9 in. long, with no sacculations, but a very marked longitudinal muscular coat. He excised descending colon, sigmoid flexure, and upper part of rectum, effecting a junction between the left end of the transverse colon and the anus, with a perfect result and complete restoration of health.

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NOTES ON A CASE OF ENTEROSPASM.

By E. OLIVER ASHE, M.D. LOND., F.R.C.S. ENG.,
SURGEON TO KIMBERLEY HOSPITAL.

THE following case seems to be a typical example of "enterospasm," a disease about which very little is known, and of which I personally knew nothing at all, and failed to identify as a definitely recognized pathological condition at the time of the operation. Dr. Briggs, however, our junior house-surgeon, who saw the operation, said at once "that is the condition recently described in the *BRITISH MEDICAL JOURNAL*," and I find in the number for January 13th, 1906, a very careful and thorough account of a series of similar cases by Dr. Hawkins, of St. Thomas's.

The patient, a strong healthy woman, aged 22, a member of a healthy family well known to me, of active habits but inclined to be stout, first consulted me on March 22nd, 1906.

History.

She had been well and strong and had never ailed anything until about December, 1905. She then began to be a little constipated, not always, but now and then, and to suffer from a feeling of discomfort in the left side of the stomach low down, which at times became actual pain, especially on walking far or fast. The pain did not last long and did not come frequently, sometimes staying away for a week. Early in January she got married, and was then apparently in perfect health. Whilst on her honeymoon at Johannesburg the pain and constipation became more troublesome and she had to take aperients regularly, which she had never done before, and on her return home the constipation continued. On February 1st, a few days after returning to her home, she was suddenly seized with most acute abdominal pain accompanied by a feeling of sickness, but she did not actually vomit. Various domestic remedies were tried to ease the pain, but gave no relief, so the nearest doctor was called in, and he gave a hypodermic of morphine which neither eased the pain nor sent her to sleep. Finding that the bowels had not acted satisfactorily for several days the doctor tried castor oil, cascara, Epsom salts, etc., and used enemata thoroughly, but in spite of all three days passed before the bowels were got to act, and during all this time the patient was in pain, fairly acute but not so acute as it had been at its first onset. After the bowels had acted well the pain passed off. The bowels were then kept open with an aperient containing cascara, nux vomica and magnesium sulphate in rather large doses; this had to be continued until I saw the patient at the end of March, though she was carefully dieted, and her manner of living was properly regulated.

Condition while under Observation.

Examination of the abdomen was difficult on account of tenderness and a queer twitching of the muscles to which I shall refer later, but I failed to find any cause for the constipation, and considered the case to be one of atony of the bowel, though this did not account for the acute attack of pain. I prescribed a pill of aloin, belladonna, and nux vomica to be taken at bedtime. As this had no effect, I ordered in addition three-hourly doses of cascara and magnesium sulphate—1 drachm of each—and this opened the bowels, but not at all freely.

On March 27th, the patient was put under chloroform, and a very careful and thorough examination was made—abdominal, rectal, and vaginal—but nothing to account for the constipation could be found.

On March 29th a mixture containing extract of cascara sagrada liq. (B.P.) ml , and tincture nux vomica mx , was substituted three times a day after food; to this, as it failed to act properly, tincture of belladonna mx were added on April 2nd, and a daily enema of glycerine was found necessary on April 4th. On April 6th the belladonna was increased, but had no good result.

All this time there had been a good deal of tenderness and abdominal pain, not localized, worse when the bowels acted, and much worse when the enema was used; and though the bowels could only be got to act once a day, there was frequently a feeling that they were going to act, which had no result, no flatus even being passed, though there was rather severe straining.

The tenderness was curious, in that it was very markedly

superficial; if the hand was laid ever so lightly on any part of the abdomen, severe pain was felt at once, and an involuntary wincing or spasm of the abdominal muscles resulted, but this did not happen even on firm pressure over the lower ribs. This light pressure also gave rise to deep pain, but my impression was that the superficial pain was the worst; even when the patient was lying still in bed, this involuntary wincing kept happening without any apparent cause.

Belladonna and opium applications to the abdomen not in any way diminishing this excessive irritability, on April 13th the nux vomica was omitted from the medicine on the supposition that part of the irritability might be due to unusual susceptibility to strychnine, but no improvement in this respect could be noticed.

The glycerine enema now began to lose its effect, and a soap and water enema was used. On two occasions I gave this myself, using a long tube (which, however, only could be got to pass about 4 in.) and a large quantity of water. On the second occasion I used about 4 pints of water, and, though given very slowly, this gave rise to most acute, in fact almost unbearable, pain, accompanied with vomiting; $\frac{1}{4}$ gr. of morphine was given hypodermically, and was repeated in two hours, but did not seem to ease the pain in the least, which, however, subsided in a few hours.

During all this time the temperature was never raised, and there was never any abdominal distension, though the patient was positive that no flatus passed. Till the last week or so the patient was up and about; but when the large enema had to be used, owing to the failure of the glycerine to act, she had so much pain that she preferred to stay in bed. Finding that her condition was getting worse, that no medicine could be relied on to move the bowels, and that enemata were beginning to lose their effect, I decided, after consultation with Dr. Russell, to explore the abdomen.

My own opinion was that there was partial strangulation by a band, but as there was no history of any of the usual causes of band strangulation, such as peritonitis, tuberculous, general or pelvic, this was at best only a guess.

Operation.

The abdomen was accordingly opened below the umbilicus in the usual way on April 23rd. On introducing the hand something abnormal was felt almost immediately, just to the left of the incision. On bringing this out of the abdomen for examination, it proved to be a piece of small intestine very much narrowed. The narrowed portion was about 7 in. long, and as thick as an ordinary finger, whilst the bowel above and below was the size of three fingers. There was no gradual tapering of the wide into the narrow part, or gradual expansion of the narrow into the wide part again, but at one end of the narrow part the natural-sized bowel abruptly became contracted, and at the other resumed its natural calibre just as abruptly. There was no groove, twist, congestion, or sign of peritonitis to suggest that the bowel had been nipped or strangulated in any way. The narrow part was firmly contracted, felt solid and fleshy, and was much paler than the rest of the bowel. It was to some extent pervious, as flatus could be pressed through it from the adjoining bowel, but about a drachm of soft faecal matter was lodged in the normal bowel just at the beginning of the contracted part, and was evidently unable to pass. Not being satisfied that all the symptoms were due to this contraction alone, the contracted part was covered with warm cloths and kept outside the abdomen while I tried to find some other cause for them, but though I spent ten minutes in very carefully examining the rest of the abdominal contents nothing else could be found. On then removing the cloths to look at the contracted part again, I found, to my intense surprise, that it had resumed its normal size, feel, and appearance, and could only be distinguished from the rest of the bowel by a slight difference in colour. The question how to treat the contracted part having thus solved itself, the bowel was returned into the abdomen and the wound stitched up in layers in the usual way.

The recovery after the operation was uneventful; a simple enema (one pint) was given on April 25th, the second morning after the operation, and, as the bowels acted quite well, it was continued every morning. On the evening of April 30th a pill of aloin, extract of belladonna, extract of nux vomica, blue pill, and capsicum was given, and acted so well that it was repeated every night, and the enema was discontinued. On May 6th the twitching and abdominal tenderness which had been absent since the operation again returned, but in a much milder form, and only lasted a few days. On May 7th the pill was reduced in strength, as it was acting quite well; on May 9th the bowels began to act too freely, and for three or four days acted five times a day, blood and mucus passing with the motion, but by May 14th constipation had again set in. Liquorice powder having no effect, the enema was again used. After experimenting with different aperients for a few days, I found that a half-ounce glycerine enema would act, and this was therefore used each day with a good result.

On May 23rd, acting on Dr. Russell's suggestion, I ordered tincture of belladonna mx three times a day after food, and this was increased until by May 30th the dose had reached mxx , and the full physiological effect had been obtained. The belladonna seemed to have very little effect, except that it allowed the glycerine enema to be reduced from 4 drachms to 2 drachms. The dose was therefore gradually diminished, and

when the patient left the hospital on June 3rd she was instructed to keep on gradually diminishing the dose to the vanishing point.

On July 30th she reported "I am taking 10 drops of belladonna at night only, but I am not taking any opening medicine as the bowels act twice a day." Later she wrote that the bowels were acting perfectly well without either belladonna or the enema. On October 11th she wrote, "Sometimes I get the old pain down the left side again; last week it was rather bad. The bowels are all right, but I have had to use the glycerine enema four or five times since I wrote to you last."

Two points in Dr. Hawkins's summary of the conclusions to be drawn from his observations bear directly on the present case, namely:

1. "Whether the pain is short and sharp, or long and wearing, it is usually situated in the right or left iliac fossa or the immediate neighbourhood."
2. "In both these situations it may lead to the idea that more serious disease is present, as affecting chiefly the appendix, and to a less extent the sigmoid flexure."

In the case here reported the worst pain was in the left fossa, and so the question of appendicitis did not arise, but obstruction by a band or intussusception seemed quite possible. Looking at some of the symptoms with the knowledge of what the condition actually was they do not seem very serious. For instance, there was no loss of weight, though the illness had lasted a considerable time, vomiting was a rare occurrence, fever was absent, appetite was good, tongue clean and moist, and the abdomen practically not at all distended; but when it is remembered that constipation was absolute except when the enema was used, and that even flatus failed to pass, and that latterly pain was constantly present, exploration was manifestly the proper course to adopt.

That mere spasmodic contraction of a part of the bowel can cause these symptoms, shows that a new factor has to enter into our calculations when diagnosing abdominal cases; and if this condition can occur in a strong and healthy young woman in easy circumstances, with no worries and not at all neurotic in the ordinary acceptance of the term, the positive diagnosis of "enterospasm" will always be a difficult matter.

One of the symptoms noted—namely, the extreme strychnine-like irritability of the abdominal muscles and the tendency to spasms of pain either in the muscles or the underlying viscera—seems worthy of special attention. It may perhaps be found, with wider experience, that this symptom is pathognomonic; and, if so, it will be of great value in differentiating enterospasm from other abdominal conditions which it so closely simulates.

SIMPLE COLONIC ADHESIONS A CAUSE OF INTERMITTENT ATTACKS OF ABDOMINAL PAINS.

By A. ERNEST MAYLARD, M.B., B.S.LOND.,
SURGEON, VICTORIA INFIRMARY, GLASGOW.

A CASE coming recently under my observation, in which the symptoms appeared to be solely due to some simple adhesions hampering the proper action of the colon, recalled another similar case which I operated upon about four years ago, and the two seemed to me sufficiently interesting to place upon record. In neither case was a correct diagnosis made, nor perhaps could have been made. Indeed, in the one the symptoms seemed typically to suggest chronic appendicitis; in the other—mostly from the age of the patient—the possible existence of early cancer of the large bowel. Both patients were comparatively healthy, and in neither case could any antecedent history satisfactorily ascribe a cause for the condition found at operation.

CASE I.

Miss H., aged 43, was brought to see me by Dr. Bradford of Carlisle. About thirteen years ago she was seized with pain in the right iliac fossa accompanied with vomiting. Since that time she has had ten or eleven similar attacks. The vomiting would pass off in a few days, but the pain and discomfort in the iliac fossa would linger, sometimes for weeks. They were unaccompanied with any increase of temperature, and there was either very slight or practically no tenderness of the part. She had always been constipated, requiring to take aperients, and this condition was more marked at the time of her painful attacks. With the exception of very slight pain on deep pressure there were no physical

signs to be elicited by digital examination. The genito-urinary system appeared healthy. She complained sometimes when walking or in moving her right leg that pain was felt in the same region.

Operation.—The abdomen was opened as for an appendix operation. The appendix, however, appeared perfectly healthy as did also the uterus and adnexa. On further searching for a cause some adhesions were encountered about the middle of the ascending colon which doubled the bowel on itself (see Fig. 1) and so attached it deeply that it could not be brought

Fig. 1.—a, Ascending colon; b, caecum; c, adhesions binding together two limbs of the colon.

out like the caecum below and the bowel above. On examining more closely the adhesion a small knotty structure existed in the middle of those which bound the limbs of the colon together. The colon itself in the neighbourhood of the adhesions presented no indication of constriction, of ulcer, or of growth, the passage from below upwards appearing perfectly free. The adhesions were divided and an attempt made to straighten out the gut, but it was soon seen that this was prevented by the anterior longitudinal band of muscular fibres which stood up like a tense cord. As there seemed some difficulty about liberating the bowel from its deeper attachments it was left undisturbed and short-circuiting performed by creating a fistula bimuscosa between the two limbs of the colon, thus establishing a straight tract between the caecum and the upper portion of the ascending colon. This was effected by suturing.

Subsequent microscopic examination of the "knot" showed it to consist merely of what appeared to be a small collection of mesenteric fat.

The special points of interest in this case were two: The contracted condition of the longitudinal muscular band which prevented the bowel straightening out after division of the adhesions, and the attachment of the bowel to the psoas muscle. This latter relationship would seem to explain the cause of the pain when the leg was moved, for every contraction of the muscle would exercise a dragging effect upon the bowel, and so effect a result similar to that evoked by the normal peristaltic movement. The contracted condition of the anterior longitudinal muscle band seemed to suggest that the mischief was of some long standing. For just as one is familiar with the shortening which muscles undergo about chronically contracted joints, so this bent condition of the bowel, by probably old adhesions, had caused the band to become shortened. As an alternative to the operation performed was the transverse division of this muscle, and the execution of coloplasty; but, as the separation of the deep attachments seemed difficult, I thought it advisable to leave the parts in their altered position, and establish a straight course of the canal by a bimucous fistula, colo-colostomy.

CASE II.

Miss A., aged 54, I was asked to see by Dr. Alice MacLaren. Her history was that she had suffered from constipation all her life, but more so recently, and had been obliged to take aperients to obtain a movement. Beyond this, her only symptom was more or less pain felt in the course of the descending colon when the bowels were confined. Relief usually followed an evacuation. There was a history of an old injury to the left side, but further than this there was nothing to account for her illness. No history of peritonitis; no tuberculous diathesis. The abdomen was opened in the course of the descending colon. The omentum was discovered attached for a distance of 4 in. along the descending colon, forming a broad band, which held the transverse colon down so that a similar distance of 4 in. existed between these two segments of the bowel (see Fig. 2). This broad membranous attachment was severed and the two portions of the colon freed. The bowel otherwise seemed quite healthy, and no other adhesions were detected in any other part of the abdominal cavity. The patient made an uninterrupted recovery, and now—about four years since her operation—has remained quite well and free from her old pain.

Fig. 2.—a, Transverse colon; b, descending colon; c, omentum uniting the two portions of the colon.