SURGERY, GYNECOLOGY, OBSTETRICS AND GENITO-URINARY DISEASES

THE ACUTE SURGICAL ABDOMEN.*

By Floyd W. McRae, M.D.,
Atlanta, Ga.

I have on several occasions before the Medical Association of Georgia, and the Surgical Section of the American Medical Association, urged the necessity for surgical deliberation in chronic or elective surgery.

Today I want to point out with all possible emphasis the tragic consequences of indecision, of lack of courage, of ignorance, of yielding to importunities of patients, relatives or friends, of masterly inactivity, of the abuse of purgatives and opiates, in dealing with the acute surgical abdomen.

My object in writing this paper is to call attention to the essential features of the important acute surgical conditions of the abdomen which demand early recognition and prompt surgical interference in order that valuable lives may be saved and much suffering prevented.

If I can help my fellow workers to mitigate the intense suffering caused by these conditions, and save them the humiliation and the tragedies that must follow these diseases overlooked, neglected, improperly treated, my purpose will have been accomplished.

Here let me quote from the most excellent paper of Dr. J. C. Bloodgood, The Journal of the A. M. A., page 829, March 23, 1912:

"Most surgeons must feel daily that they are called on to employ their art as operating technicians at the wrong and late period of the disease. In this sense much of their work is unnecessary surgery. Earlier recognition of the disease, in some cases followed by appropriate treatment, may make surgical intervention unnecessary; such measures belong to preventive surgery.

"Most physicians must regret their relation to the later intervention of surgery. In the literature and in conversation one so often reads and hears that surgery should be the last resort, modified sometimes by the statement—but not a late resort. This expression 'a last, but not a late resort' sounds well, and I am quite certain that those who employ it mean well and are just as anxious to have surgery an early intervention, although as a 'last resort.' I fear, however, that the promulgation of the expression that surgery should be a last resort will unconsciously act to make it a late resort.

"In view of the daily painful reminders in my operative work that surgery, indeed, is a late and last resort, and much of it unnecessary in this late period, and some of it absolutely preventable, it is natural that I should wish to discuss the surgeon's view of the medical aspects of surgical diseases. In the last few years I have been especially attracted by this phase of the subject and have dwelt on it at considerable length in teaching. The facts are these: At the present time and ever since modern surgical methods were introduced, surgical technique has been far ahead of either surgical or medical diagnosis. No one can question this. A graduate in medicine can become proficient in surgical technique long before he is in diagnosis. Surgeons, therefore, are prepared, in the majority of cases, to offer this improved technique to patients with surgical lesions in the early stage of the disease as well as in later periods. A statistical study of any surgical clinic will demonstrate that all classes of diseases which ultimately come for treatment by operation come, not in the early stage, but at later periods.

("Studies of immediate and late results demonstrate that the operative mortality is greater in the late period, the post-operative complications and period of disability greater than when the operation was performed in the early stage. But the contrast is most striking in the study of late results.")

The previous history of the patient is of great value in arriving at a correct diagnosis. Laboratory findings by an expert are very helpful, but not always essential. The labora-
tory diagnostician will frequently waste valuable time. Clinical methods of diagnosis are sufficient to indicate the nature of the disease and admit of prompt action. The internist or surgeon who hesitates in order to work out hair-splitting details will often lose the golden opportunity for saving life, or of preventing irremediable complications.

We should not be governed in making diagnoses and recommending surgical consultation by "surgical ancient history," but by the latest publications from the best medical and surgical diagnosticians. Of what real value is the diagnosis of acute intestinal obstruction after three or four days of progressive symptoms with stercoraceous vomiting, peritonitis, barrel-shaped abdomen? Such a diagnosis calls for the undertaker rather than the operator. Of what service is an accurate diagnosis of ruptured ectopic pregnancy when the woman is pulseless, fighting for air, moribund—perhaps brought to this state by the energetic administration of powerful stimulants, saline infusions, or transfusions, forcing the little blood left in the heart and vessels into the abdominal cavity. Drastic purgatives kill many; convert simple inflammatory troubles into serious surgical conditions, help none. I do not know of any class of agents, or method of treatment, so pregnant with dangerous possibilities, so universally demanded by the laity, so frequently administered by the profession. Every surgeon, every clinician, has abundant opportunity to verify the disastrous effects of purgatives on the operating table, or in the post-mortem room.

Opiates have a real place, but a narrow range of usefulness, and when administered there is grave risk of obscuring the real condition until too late to be successfully combated. After a conclusion has been arrived at, and a definite line of treatment determined upon, the administration of hypodermic of morphine or codeine is a life-saving measure. Thus administered, makes the transportation of patients suffering with acute surgical abdominal conditions, comparatively safe for considerable distances.

Patients suffering with acute abdominal conditions should be kept in a recumbent position, whether at home, or en route to a hospital. They should never be transported in a sitting posture when avoidable. A spring cot or mattress and springs can be put in a wagon or baggage car and the patient moved with comparative comfort and safety.

Many of the acute surgical conditions are not imperatively operative, and only become so if neglected, or improperly treated. By prompt recognition of the abdominal pathologic complications and disaster may be avoided. Every general practitioner should be on the lookout for the acute death-dealing diseases, such as perforating gastric or duodenal ulcer, gall-stones, acute pancreatitis, acute intestinal obstruction, internal and external hernia with strangulation, ruptured ectopic pregnancy, acute pelvic inflammation, fulminant appendicitis, etc. He should be familiar with the classical signs and symptoms of these diseases, and be able to marshall these signs and symptoms so as to differentiate between real surgical conditions and intestinal colics due to fermentation, constipation, etc. A diagnosis of acute indigestion that is associated with intense pain, fever, localized tenderness and followed by soreness and disability, should be looked upon with suspicion. If "acute indigestion" terminates in death, then someone has blundered. As physicians we should awake to the fact that people do not die of acute indigestion. Such diagnoses are a sad commentary on our profession, misleading and mischievous in their influence on the laity. We must, in the presence of obscure conditions, or the absence of correct knowledge, be fair with ourselves and our friends and say, "I don't know." Then we are in a position to study the case closely, examine in detail, call for consultation, avoid disaster, save lives and reputations.

Intense abdominal pain is a symptom of the
McRae: ACUTE SURGICAL ABDOMEN.

The greatest value. Its persistence with increasing intensity or recurrence after a hypodermic of morphine should put the doctor on guard immediately. My experience in dealing with acute abdominal troubles has been that disaster follows very, very frequently in the wake of severe initial pain, and the administration of morphine. It makes very little difference whether this be the acute stabbing pain of a perforating gastric or duodenal ulcer, the intense colicky pain of gall-stones, or the more steadily increasing pain of fulminant appendicitis.

The more or less sudden cessation of pain should arouse suspicion. Following the immediate pain of perforation of gastric or duodenal ulcer there is a period of comparative rest until the incidence of general peritonitis. The same is true of perforative appendicitis after the concretion bursts its way through the appendix, or in fulminant appendicitis where there is complete death of the organ.

The general appearance of the patient is perhaps second in value only to pain as a diagnostic and prognostic feature. The peculiar anxious expression of countenance that we designate the facies abdominalis, is of extreme value. Nausea and vomiting, more or less severe, are concomitants of most of these abdominal diseases, but frequently enough so slight, or entirely absent, as to keep one on guard constantly.

Accompanying the intense pain and nausea there is almost always a corresponding influence upon the pulse rate. It is usually increased in frequency and lessened in force in proportion to the pathology. Occasionally instead of a rapid pulse there is a slow, weak pulse. Few of the most serious acute surgical abdominal diseases are associated with rise of temperature at the onset. This is true of appendicitis as well as of the non-inflammatory diseases, such as perforating duodenal ulcer, ruptured ectopic pregnancy, acute intestinal obstruction. In my experience there is no other one thing that so often misleads doctors who have not kept in close touch with these subjects as the absence of fever. The general practitioner has so long been taught the importance of a rise in temperature and sees it almost universally associated with the infectious so-called medical diseases, that he is apt to be taken off his guard, and lay too much stress on the absence or presence of fever.

Early, careful examination of the abdomen with the warmed hand laid first flat on the belly, then carefully, lightly manipulated over the entire surface will practically uniformly discover increased muscular tension over the site of the intra-abdominal pathology. More or less deep-seated tenderness, according to the location of the pathology, can also be practically uniformly determined by proper examination.

These simple signs and symptoms, common to all acute surgical abdominal diseases, are sufficient to enable the doctor to determine that he has some real and serious trouble to deal with. It is only by taking prompt action that good results may be obtained, surgical interference frequently avoided and valuable lives saved. Now is the time for consultation, and where the symptoms persist, if competent help is not at hand, to transport the patient to where help can be obtained, the case carefully watched and emergencies dealt with as they arise.

I wish again to emphasize the danger of purgatives in dealing with the acute surgical abdomen. The stomach may be emptied by the stomach tube, and the bowels by enemata, as indicated, but drastic purgatives should be scrupulously avoided. Purgatives in such conditions are always dangerous, frequently death-dealing.

It is not my purpose to go into the details of these surgical conditions. My intention has been to try to help general practitioners and surgeons alike to realize their responsibilities in dealing with this class of diseases, in the hope of saving life and preventing suffering.

(Discussion on page 304.)
great, relief is given by a second incision on the right side, and the performance of either appendicostomy or cecostomy for the escape of gases.

Some weeks after the bowel and growth have been excised the colon canal can be restored by means of the enterotome clamp. In obstruction due to cancer of the rectum and lower sigmoid we make incision through the left rectus, examine the tumor, glands and liver. We then draw a loop of the colon out through the abdominal wound and fasten it as we close the wound. A second incision is then made on the right side and either cecostomy or appendicostomy performed.

A few days later the colon is opened and the colostomy completed. Some weeks later the growth is removed by a modified Kraske operation. If possible the ends are united after removal of the growth and the preliminary colostomy can then be closed. If end to end union cannot be secured after removal of the growth, the colostomy is left as a permanent artificial anus.

In post-operative intestinal obstruction we usually have a combination of dynamic and adynamic obstruction. There are some adhesions or kinks, and the weak peristalsis is not able to overcome the obstruction. While these cases require the greatest judgment to decide when to operate the safe rule is not to wait too long. Enterostomy is the safety valve, a simple procedure, but has life-saving effects. In the performance of enterostomy we usually use the following method: Local anesthesia by novocaine. The wound is opened or a second incision is made, as the case may be. The distended bowel coming into view is drawn out and an aspiration needle inserted for the relief of gas tension. The bowel is then lightly clamped with a rubber covered clamp as the needle is withdrawn. A large Oeschner troca and canula, size 30-F., is then inserted as near as possible through the hole made by the aspirating needle. The bowel is then emptied through the canula and rubber tube at side of canula. A purse-string suture is then placed around the entrance of the canula into the gut. The trocar is removed and a thin wall rubber tube is threaded into the bowel through the canula; the purse-string suture is then drawn tight around the rubber tube as the canula is withdrawn. A few sutures tack the bowel to peritoneum, and the wound is closed around the tube. This method is easy of performance and prevents contamination and infection of the peritoneum or wound at the time of operation.

The resulting adhesions between the bowel and the wound and the glazing over of the wound take care of and prevent late infection after the tube is removed. This is the method we use in performing all enterostomies and cecostomies.

DISCUSSION OF SYMPOSIUM ON ABDOMINAL SURGERY.
(Papers by Drs. McRae, Horsley, Royster and Graham.)

Dr. Stephen H. Watts University of Virginia: I was much interested in the very clear presentation of his subject by Dr. McRae. I think it is a paper that should appeal particularly to men in general practice. One important thing that he emphasized is the fact that the general practitioner often wastes much valuable time in acute abdominal conditions in attempting to make a diagnosis of the exact condition present instead of making a diagnosis that operation is necessary.

Dr. Horsley presented a beautiful method of intestinal suture which I have used and found very satisfactory. I sometimes, in making an end-to-end suture, twist the bowel a trifle, so that the raw space between the leaves of the mesentery may be opposed to the endothelial covering of the intestine. I do not think much pressure of suture is necessary in order to insure cohesion of the adjacent surfaces, because, I believe, in most cases in which you do a suture of this character there is enough infection present, coming from the lumen of the hollow viscous being operated upon—in this case the bowel—to insure cohesion.

I do not know that I have seen any case of sigmoid kink, such as Dr. Royster describes; perhaps due to the fact that I have not looked for it sufficiently. I must say that I am rather skeptical regarding the frequent occurrence of obstruction of the large intestine by adhesive bands; in fact, we make use of this principle in pelvic surgery in that we seek to oppose large intestine, rather than small intestine, to raw surfaces. Of course, I do not maintain that obstruction of the large bowel may not be due to such causes.

Dr. Royster says this kink has not been named. I move that it be called Royster's kink.

Dr. Graham really reported a startling number of cases of intestinal obstruction. We do not have