Caesarean section shows that this risk is very greatly exaggerated. By that I do not mean that one would choose to wait long in labour before a Caesarean section is performed, but, as we shall show later, it may be necessary to do so; if, however, reasonable care had been exercised in any vaginal examination that may have been made, I personally would not hesitate on that ground to perform a Caesarean section. I should not prefer to do so, but I should not hesitate to do so, because it is the best alternative then at our disposal. In these circumstances I think it would probably be wisest to paint out the vagina and then to evert the uterus, packing it off completely from the peritoneal cavity, and when the child had been removed, to paint out the uterine cavity itself with a suitable antiseptic.

With regard to the question of a scar in the uterus, much has been made of its risk in a subsequent pregnancy. Personally I have not been troubled by it, and I attribute this to the fact that I take the greatest possible care in my method of suturing the uterus. Normally the cavity of the pregnant uterus is sterile. This I have proved, because in 75 cases I have taken smears at the time of operation, and these have been invariably returned as sterile. Therefore one is perfectly safe in putting one's sutures right through the mucous membrane into the cavity, and thus getting a very exact apposition of the walls.

I have one patient at Guy's Hospital on whom the operation has been performed five times, and on the fifth occasion I asked the dresser to show me where the scars were. None were visible; the only result of the five operations was that the anterior wall of the uterus was considerably thickened and more powerful than the posterior. I fancy there are very few women who would want more than five babies born by Caesarean section.

With regard to the psychic effect on the woman and her relatives, this used to be tremendously marked in the days when Caesarean section was performed as a last resort, and so rarely that every student and every nurse that could possibly manage to do so used to come to watch it. It also affords material for those amazing females who apparently delight to gather round a pregnant woman and tell her of all the horrors, real and imaginary, that can be associated with labour. Now, fortunately, this stage is completely past, and I have on many occasions, both in hospital and in private, been asked by women to deliver them by Caesarean section.

What, then, is going to be to-day our routine practice? Normally we should examine all women at the thirty-sixth week, and in the vast majority will find that the head passes the brim, and nothing more will be necessary, in all probability, than to avoid those accidents which may always occur during labour, however normal it may appear to be. However, one should be on the watch, because the head may pass the brim, but may become stuck in the mid-cavity, owing to those very important ischial spines. Should delay occur there, always be on the look out for a persistent occipito-posterior presentation, because these play a large part in determining backward rotation. Delay also may occur at the outlet. In the two latter cases, having corrected the position if necessary, the application of forceps, after sufficient time has been allowed for moulding to take place, will usually finish off the labour very satisfactorily.

In those cases in which the head is overlapping at the brim, and in which we feel certain that the power of the uterus and the moulding of the child's head will allow it to pass, do nothing, but expect the labour to last longer than usual; and here a study of the psychic side of the patient will be of very great importance, because a human being cannot be expected to go on indefinitely in pain, and it is in these that the use of morphine and scopolamine is of such great value. If it is found that after the lapse of a reasonable time the head does not come down into the pelvis, Caesarean section may still quite safely be performed. If, however, the child does come down sufficiently for the head to be through the os and through the brim, and becomes at all engaged in the pelvis, the extraction of the child by forceps should be carried out.

On the other hand, if we feel certain after all examinations have been made, supplemented, if necessary, by x-ray

photographs, that the head is definitely too large, I should not consider the induction of labour at an early date, for the reasons I have already given, but would let the woman go on into labour and see what happens. If the child makes no advance I should perform Caesarean section. If I felt confident at the start of labour that the overlapping was so great that one could not intelligently anticipate that the obstruction could possibly be overcome, Caesarean section would be indicated.

AN IMPORTANT SIGN IN ACUTE APPENDICITIS.*

BY

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Most cases of acute appendicitis present no difficulty in diagnosis. The sudden abdominal pain, first, possibly, in the upper part of the abdomen, then localizing in the right iliac region, the nausea or vomiting, the hyperaesthesia and/or tenderness on gentle palpation of the right iliac fossa, the rigid abdominal wall, either limited to the right iliac region or general—all these signs and symptoms present a picture which the veriest tyro can recognize. The possible presence of right-sided localized tenderness or swelling on rectal examination, pain felt in the right iliac region when sudden pressure is made over the left iliac region, pain evoked on suddenly bringing into action the muscles upon which an inflamed appendix lies, an increased rectal temperature, are still further corroborative signs, one or more of which may be present.

In a large number of cases, however, a patient complains of slight abdominal pain in the right iliac region, but there are none of the above-noted signs or symptoms. There is a clean tongue, normal temperature, normal pulse, no pain or tenderness on movement, no nausea, no vomiting, no rigidity, and no abnormality discovered rectally; in fact, there is simply a "stomach ache." In the course of the last few years I have had at least a dozen such cases where I was yet able correctly to diagnose acute appendicitis, in each case an immediate operation demonstrating the appendix to be either inflamed or full of pus, or ulcerated.

Such apparently mild cases with no distinguishing signs or symptoms place one on the horns of a dilemma: if one diagnoses acute appendicitis and removes an appendix which proves to be normal, one is rightly blamed for performing a needless operation; if, on the other hand, one decides against appendix trouble, and a few hours or days show definitely that appendicitis is present, with possibly disaster resulting from delay in operation, then one is impaled on the other horn. Auto-suggestion may give rise to many of the symptoms of appendicitis, especially in young susceptible people, and these constitute the larger bulk of difficult cases; children form another large class; but there are also a large number of cases of acute appendicitis with practically no signs or symptoms.

For some years I have noticed that in all cases of acute appendicitis one sign, not mentioned in the textbooks, is invariably present at the onset. It is the state of the abdominal wall covering the right iliac fossa, and is produced by the earliest reflex of the inflamed appendix. This reflex may, indeed, produce the classical "rigidity" in severe cases where the onset of the appendix inflammation is very sudden and acute, particularly in those cases where the appendix contents are under pressure from a blockage of its lumen or are of great virulence; but in just such cases there is no difficulty in diagnosis. The earliest reflex may, however, result in nothing more than an increase of the normal tone of the muscle covering the right iliac fossa, and is definitely appreciable to careful palpation. This slight tightening of the muscle has to be carefully searched for, and all voluntary contraction of the abdominal muscles must be obviated. The patient lies on his back, limp, his arms by his sides, breathing freely with his mouth wide open, his tongue protruded, and his glottis open (making no noise on respiration). The warmed hand of

* A paper read before the Dorset and West Hants Branch of the British Medical Association.

the surgeon is then placed on the lower abdomen, the metacarpo-phalangeal joints resting on the pubes and the fingers kept rigid, together, extended, and pointing first to the right clavicle when examining the right side and to the left clavicle when examining the left side; by a gentle movement of the metacarpo-phalangeal joints, wrist, and elbow, and without any deep pressure of the phalanges, the muscle tone of the two sides is several times compared, when it will be found that there is a definite increase of tone on the right side as compared with the left.

It is a very delicate palpation, but is worth carefully cultivating. I regard it in my practice as a definite deciding factor in doubtful cases, and it has never let me down. The fact that it is an objective sign and not under the control of the patient makes it of the utmost value.

Another little but important point is always to treat a possibly inflamed appendix very gently and not to palpate deeply, for even in what appears to be the mildest of cases there may be an ulcer on the point of perforating, or the appendix may be acutely distended with pus. In two cases I have known rough handling result in perforation and death.

Of course, this sign by no means rules out chest troubles or stone in the kidney or ureter, or some other lesion of the bowel (for example, volvulus or intussusception), or a twisted pedicle of an ovarian cyst; but these, and other conditions in which the sign may be present carry other well-defined signs and symptoms. In one such case with mild symptoms of abdominal pain but with definitely increased right iliac muscle tone the appendix proved to be adherent to the right ovary from old inflammation, thus producing the common menstrual appendix pain. In another patient sent to hospital as suffering from acute appendicitis, where many symptoms were present but this sign was absent, a diagnosis of small ovarian cyst was made, and this was in due course removed.

The following three cases illustrate the value of examining the iliac fossa in the way I have described.

CASE I.

I was called in one evening to see a governess, aged 22, who had a slight abdominal discomfort in her right iliac region. The history was that she had had a slight pain in the early morning, which had passed off; she had a normal pulse and temperature, a clean tongue, no nausea or vomiting, and no physical signs whatever except the slightly increased muscle tone over the right iliac abdominal wall. I said to her mistress that I suspected appendicitis, but I would leave her till the morning. The patient had a perfect night, and next morning had no pain or other symptom; but she still had the slightly increased muscle tone in the right iliac region. I definitely diagnosed acute appendicitis, and operated the same morning. The appendix was swollen and full of muco-pus.

CASE II.

A man, aged 32, walked into my consulting room at 7.30 one evening; he punched himself hard with his fist in the right iliac region and said he was a little uncomfortable there, and wanted to know what was the matter. He had wakened the previous night with a pain and had taken a dose of castor oil. At 9 a.m. he had gone to his office eight miles away, but in the evening, still finding that deep pressure produced discomfort in the same spot, he came to see me.

His tongue was clean; he had had no nausea or vomiting; his pulse and temperature were normal, and there was no hyperaesthesia or tenderness in the right iliac region except on very deep pressure (as is common with the normal person). He had no rigidity, but there was a slight increase of the muscle tone of the right iliac region as compared with the left. I operated the same evening, and found that the appendix was inflamed, tense, and full of muco-pus, with commencing ulceration of the mucous membrane.

CASE III.

A man, aged 35, had ridden two hundred miles on his motor cycle, arriving home exhausted. He ate a large dinner, and took various forms of alcoholic liquor to excess. After a good night's rest he woke up at 8 o'clock the next morning with a severe headache, vomiting, and diarrhoea; he had, in fact, what might have been expected—a severe gastro-intestinal irritation. He stayed in bed all day, but could keep nothing in his stomach, returning even small drinks of water. At 7 p.m. he sought my advice.

He had had no abdominal pain; when I examined him he had no temperature and his pulse was normal; he was quite cheerful, and wanted something to stop the vomiting when he took water. He evidently had acute gastro-intestinal irritation. There was no abdominal tenderness or rigidity, but he was a little hyper-

aesthetic at McBurney's point. He had definite, but slight, increased "muscle tone" in the right iliac abdominal muscles. He had no other signs or symptoms of acute appendicitis.

I told him that, in addition to his "stomach upset," he had also got an acutely inflamed appendix, and advised immediate operation. He demurred. I pointed out the risks he ran without operation, and at last he consented. When the ambulance to bring him to the nursing home arrived an hour afterwards he refused operation on the grounds that another medical man had assured him that there was no appendicitis, and that it was "gastro-enteritis" only. At 10 p.m. that doctor came and apologized, saying that the patient merely asked him, "Have I appendicitis?" and had withheld the fact that I had seen him; he (the doctor) could find no evidence whatever of appendicitis, and had advised him accordingly. At 4 a.m. the same doctor came to my house and said he had just been called to the patient, who now had definite signs of acute appendix. He had had him removed to the nursing home, and asked me to operate. I did so at once. The appendix was acutely inflamed and on the point of ulcerating through at one spot. Thus the increased muscle tone sign had enabled me to say definitely that the appendix was involved nine hours before the other doctor (a very able diagnostician) was convinced of that fact.

THE PORTABLE ELECTRO-CARDIOGRAPH IN PRACTICAL CARDIOLOGY.

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THE electro-cardiograph is one of the best-recognized methods at the present time for forming an accurate opinion of the heart's functional activity. Until recently the electro-cardiograph has only been available (1) to persons in a hospital or similar institution; (2) to patients capable either of attending or being brought to a cardiologist's consulting room.

FIG. 1.—The top two records are from the same person.

The production of a portable electro-cardiograph has greatly extended its scope, as it is now available anywhere quite independent of electric power supply. There are at least two portable instruments, which we have had the opportunity of thoroughly testing. These instruments must of necessity become increasingly used as their value is recognized. They are the Victor machine, which is constructed on the wireless valve principle, by which the heart currents are amplified and then recorded; and the Cambridge portable instrument, which is essentially a string galvanometer and records the actual current. Either of these instruments is thoroughly reliable, and gives records which are for all practicable purposes comparable.

The records of normal cases reproduced in Fig. 1 show the slight differences of these instruments and the standard Cambridge instrument.