have been presented by Drs. Emmett and Hammer. The occurrence of infection in the urinary tract more often than not means that the patient will complain of varying degrees of discomfort and that return to a feeling of complete well-being will be delayed several days or even

weeks. Any measures which promise to decrease the morbidity following an operation are worthy of extensive trial.

The use of sulfanilamide (p-amino-benzene-sulfonamide) after operation has appeared to us to offer considerable relief in cases in which catheterization is performed frequently. Not only does infection occur less frequently but when it does occur it seems to respond more readily to intensive treatment. We do not wish to give the impression that prophylactic administration of this drug is a cure-all but it has seemed to be of enough help to warrant its use.

Initiation of any procedure of this sort as a routine is attended by some difficulty. However, after the plan had been established as a part of the postoperative routine on our surgical service, it was only on a few occasions that the treatment was not completed by the nursing service. As we routinely give saline solution by hypodermoclysis, it was only necessary to order that the solution of sulfanilamide be given first and then that the bottle of saline solution be connected. In this manner there was no added expense incident to the subcutaneous administration. As soon as the patient was taking adequate fluids by mouth, the tablets of sulfanilamide were given.

It is true that we occasionally stopped oral administration of the drug because the patient was nauseated. It has not been possible to ascertain just how many of these patients actually were nauseated by the drug alone. Many patients complain of nausea for some days after operation even though the intake of fluid is adequate and there has been no other evidence of gastro-intestinal disturbance. However, we promptly stopped administration of the drug whenever there was the slightest possibility that it was causing gastric disturbance. It seemed to us that sulfanilamide in this dosage and when given with soda was very seldom the cause of gastric disturbance of sufficient intensity to warrant failure of its use as a prophylactic measure.

A large percentage of the failures of this measure occurred in cases in which the infection was caused by *Streptococcus faecalis*. This, of course, was to be expected. It has been suggested that sulfathiazole (2-sulfamidothiazole) might be more effective than sulfanilamide as it is presumably more effective against this organism. We believe that sulfathiazole should be tried. We have used it in a number of cases recently in which culture of the urine revealed *Streptococcus faecalis*. Clinically it has not seemed to be as effective against this organism as mandelic acid and therefore we usually use some form of mandelic acid for infection attributable to *Streptococcus faecalis*.

The prophylactic measures often seemed to be ineffectual because of a urinary infection that existed preoperatively. We have no way of judging whether or not this is true because catheterized

specimens of urine were obtained before operation and checked microscopically and by culture in only an occasional case on our service. It appears logical to assume that if patients could be given medication for one or two days before operation, the number who had trouble postoperatively might be diminished appreciably.

Other precautions should not be neglected when the aim is the prevention of infection of the urinary tract. Failure to protect the end of a retention catheter with a sterile pad when the patient is sent from the operating room, lack of aseptic technic on the part of the nurse when connecting the catheter to the retention bottle or in an individual catheterization, and frequent routine irrigations of the catheter should be checked carefully. We believe that routine irrigations of the catheter are unnecessary. What good can possibly be attained by irrigating a catheter that is obviously draining freely or what can be attained by instilling into and lavaging the bladder with various solutions and medicaments that often only serve to cause the formation of a sediment which may plug the catheter? It is a standing rule on our service that a retention catheter is to be irrigated only when it is not draining and then only if it can be demonstrated that this failure to drain is not due to kinking of the catheter.

To us it seems that the ideal method of handling this particular part of the postoperative care would be to give sulfanilamide prophylactically as has been outlined. Then, on the seventh or eighth day after operation a catheterized specimen of urine from each patient who has had a retention catheter or who has had repeated catheterizations should be examined microscopically and cultured. If full therapeutic dosage with the proper drug is then instituted in cases in which infection is present it is believed that at least 90 per cent of the patients would have little or no pus in the urine at the time of the dismissal from the hospital.

The validity of this therapeutic experiment might well be questioned on several points. There is no doubt that the method will be tried by others and discarded as worthless by those who will not take the time to collect complete data and then evaluate these data adequately. It was with some surprise that we noted the marked difference in the data on the treated and untreated patients. When making rounds it is the patient with something in the way of a positive finding that sticks in the surgeon's mind. The patient who is doing well and does not have any complaints and on whom the results of laboratory tests are negative is often visited without any conscious effort. For this reason those who try this method are urged to try it without any preconceived opinion and not to discard it until they have surveyed their data.

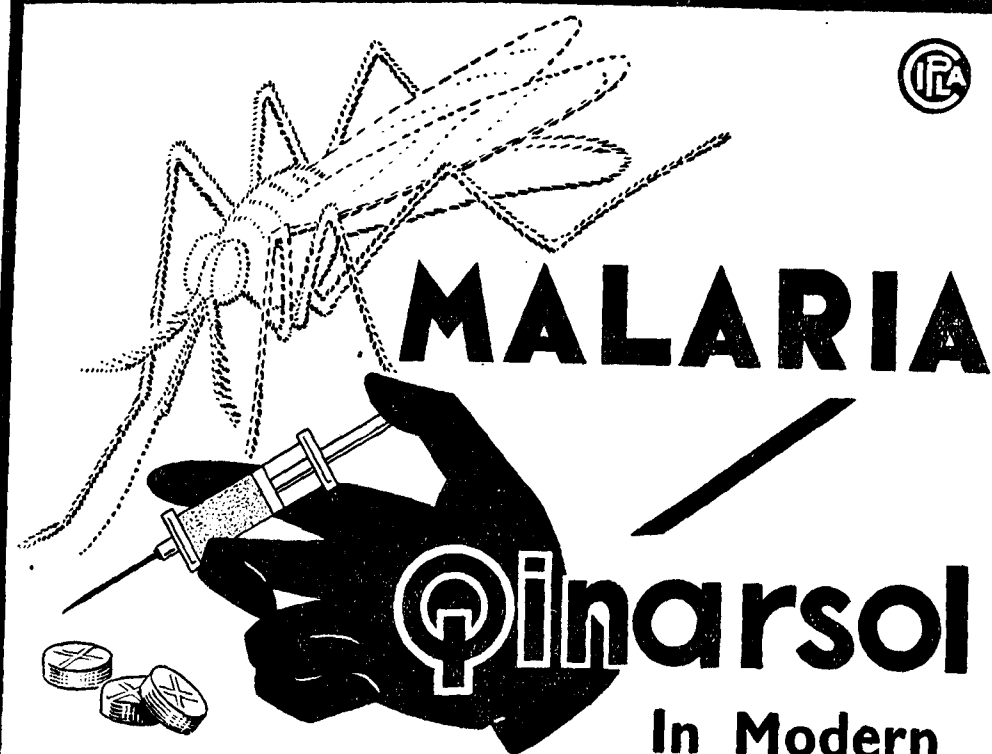
Medical Miscellany

The Coimbatore District Medical Association has the unique distinction of publishing an Annual for the year 1940, describing among other things, the activities of the Association for the year, the sixteenth year of its existence. The lectures delivered before the regular monthly meetings of the Association are printed therein, including a symposium on tuberculosis. A few abstracts from recent medical literature also find a place. The Association has a membership of 107, has its own premises and a library. The Association has recently sponsored a medical co-operative society. The Annual contains the reports of the Perundurai Sanatorium and of the Vedapatti Health Ashram, both of which are situated within Coimbatore district and with which some of the members are associated. Captain E.S. Gopalan, the erstwhile secretary of the Association deserves our hearty congratulations for bringing out this Annual, which we commend to the notice and emulation of other medical associations, who are frittering away their energies in bringing out short lived monthly or quarterly publications. We would advise the medical association of South India's cotton-growing and textile district to shed its policy of isolation and transform itself at the earliest opportunity into a branch of the Indian Medical Association, as the association together of these two associations as well as other medical associations in this country—will speed up the consolidation throughout the length and breadth of this country and enable the medical men of this district to play their rightful part and pull their weight in medical affairs in conjunction and co-ordination with medical men in other part of India.

One of the appointments made to a specialist-post in one of our hospitals more than six months ago has not attracted sufficient notice from the medical profession in this presidency. The "appointee" has straightaway been made a Civil Surgeon over the heads of perhaps better qualified aspirants, and has also been given the privileges of private practice within and even outside his speciality. Evidently this is an instance of a person having a "pull" with the authorities getting a "prizejob." As a counterpoise to this, witness the Public Services Commission advertising recently for Assistant Surgeons with the strange proviso: "Selection is no guarantee of appointment." Somebody has swallowed a camel but is straining at a gnat.

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Medical Bulletin, Vol. VII, No. 19, Oct. 7, 1939.

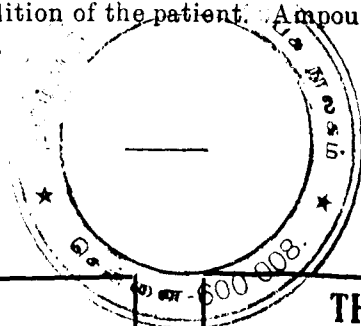
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