Remarks

ON

ACUTE INTESTINAL OBSTRUCTION*

BY

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"In the same hour came forth the fingers of a man's hand and wrote over against the candlestick upon the plaister of the wall of the King's Palace. . . . Then the King's countenance was changed and his thoughts troubled him. . . . Then came in all the King's wise men, but they could not read the writing, nor make known to the King the interpretation thereof."

The fingers and the graph on the wall, the handiwork of one of the secretaries (Mr. Vick) of this Section, speak for themselves, and surely should give surgeons seriously to think. The interpretation of them is not difficult. He who runs may read that delay in helping the patient too often dooms him to death. In the early recognition and treatment of acute intestinal obstruction the responsible medical attendant has been weighed in the balance and found wanting. It is all very well for surgeons with one accord to excuse themselves and to assert that the responsibility for that death-dealing delay is not theirs. The fact remains that acute intestinal obstruction is a surgical condition. It is to the surgeons attached to the medical schools throughout the Empire that the profession looks for light and leading. It is they who have the "light, understanding, and excellent wisdom" which should qualify them to dissolve doubts and to diminish the peril of delay. All surgeons are agreed that delay in recognizing the presence of acute intestinal obstruction is the chief factor in determining the death of the patient. The period during which operation is likely to be followed by success is the phase which extends from the sudden action of the obstructing agent to the first appearance of distension of the abdomen. It is difficult to conceive how any future research or discovery can expedite a correct diagnosis in the early hours of this condition. We must use the means at hand and cultivate the "seeing eye" to detect and appraise the value of the signs, positive and negative, sparse though they may be, in the phase mentioned. Something akin to the super-sense of the Australian aborigine would be a priceless possession. Tracks in the bush, obvious to him, are unseen by the white man, yet are visible when shown.

I do not employ this simile to magnify the difficulties of the problem, but to point the moral that the early signs of acute intestinal obstruction are present if they are looked for with a "seeing eye." Too often, when death has occurred, we are wise after the event, and realize we have failed in the surgical application of the injunction "he that hath eyes to see let him see."

It is unfortunate that the acute symptoms that announce the onset of acute intestinal obstruction should be common to other acute abdominal conditions, but their very intensity should focus our attention on their possible cause. Sudden onset of intense and persistent pain, soon followed by repeated vomiting, and associated with collapse and absolute constipation, constitute a clinical picture of acute obstruction of the intestine that should not be mistaken for anything else. The very absence of the abdominal signs of visceral inflammation or injury, or of a peritoneal insult (extravasation), strongly favours the diagnosis.

THE DIAGNOSTIC VALUE OF ENEMATA

In the early phase of a less severe grade of obstruction the prompt detection of absolute constipation is of supreme importance. As was pointed out by Mr. Sampson Handley in the discussion on this subject a few years ago, two enemata at an interval of one hour will give positive evidence of acute complete intestinal obstruction. Even if any doubt attaches to the first, no faeces or flatus will result from the second enema, which may be retained or expelled without force. The bed-pan should always be saved for examination, and the examination carried out. It is important that medical students should receive practical instruction in administration of enemata, and in the inspection of the result. In certain circumstances of medical practice a human life may depend on this knowledge.

Attention has recently been called by Lord Moynihan and others to the dire consequences of giving an aperient at the onset of acute appendiceal obstruction. It is even more strongly contraindicated, if that is possible, at any stage of acute intestinal obstruction. It does nothing but harm. It lashes the bowel into a frenzy of impotent effort and aggravates the pathological processes and the symptoms. Unlike morphine it does not mask symptoms; it magnifies them in a malign manner. It should be a surgical aphorism that an aperient should never be given to a patient at the onset of acute abdominal pain. An enema is just as likely to give relief. It is certain to give some information, negative or positive.

POST-OPERATIVE ADHESIONS

There is another aspect of the question to which I desire to direct attention—the aetiology of acute intestinal obstruction. I cannot give figures, but there is no question that the surgeon himself is responsible for not a few cases. The actual death rate of appendicitis would be appreciably increased were all the cases which die from acute intestinal obstruction supervening soon or more remotely after operation included. In my experience it is not the patient with a gross abscess who later on develops obstruction. Such cases are usually treated with a minimum of manipulation—simply an incision and the introduction of a tube into the abscess cavity. In the appendix cases followed by acute intestinal obstruction that I have seen there has been no abscess formation, but a good deal of difficulty and manipulation has been associated with the removal of the appendix by men of no great experience. I can myself recall a case of intussusception under my care at the Adelaide Children's Hospital over twenty years ago, in which I operated and easily reduced the invagination. The appendix appeared unduly thickened and turgid. In an evil moment I was tempted to remove it, and the child made an uneventful recovery. About two years later the patient was readmitted to the Children's Hospital in the last stage of acute intestinal obstruction. I operated and divided a band which ran from the site of the appendix stump and had strangled a loop of small intestine. The patient died. I have never forgotten this result of my meddling surgery. The bands and adhesions which cause acute intestinal obstruction are, in not a few cases, man-made, and may arise after aseptic or doubtfully aseptic operations. Trauma—manual or instrumental—or the use of a drainage tube for too long a period may all play a part in their development.

ACUTE INTUSSUSCEPTION

It is common knowledge that some of the features of acute intestinal obstruction, when taken in conjunction with the history, enable a positive diagnosis of the cause to be made. The presence of a tumour with certain

* Contribution to a discussion in the Section of Surgery at the Centenary Meeting of the British Medical Association, London, 1932.

characters is the best example of this. Of all the forms of acute intestinal obstruction acute intussusception affords the most striking instance of the influence of early operation in diminishing the mortality. The history, the symptoms and signs, and the presence of a tumour which can almost always be found if it be sought for under an anaesthetic, form a very definite clinical picture. Sir William Taylor of Dublin, and Sir Charles Clubbe of Sydney, have long preached the gospel of early operation in acute intussusception, and their pleadings have brought their reward. In one series of a hundred cases operated on by Sir Charles Clubbe the mortality was 3.5 per cent., and in a series of Sir William Taylor's the death rate was less than 4 per cent.

OBSTRUCTION BY GALL-STONES

In rare instances a gall-stone in the small intestine has been felt, but so rarely that help in this respect cannot be looked for. Most assistance is derived from a history of symptoms pointing to disease of the gall-bladder. Consideration of these, and of the clinical features of the case, have enabled me in the last thirteen years to diagnose, with rare good fortune, gall-stone obstruction in three cases of acute stoppage of the bowels. The stones were removed successfully in each case through a muscle-splitting incision in the right iliac region. In a fourth case, seen in consultation, I was able to make a correct diagnosis, and the stone was successfully removed by another surgeon. The operation in one of my cases was performed on the fifth day. I am able to show you the stone I removed. The patient was fortunate to survive, as the records show that when operation is postponed beyond the fourth day the patient almost invariably dies. So far as I can recall I have never been asked to see a case of gall-stone obstruction before the third day. It should be possible to make a correct diagnosis on the second day. A carefully taken history should direct attention to the gall-bladder as the possible origin of the trouble. Indeed, in most of these cases the first diagnosis has been one of gall-stone colic, and morphine has been given. This, however, only gives temporary relief. The acute pain, the frequent and copious vomiting of dark material, and complete or almost complete constipation persist. The acuteness of these symptoms, associated with a relatively mild degree of tenderness and rigidity in the right upper quadrant of the abdomen, and the absence of the referred pain and cutaneous hyperaesthesia associated with gall-stones, should afford grounds for a presumptive diagnosis of gall-stone obstruction. It is possible that the large size of the stone may enable it to be detected by radiography. I am not aware that a diagnosis has been successfully made in this way. The slides before you have been made from radiographs of large gall-stones placed on the anterior abdominal wall of obese women. It may interest you to know that shortly before I left Australia a colleague of mine on the staff of the Adelaide Hospital successfully removed a large gall-stone which was obstructing the intestine of a full-blooded male Australian native.

SURGICAL RELIEF OF INTESTINAL PARALYSIS

With regard to late cases of intestinal obstruction in which the mechanical obstacle has been dealt with, the important question arises whether the intestinal paralysis and toxæmia should be relieved by a high enterostomy or by a lateral anastomosis. A high enterostomy (jejunostomy), the rubber tube being brought through the omentum, appears to me to achieve all that is necessary with the least possible strain on the patient, and to permit of the restoration of the intestine later on to its *status quo ante*.

ACUTE INTESTINAL OBSTRUCTION *

BY

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I will confine my remarks to early post-operative obstruction of the small intestine and to acute obstruction of the large bowel, the result of new growth. The early recognition of post-operative obstruction arising after an interval of weeks or months is helped by the history. If the patient is within reach of a surgical centre, operation is seldom unduly delayed. Obstruction arising a few days following a simple abdominal operation is another matter. In this case we must consider whether the symptoms are due to so-called ileus or to filmy adhesions between loops of small intestine. Both conditions are often found.

The trouble commences to manifest itself after the first aperient; in a few hours the patient becomes restless and uncomfortable, and may vomit. An enema is given, and is reinforced by an injection of pituitary extract, with no result. The failure of response to aperients and enemata aggravates vomiting and increases abdominal distension and general distress. A second enema is given, but there is no peristaltic response.

Few will recommend reopening the abdomen within the first twelve hours unless the condition at the time of the recent operation was such as to suggest the likelihood of mechanical post-operative obstruction. The next twelve hours is marked by therapeutic inactivity. Vomiting prevents the patient taking anything by the mouth, and previous stimulating enemata have made the rectum intolerant. The patient should be given rest. Beneficent quietude is promoted by aspiration of the stomach through a Jutte tube, which may be left *in situ*; no liquid paraffin or other aperient should be introduced. If the pulse rate has not gone up, and if the tongue remains moist and the material aspirated from the stomach is still bile and mucus, there is a likelihood that an enema at the end of twenty-four hours will be followed by the passage of flatus and intestinal contents. It is taken for granted that during the period of anxiety—that is, from the time of the failure of the first aperient and enemata—fluids are generously administered. Normal saline is introduced by the drip method into one axilla from a flask above the head of the bed. It is absorbed as rapidly as it is introduced. Intravenous injections of 10 per cent. glucose solutions are given slowly every four hours. When the introduction of the needle is found difficult owing to badly defined veins, it is better to introduce a cannula and allow the solution to drip by the continuous method into the selected vein. Continuous intravenous medication is an immense advantage in selected cases.

But if, after the second twelve hours, an enema of turpentine, ammonia, or ox bile is ineffectual, immediate operation must be considered. While preparations are being made one or more intravenous injections of hypertonic salt solution are given slowly; 500 c.cm. of a 6 per cent. solution is an average quantity and strength, although the strength may be increased to 20 per cent. The replacement of the depleted chlorides in the blood sometimes has a dramatic effect in producing intestinal peristalsis and in combating the toxæmia associated with alkalosis. A copious bowel action may take place during the injection when there is no insuperable barrier to the intestinal onflow.

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