Remarks

ON

ACUTE CONDITIONS IN THE LOWER ABDOMEN OF THE FEMALE.*

BY

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Two general considerations:

1. The genital tract in the female is a hollow cylinder, bifurcate above, which communicates directly between the skin surface and the peritoneal cavity. A direct channel, or avenue of communication between a contaminated skin surface and this mesothelial space! (Victor Bonney.)

And this genital tract is subject to many vicissitudes. There are the traumata of menstruation, of childbirth, and abortion; and the dangers associated with venereal disease. It is an imperfect world. Hence in the female the frequency of acute infections of the lower abdomen.

2. The peritoneal cavity is one of the three large enclosed chambers of the body—it is the largest of the three, the largest lymphatic space. Its absorptive surface is immense, compared either with the pleura or the subdural space. Hence the danger of an acute infection of this large space. The peritoneal cavity—an organismal Valhalla—a perfect incubation chamber.

These acute conditions are sometimes grouped together under the term, "The acute abdomen," "The emergency abdomen," or "The abdominal emergency." The point of the emergency concerns both the patient and the surgeon, and any given individual has only one abdomen. To open or not to open—that is the question, a decision oftentimes of very grave importance.

I need not tell you that the opening of the abdomen should never be lightly or carelessly undertaken. I object to the term of "giving the patient the benefit of an exploration." "Open and see" is a foolish behest. If too often done this may be interpreted as "condemning the patient to an added injury." In surgery we must remember the three "C's"—caution, care, as well as cutting. You will also agree that before any abdominal operation is undertaken a vaginal examination, a rectal examination, or both, should invariably be made.

In general terms, these acute conditions may be grouped as follows:

1. Haemorrhage, a concealed haemorrhage.
2. Acute infections, usually of the uterus, the Fallopian tubes, or the appendix.
3. Perforation of the bowel or other hollow viscus—perforation or rupture.
4. An acute bowel obstruction.
5. Strangulation of any organ or neoplasm.
6. The passage of a ureteral stone.
7. A uterine abortion, spasmodic dysmenorrhoea, or even a bladder retention.

For the gynaecologist the most common of these are a ruptured ectopic pregnancy, an acute appendicitis or salpingitis, a uterine infection, strangulation, thrombosis, or an ovarian cyst, or uterine fibroid with a twisted pedicle.

Speaking in a general way for all these conditions, some of them are at once recognizable—he who runs may read—while others require a most painstaking differentiation.

May I first make two pleas of a preliminary character? The first concerns the wisdom of a careful case-history, for in many of these conditions the previous history, or the story of the onset, may afford the clue. Sir James Mackenzie pointed out that in difficult cases the diagnosis frequently depends more upon an exact history than even upon a careful examination. My second plea is always to pass a catheter, and to examine the resulting urine.

I shall now discuss in a general way the various signs and symptoms of these acute conditions.

Pain is always the outstanding symptom. It may well

be defined as Nature's expostulation to an injury, and its function is a protective one. La Rochefoucauld has told us that pain is the greatest liar in the world, but it is wise not always to believe this. At times it is a liar; and so for the matter of that are all men, and a few women; but I believe it is wise to take the following advice: "Never open the abdomen for pain only"—for pain only and with no accompanying signs or symptoms.

The most important sign, perhaps, is the face—the abdominal face—the facial expression, and this never lies. So often it is the anxious peritoneal face, apprehensive. In haemorrhage it is pallid, often waxy, and the mucocutaneous line of the lip is unduly sharp and pronounced. There is the grey ashen face of shock, and the flushed or cyanotic face of a severe toxæmia. The severity of the lesion can often in this way be immediately inferred.

And there is the attitude of the patient, her decubitus and her mobility. If the lesion be acute and intraperitoneal, the patient lies invariably upon her back, and with her knees flexed. Any movement is a torture. On the other hand, if the patient moves readily, and turns easily on her side, there is no grave lesion within the abdomen. I have often found this test of asking the patient to turn over on her side of great service.

So far, you will observe, I have not mentioned either the temperature or the pulse rate. I shall refer to them later in their special place. Let us now consider the three commonest of these lower abdominal conditions. These are haemorrhage, acute infections of the appendix or Fallopian tube, and a strangulation or thrombosis of a pelvic organ or neoplasm.

1. Haemorrhage.

The first of these is haemorrhage. The common site, of course, is a ruptured tubal pregnancy. A severe haemorrhage may arise, however, from other situations—for example, from a ruptured Graafian follicle. Three years ago Primrose of Toronto reported six such cases. I have met one in my own practice, and there was a large loss of blood. Again, a varicocele may rupture, and a uterus ruptured during labour, or perforated even by a sound or curette, may lead to a severe intraperitoneal haemorrhage. The history here is all-important.

Usually the condition is that of ectopic pregnancy. As you know, the history of the pregnancy, the amenorrhoea, is often indefinite. Rupture occurs usually between the seventh and the twelfth week, and this rupture may be large or small. The dangerous situations are the isthmus and the cornu of the uterus. If large, the haemorrhage is usually severe—the cataclysmic case with pallor, subnormal temperature, rapid and thready pulse, air-hunger, cold and clammy extremities. The abdomen is tumid and tender, frequently tympanitic, for the bowel floats; the blood has a high specific gravity. The pouch of Douglas may be full and depressed, and a feeling of crepitation may be present as the finger breaks the blood-clot. There is frequently the history of a dagger-like thrust of pain, with immediate faintness or collapse. A uterine trickle of blood is often manifest, together with rectal tenesmus, and some bladder strangury. In these severe cases the diagnosis is easy, and does not require the taking of a haemoglobin index. The abdomen should be opened at once, and venous transfusion, of citrated blood or a glucose saline, carried out.

It is well to remember that if such a patient survive and be not seen till the fourth or fifth day she may present all the signs and symptoms of a widespread peritonitis—namely, fever, a rapid pulse, a distended abdomen with paralytic ileus, regurgitant vomiting, with a marked leucocytosis—the picture of late bowel obstruction.

In a so-called chronic case—the "leakers"—while the diagnosis is less urgent, it is sometimes more difficult to make. There is the history of repeated attacks of sharp, lancinating pain in the lower abdomen, an interval of twenty-four or forty-eight hours, or even some days, between them; slight uterine haemorrhage, no marked fever or great disturbance of pulse rate; a lateral mass on one or other side of the uterus, increasing rapidly in size. Mark such a case. If a decidual cast is shed from the uterus—this occurs in only about 20 per cent. of the cases—the diagnosis is clear.

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There is in these cases a degree of anaemia; there is often a marked leucocytosis (De Quervain contends that a leucocytosis of 20,000, where signs are slight, points to a haemorrhage rather than to an inflammation). A haemoglobin index is of small value. Two years ago the hope was expressed that a low and falling index would reveal a concealed haemorrhage. Unfortunately, this is not so.

We rely in these cases upon the history—the recurrent attacks of pain, the uterine bleeding and mass, at first lateral to the uterus, which increases rapidly in size. It is always well to bear that in mind. If in doubt, an exploratory colpotomy is the indication, and at once settles the matter. If blood is found, the abdomen should be opened from above and the tubal sac removed.

2. Acute Infection of Appendix or Fallopian Tube.

The second common condition is an acute infection—an infection of either the vermiform appendix or the Fallopian tube. The distinction between these two infections is all-important, for an inflamed appendix should be at once removed, certainly within the first twenty-four hours; while to open the abdomen for an acute salpingitis is nothing short of a disaster.

The inflamed appendix we all know, with its more or less definite syndrome, outlined first by Reginald Fitz, and its surgical treatment indicated by Charles McBurney of New York. Professor Wilkie of Edinburgh emphasizes an important pathological and clinical distinction. He says:

"There are two main types of acute appendicitis: (a) the one infective, an organismal invasion of the lymphoid tissue, the inflammatory type; here there is pain, more or less continuous, but not severe, fever, increased pulse rate, localized tenderness, and a marked leucocytosis; and (b) the obstructive type, faecal concretions often present, blocking of the circulation, and sudden gangrene, and perforation. Here the pain is intense and spasmodic, the fever is slight, the pulse is often rapid—the abdominal faeces—and no great increase in leucocyte count."

These are his two main divisions, and I think they are well founded.

The common infection of the Fallopian tube we are all familiar with. It is really a mixed infection, an acute exacerbation of a chronic condition. The chronic infection is a gonorrhoeal one, rarely tuberculous, and the acute maleficent synergism is frequently due to the colon bacillus.

It is the distinction between these two acute conditions, the one of the vermiform appendix and the other of the Fallopian tube, that sometimes taxes our clinical acumen to the utmost. How shall we proceed to such a distinction? It is, I admit, an old story, but one that in our daily practice is ever new.

In a general way it may be said that in acute salpingitis the patient does not appear so ill; the temperature is often high, it is true, usually higher than in appendicitis, but the pulse rate is not correspondingly disturbed. The face is often flushed, but not to the same degree anxious or apprehensive. The function of the bowel is not so greatly disturbed, nausea and vomiting are not a feature, though there may be considerable distension; abdominal tenderness and rigidity are more diffuse and widespread. All this in a general way, the general rule if you like, where there are bound to be exceptions.

The history of the case—of the onset, or of previous attacks, a previous complicated puerperium, a one-child sterility, with depraved menstrual habit—may afford a clue. And then in our examination we always look for signs of a gonorrhoeal infection. As I have said, it is an imperfect world. First, the signs at the vulvo-vaginal outlet; the chronic urethritis, with the pouting and oedematous tubules of Skene; the maculae gonorrhoeicae at the opening of the Bartholinian duct—these are all signs that a gonorrhoeal infection has passed that way.

If the infection be a Noeggerath's infection—a chronic gleet in the male—there will only be the chronic cervical catarrh and the immobility of the uterus—the uterus fixed in starch, as it were, and often with no definite appendage mass. Yet at this time the appendages are slightly enlarged and very sensitive, and the mere movement of the cervix uteri elicits severe pain.

With such a finding the diagnosis is an acute exacerbation of a chronic salpingitis, with a spreading peritonitis, and the indication is—*above all things do not operate.*

The situation in these cases was well summed up some years ago by one of your able southern surgeons, when he said, "In a gonorrhoeal salpingitis, never operate in the acute stage; wait till the cold stage, and clear them out." Never operate till you are compelled.

In contradistinction to this clinical picture I think it is wise for us to keep in mind a typical attack of appendicitis. The history helps us here. There may have been previous attacks, but—

The pain is first felt above the umbilicus or in the epigastric region; it soon determines itself in the right lower quadrant. There is anorexia, or nausea, or even vomiting. There is tenderness over McBurney's point, which we remember is the base of the mesentery of the appendix—a lymphangitis. There is also some muscular spasm or rigidity of the right rectus or oblique muscles, with fever or quickened pulse rate, often not specially pronounced. There is a moderate leucocytosis—ten to twelve thousand—with polymorphs predominating. If the inflamed appendix be near the brim of the pelvis a vaginal or a rectal examination shows a marked tenderness in the neighbourhood of the right sacro-iliac joint.

Such is a typical clinical picture of a catarrhal appendicitis. We can see at once how it differs from an acute salpingitis. When in doubt between the two *watch and wait*—hour by hour, not day by day.

3. Thrombosis, Gangrenous Organ or Neoplasm.

Here the lesion is a definite venous thrombosis, or a twist in a pedicle. The common neoplasms that suffer this pathology are ovarian cysts of medium size, or a fibromyoma of the uterus, pediculated or intramural. Frequently the patient has been aware of the presence of the neoplasm. The pain is severe and colic-like, short in duration, and the tenderness is at first localized to the tumour surface; there is slight disturbance of temperature or pulse rate.

A careful examination discovers the neoplasm. If the thrombosis be extensive or the strangulation severe, and the patient be seen late, there are all the signs of a superadded peritonitis, the result of a colon infection. These three conditions mark the common acute lesions of the lower abdomen.

May I add here a word of warning in respect of pneumonia?—a pneumococcal infection, which may spread below the diaphragm and simulate even an appendicitis. My warning consists in this—a careful history of the onset. If a rigor has occurred, a chill, it is probably not appendicitis. In a series of 85 cases of appendicitis a chill was recorded but three times; so, if there is a chill at the onset, watch the alae nasi (count the respirations), think of pneumonia, and make a leucocyte count. If the leucocyte count be over 15,000 in the first twenty-four hours the condition is likely to be pneumonia and not appendicitis.

A word or two concerning bowel obstruction—an obstruction of the lower bowel. I need not remind you to examine all hernial orifices. An intussusception is common only in the young or adolescent, and soon gives rise to a typical ileo-caecal tumour and the characteristic bloody-mucus bowel discharge. A volvulus occurs rather in the old, a rare left-sided lesion, which can usually be felt by bimanual examination.

The obstruction causes colic, with quiet intervals; constipation, of course, and, later, the antiperistalsis, may result in vomiting. A diverticulitis occurs usually in the pelvic or iliac colon, and diarrhoea is a frequent concomitant—diarrhoea and fever.

A stone in the ureter or in the pelvis of the kidney may cause abdominal distension and vomiting, and not a few abdomens have been mistakenly violated. The onset of the pain, its distribution into the urethra or down the leg, frequent micturition, and blood in the urine may possibly identify it. If in doubt, an x-ray picture should be taken.

A good surgeon must first be a good physician—a mind broadly trained, and the hand narrowly. The function of the good surgeon is to diminish surgery in the world to-day.