REMARKS

ON

INTESTINAL OBSTRUCTION: WITH SPECIAL
REFERENCE TO DIAGNOSIS.*

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I.

GENTLEMEN,—I make no apology for bringing before you the subject of obstruction of the bowel, as I am well aware that many of you have had personal experience of the difficulty and anxiety which attend its management; and that a review of the whole subject, with the aim, if possible, of placing clearly before you the points which chiefly bear on diagnosis and treatment, together with the relation of cases which have mostly occurred in the practice of my hearers, may prove acceptable. I have placed on the table a large number of morbid specimens, illustrative of the different points touched on, and to these I will from time to time direct your attention.

In what follows, I do not include strangulated hernia, hysterical affections, or malformations. They lie beyond my present thesis; but it is necessary prominently to state that, as hernia is by far the most common of all causes of intestinal obstruction, the surgeon should, in any case in which symptoms of occlusion are present, convince himself by personal examination that there is no hernia. No statement, however positive, on the part of the patient, should cause him to dispense with such an examination.

Intestinal obstruction may arise from very many causes. Some of these are not difficult to discover; but others are very obscure, and, not unfrequently, the exact source of the affection entirely eludes our research during life.

The causes of obstruction may be classed as follows:

A. Those existing within the bowel itself;

B. Those existing in the wall of the gut;

C. Those seated in surrounding parts.

A. Of causes lying within the intestinal canal, we may have

(a) Foreign bodies which have been swallowed, or have formed within the bowel, or been inserted by the anus. I need not recount the vast variety of foreign bodies which have been swallowed and caused more or less obstruction. Suffice it to say that, while the most heterogeneous substances—false teeth, coins, knives and forks, masses of hair and string, pins, seeds and kernels of fruit, etc.—have passed downwards into the stomach and bowels, it is remarkable how seldom they have occasioned (when there was no previous or coincident narrowing of the passage) complete obstruction. The most formidable agents have been expelled without injury, while articles (like fruit-seeds) apparently innocuous have caused the most serious consequences.

Of concretions formed within the body, gall-stones are the most frequent sources of occlusion; but the aggregation of certain chemical materials taken as medicines (subnitrate of bismuth, magnesia, sesquioxide of iron, saccharated solution of lime, etc.), and, in a few cases, collections of the *ascaris lumbricoides* and masses of *feces*, have been known to close the bowel.

Various agents, inserted into the lower end of the gut, have also obstructed its canal. A soda-water bottle and a box containing instruments adapted to favour the escape of a prisoner from jail may be mentioned as among the recorded examples.

(b) Intussusception or invagination, in which one portion of the bowel passes within another, is, according to Brinton, the cause of obstruction in nearly half of the cases of the affection under review.

(c) Incarceration of the bowel in old irreducible herniary protrusions.

(d) Growths, simple or malignant, protruding into the intestinal canal.

B. Causes seated in the wall of the gut. (a) Spasm, such as may arise occasionally in enteritis and lead-colic. (b) Paralysis of the bowel, as in violent catarrhal inflammations and after herniotomy. (c) Stricture, due to cicatrisation after ulceration, or to malignant disease of the bowel. (d) Volvulus or twist in the bowel. (e) Hypertrophy of one of the *valvulae conniventes*, as in the specimen on the table from the Hunterian Museum.

C. Causes lying outside of the bowel. (a) Adhesions of the bowel to

some surrounding part, or to another coil of bowel. (b) Bands or diverticula constricting the bowel. (c) Tears or apertures in the omentum, or mesentery, or peritoneum, allowing the passage of a coil of bowel. (d) Internal hernia, as diaphragmatic, obturator, ischiatic, into the foramen of Winslow, etc. (e) Enlargements or displacements of the uterus, ovary, liver, pancreas, spleen (Pétréquin), kidney (Wieger), etc. (f) Tumours, mesenteric, ovarian, or other. Abscesses connected with dead bone, or that of perityphlitis.

Such is a summary of the various causes of intestinal obstruction. Some of them produce acute and others chronic effects; and, as the violence of the symptoms bears a very constant relationship to their exciting cause, it will be useful to arrange them into two classes, according as they give rise to early and acute symptoms, or late and chronic ones.

The following occasion urgent early effects: Invagination, spasm, volvulus, loops and internal hernia, and, in many cases, adhesions and bands. On the other hand, the signs of obstruction come on slowly when foreign bodies, incarceration, growths within or without the canal, paralysis, stricture, the pressure of neighbouring organs or tumours, occasion it.

What, then, are the signs by which intestinal obstruction makes itself known?

1. Constipation. This is frequently the sign which chiefly attracts attention. It and stercoraceous vomiting are the most characteristic of all the signs of closure of the bowel. The contents of the bowel below the seat of obstruction may, of course, be evacuated after the closure of the canal has taken place, and irregular action and even diarrhoea may precede the establishment of the occlusion. Fluid *feces*, in limited quantity, may escape even when the lesser bowel is to all intents closed, yet, with all this, it is true that complete constipation is the rule in cases of true intestinal obstruction.

2. Pain varies much in different cases, and may range from a mere feeling of weight to violent suffering. It is, as a rule, most severe in invagination and volvulus, and least so in the case of stercoraceous collections. The seat, character, and amount of pain always deserve careful study, as occasionally it coincides very exactly with the place of the lesion. The pain may begin suddenly and violently, or be for long little regarded. Most commonly, if it be not very severe at the outset, it soon becomes so. At first colicky in its nature, it wholly changes its character as inflammation becomes developed, and finally, the accumulation of fluids and air causes such distension as to give rise to much distress. In most cases, the pain has its seat chiefly about the umbilicus; but, when inflammation is established, it becomes more or less diffused. The absence of pain is no positive evidence that even the most unmanageable sources of obstruction are not present.

3. Vomiting occurs early or late, chiefly according to the part of the canal involved. The higher up the obstruction lies, the sooner will regurgitation of the intestinal contents take place. The vomiting is usually (though not always) accompanied with nausea, and it is a great cause of distress and exhaustion. Only food or bilious matters are ejected at first, but afterwards the characteristic "*feculent*" vomiting appears. Even when the occlusion lies in the small gut, the ejected matters come to have the smell of *feces*. This is the only *certain* sign of obstruction. Brinton thought it was produced, not by an antiperistaltic movement, but by a return current, starting from the obstacle and passing backward in the centre of the tube. The vomiting may be continuous or it may remit, and before death it may cease from sheer exhaustion.

4. Swelling confined to a portion of the abdomen or affecting the whole cavity. If the patient is seen early, this is often a very important and instructive sign. It arises from the accumulation of fluids above the obstruction, and later on to flatulent distension. Careful percussion will indicate which of these causes is present, and its exact seat. In some cases, the swelling is very slight throughout.

5. Movements of the bowel, accompanied by violent gurgling, are often very apparent in chronic cases of obstruction when emaciation has attenuated the abdominal walls and the bowel has become hypertrophied from its long efforts to overcome an increasing obstruction. When inflammation has been set up and the bowel becomes paralysed from over-distension, these writhings cease. In obstructions high up in the gut and in acute cases, they are not observed. The movements may extend only to one point, and this will give important information.

6. Hiccup is frequently a late and very distressing condition. In obstructions high up, it may appear very early and be very violent.

7. Sedgwick has shown that, if the attack be sudden and acute and implicate the small gut, it is likely that the secretion of urine may be diminished or even suppressed; but in chronic obstruction, low down in the canal, a reverse effect may be produced. Habershon, again, gave its due weight to the vomiting in diminishing the urine; and doubtless the amount of fever, local inflammation and collapse will

* Communicated to the Medico-Chirurgical Society of Glasgow.

act in the same way. The influences referred to, and not the seat of obstruction (as limiting the absorbing surface of the bowel), as Barlow supposed, are evidently those which affect the secretion of the urine in these cases.

To the above symptoms we have to add the "facies Hippocratica", often markedly present—the general prostration, and the evidence of that enteritis or peritonitis which, in many cases, is the immediate cause of death. The whole aspect of the patient is usually most distressing and significant, and the dyspnoea a source of constant disquietude. The ailment has been known to set in with fainting, and rapid collapse is not uncommon when the small gut is implicated. Death is usually occasioned by exhaustion, or gangrene, or blood-poisoning. Nélaton thinks the directly poisonous effects of the retained feces have much to do with it.

All the symptoms which have been described may undergo much modification and abatement in chronic cases. The constipation may be preceded by long periods of irregularity in the action of the bowels, and even by diarrhoea, alternating with constipation. The shape, bulk, and consistence of the motions may be much altered, and the final constipation may very slowly become complete. In these cases, too, the vomiting may not become feculent till a very late period; and even the sickness and eructations may not be so clamant as to attract much attention. The distension and prostration, together with the pain and constitutional disturbance, are in some chronic cases marvellously subdued till near the end, which again may be remarkably delayed. Complete closing of the bowel may, in chronic cases, however, be very rapidly established before death.

With this preliminary statement, let me now glance at the means we have of determining, in any given case, what the cause of the obstruction may be, and where it is probably seated. Before any idea can be formed on these points, we must obtain a clear clinical history of the origin and progress of the case, and carefully examine the patient's present condition.

This will be best secured by following some such order as this:—
1. What is the age and sex of the sufferer? 2. Does he present any marked diathesis? 3. Has he ever before suffered from any abdominal affection?—inflammation, colic, gall-stones, dysentery, hernia, or any attack at all like the present one. Is there any history of tubercular affection of the mesentery or bowel? 4. Has he been using any article of food or medicine likely to occasion the symptoms present? 5. What has been the usual, and especially the recent, condition of his alvine evacuations, both as to regularity and to character? 6. What are the degree and duration of the constipation? 7. Has there been vomiting? If so, when did it begin and what is its nature? Has it been continuous and accompanied by hiccup? 8. Did the symptoms set in suddenly and severely, or the reverse? If suddenly, how had the patient been engaged immediately before? Had he been making any sudden effort? 9. Was the patient aware of having any "lump" in his abdomen before this attack; and if so, how long has it been present? Has it been fixed or movable? Has it altered its shape, or position, or size? Is it painful, and what are its physical characters and anatomical position? 10. Does the patient suffer pain; and if so, what are the character and seat of that pain? Is it relieved or increased by pressure? Does the pain radiate from or cease at a certain spot, or does it intermit? 11. Is there any swelling? If so, is it diffused or is it specially marked on one side, or at one place? 12. What do we learn from percussion and palpation? 13. Are there any vermicular movements apparent, and do they appear to be arrested at one point? 14. What is the condition of the urinary secretion as to quantity and quality? 15. Lastly, what are the patient's strength, aspect, courage, and constitutional power, and what evidence is there of the presence of inflammation?

It may be noted that the right iliac region is that which should receive our most careful attention, as it is there that obstructions in either large or small gut are most apt to exist, and make themselves evident by swelling, pain, etc. It is by a careful consideration of the above points that an opinion can be best formed of the cause and seat of obstruction.

In inspecting the abdomen, we should, if possible, place the patient alternately on the back, side, and face. The condition of the flanks should be carefully scrutinised. Fagge recommends that their relative weight and fulness should be judged by "poising" them on the hand. Palpation and percussion must be directed to discover any irregularity in the cavity, or any special seat of pain, together with the full and empty portions of the bowel. Chloroform is often of great assistance after our inquiries have been addressed to the patient. When the affection has subsisted for some time, and the distended portions of the bowel have changed their position, and come to cover over and conceal the empty parts, or if the parietes be rigid, or loaded with fat, or much stretched and tender, then a minute and satisfactory examination by palpation can

hardly be made. The attendant should, in following out his inquiry, try and realise to himself the position of each abdominal organ. The groins and rectum should be carefully explored, and in females the uterus must be attentively examined. In many cases, the investigation of the rectum by a tube, or current of fluid, or, when feasible, by the introduction under chloroform of the whole hand, is capable of affording very valuable information.

Let us now see how each of the points to which attention has been called helps us in recognising each kind of obstruction.

1. Most foreign bodies are apt to be arrested at the cæcum and at the sigmoid flexure and in the rectum. (Preparations were shown illustrative of this). Seeds and small bodies may get into the appendix, and thus cause fatal results. Of this, I shall afterwards relate an instance. It is very remarkable, as has been before said, how often the most formidable bodies which have been swallowed (open knives and large coins, for example) have passed, without causing injury, through the whole length of the canal, while small and apparently innocent bodies have given rise to fatal consequences. Foreign bodies, however, rarely cause fatal obstruction, and the symptoms which their presence occasion are very uncertain and inconstant. Neither their position nor nature can be usually made out. They are, of course, liable to give rise to inflammation and ulceration, and in this way secondarily to stricture. Sometimes, they spontaneously escape by the ulcer they form; and the points at which they are thus most apt to emerge are either in the right iliac region (when they are impacted in the cæcum), or near the umbilicus (when they are seated in the small gut). The enormous gall-stones which are occasionally met with may, doubtless, be felt moving slowly down the canal, but even they often escape detection. The history of a short and sudden or more prolonged attack of pain in the region of the gall-bladder, with possibly jaundice, in an elderly female, with symptoms afterwards of embarrassed function in the alimentary circulation, would render it probable that a gall-stone was present. Gall-stones are most apt to be arrested in the jejunum and just above the ileo-colic valve. Such sources of obstruction are, however, rare; and other concretions, as those formed of masses of worms, are rarer still. Stercoraceous tumours are not very uncommon and may entirely arrest all passage through the bowel. In persons of extreme costive habits, such masses may be always present to a certain degree. In pregnancy and old age; in cases in which, from fear of the suffering which defæcation causes (ulceration, fissure, or other affection of the anus), the bowel is rarely emptied; in hysteria, too, and paralysis, such feculent accumulations may form. It is especially in the sigmoid flexure and cæcum they are found, *i. e.*, in the groins. They have been recognised in the transverse colon. They occasionally attain a great size. Their situation, slow formation, soft, kneadable, irregular, and painless character—their shape corresponding somewhat to the bowel—possibly their varying size, will cause them to be recognised. Sciatica and oedema of a limb may come on from their pressure. Liquid feces, and even a species of diarrhoea, may coexist with these accumulations from a small channel remaining through them. An examination of the rectum by the finger or probang, or stream of water, will, in most cases, clear up the diagnosis.

2. Invagination may implicate a few inches or several feet, as in one of the cases afterwards related. In very rare cases (Bucquoy relates four), we have "retrograde intussusception", *i. e.*, the lower portion of the bowel is invaginated into that above it; but in general it is, as we would expect, an upper section which is driven into that lower down. The two conditions have, it is said, been combined. This constitutes nearly a half of the causes of obstruction met with. The invaginated bowel is not invariably strangulated; but if it be, then a train of very violent effects follows. More than half of all the cases of invagination occur at the ileo-cæcal valve—the ileum passing through it, and the caput coli inverted and dragged down into the colon. This process may go on till both ascending and transverse colons are "swallowed". The cæcum and ascending, and even the transverse colons may pass into the lower portion of the gut, and drag the ileum after them, without altering the relationship of the valve. The lesser gut is rarely alone implicated. Nor is it at all common for the transverse and descending colons to be the only parts invaginated. Multiple intussusceptions have been found after death, probably occurring during the last agony.

Young infants (below six months), and children below seven years of age, are the usual subjects of this dire affection; but it has been seen at all ages, and even in the old, and that more commonly than in those of middle life. It is easy to conceive how, if one part of the intestinal canal be fixed and distended with gas, and the vermicular action of the portion above be rendered more energetic by any irritation, such as chronic diarrhoea, worms, a growth, or foreign body, or even if it be acted on suddenly and violently by muscular pressure, one section may be driven into the other; and if the action continue, great portions

may be thus invaginated, so that the ileum may come to project at the anus. It is in the right iliac and in the hypogastric regions that we seek for evidence of these intussusceptions. The arch of the colon may be so dragged down as to lie transversely across the belly, forming a horizontal massive ridge, as in one of these preparations.

The signs most characteristic of invagination are—the age of the patient; the previous history of some irritability of the bowels; the frequent desire to go to stool, with straining when there; the discharge of blood (apt to be set down as “dysentery”); much restlessness, with pain in paroxysms; thirst; and vomiting. The matters ejected are not by any means invariably feculent; and the attack, though frequently sudden, is not always so. The gut may remain partially pervious, and thin feculent discharges occur. In such cases, the child may survive for an unusual period, and die finally of exhaustion. The blood lost may vary greatly in amount. Dr. Brinton and others assert that, when the higher portions of the lesser bowel are involved, blood may be also vomited. A copious discharge of blood would point to the lesser gut being the seat of the affection. The abdomen is by no means always distended in these cases, but may be little altered.

If with such symptoms we find an elongated, cylindrical, tender, movable tumour lying in the axis of the bowel or across the lower part of the belly, and well described as “sausage-like”, and if, above all, we discover, on inserting the finger into the rectum, a body which feels like the os uteri, and which recedes from and again returns on the tip of the finger, the diagnosis is complete. As felt through the parietes, the tumour spoken of may alter its place, shape, and size at different times, and it may sometimes elude our search altogether. As a rule, these tumours tend to travel downwards, as regards the bowel, from the lower portions of the gut devouring the upper. In time, adhesion may take place between the various layers of invaginated bowel, and then, in favourable cases, as is well known, the included part may separate by sloughing and be discharged, leaving the channel of the gut more or less free; and possibly, if extravasation do not occur and no further complication arise, recovery may follow. I have known several such happy results. In the great majority of cases, the patient dies within a few days; and, from the effectual way in which the one portion of bowel is glued by adhesions to the other, we cannot safely separate them, even if the abdomen were open; thus the measure which in a certain proportion of cases brings safety, renders, in most cases, an operation useless.

Remarkable instances are on record of the slow chronic establishment of invagination, and that chiefly in the ileo-cæcal variety of the affection. The tumour, too, may in occasional instances be found before the constipation and bloody discharges, or even the sickness, appear. Whenever strangulation is established, however, the symptoms become severe. Dr. Fagge, in the thirteenth volume of *Guy's Hospital Reports*, endeavours to lay down certain distinctions between intussusception as occurring in the lesser bowel and in the ileo-cæcal region. In the former, the tumour, he says, is smaller and placed to the right of the umbilicus, and there is more free bleeding. In the ileo-cæcal variety, the tumour is in the line of the colon, in the iliac fossa or suprapubic region, and commonly descending into the rectum, and it is accompanied by more tenesmus, straining, and bloody mucus, while the pain may precede the other signs by a considerable interval and the various symptoms may subside for varying periods.

Obstruction from the *incarceration* of herniary protrusions need not detain us. Small protrusions of bowel into the internal ring, or into old herniary sacs, are occasionally causes of an arrest of the alimentary circulation, and all local evidence of their presence may be wanting. Even the pain they occasion may be referred to parts distant from the seat of strangulation. The fact that a hernia did at one time exist should, in cases not otherwise to be explained, cause us to explore the possible seat of the obstruction.

Growths within the canal, unless they can be reached from the anus, or unless large enough to be felt through the parietes, cannot be recognised by any certain signs. They are usually malignant. They are not unfrequent in persons below middle age. Of ten cases which I have seen within three months, where cancerous growths were present in the lower bowel, all but three of the patients were under middle life.

Spasm, as a source of obstruction, is very rare. It may, however, occur from inflammation, and even (notwithstanding the incredulity of Trousseau) without that accompaniment, as in “nervous ileus”—the true iliac passion of Sydenham. Briquet has related cases in which most of the signs of obstruction (distension, sickness, eructations, and persistent constipation) arose from pure hysteria. It comes on suddenly and assumes the features of “cramp” in the lesser bowel.

Stricture will have a history of antecedent inflammation, or ulceration, or intussusception. Not unfrequently there may have been previous

attacks of obstruction. Dysentery, or tubercular disease, or syphilis, or cancer, or severe catarrhal inflammation (“typhitis”), may occasion such ulceration (that which passes round or transversely to the bowel) as eventuates in stricture. A wound or any inflammation which gives rise to thickening may be its source. It is by tracing the clinical history that we recognise stricture as the cause of obstruction. While stricture has been found as high as the duodenum, yet it is almost always situated below the transverse colon—commonly in the sigmoid flexure and rectum. Its occurrence in the small bowel is very rare, and not evidenced by any characteristic features. The invasion and progress of these cases are slow and chronic, and much irregular action of the bowel may mark their early stage. As the patient becomes much emaciated and the gut hypertrophied above the seat of obstruction, those movements of the bowels which are so characteristic of obstruction may be very evident. If cancer exist, then the cachexia which so soon marks that disease will be present; and, if its seat be, as is usual, low down in the gut, pain in the sacrum and thighs, as well as the discharge of blood and mucus by the anus, will aid the diagnosis. The alteration in the shape and calibre of the motions (pipe-stem, or ribbon, or sheep's dung-like) will mark the influence of narrowing of the bowel near its termination, and then, too, a digital examination may accurately define its presence and seat.

Twists or strangulation by rotation of the bowel produce effects similar to internal hernia. These twists usually follow sudden exertion, such as jumping, but they may also follow inflammation. It has been said by Rokitsansky that they may occur in three ways or forms. The bowel may revolve on its own axis, or it may roll up on the mesentery or on another coil of intestine. It does not require much torsion to produce obstruction; half a turn may be sufficient to establish it. Enteritis soon results, and a rapidly fatal issue is the usual consequence. It is in the sigmoid flexure, ascending colon, cæcum, and lower part of the ileum that these twists have been most commonly met with. As a rule, the symptoms set in suddenly and acutely; this, together with the history of the producing cause—the pain frequently confined (at first) to a spot—the unequal distension before general inflammation has set in, followed often by great distension when the inflammation is fairly established, and the remarkably rapid evolution of the symptoms,—are our chief means of diagnosis.

Adhesions with surrounding parts, and bands of lymph or diverticula from the bowel may constrict the intestine. These adhesions and bands result from antecedent attacks of inflammation or from old hernia. It is not uncommon to trace their history from an attack of peritonitis which has been followed by repeated colics and constipation, ending in fits of diarrhoea and temporary relief. Bands have been most frequently found just opposite the promontory of the sacrum. They have been frequently found in females, arising from inflammation of their pelvic organs. The vermiform appendix may, by becoming adherent, form a loop under which a coil of bowel slips, or the pedicle of an ovarian tumour may form the snare which imprisons the gut. Tears in the omentum, meso-colon, mesentery, or reflections of the peritoneum, or an abiding urachus, or rents in the abdominal walls, or diaphragm, or uterus, or coats of the bladder, may be the cause of the strangulation of a portion of bowel; but these causes are only revealed after death. Adhesions may remain after herniotomy, or be set up by it or the taxis, and obstruction result. Tubercular or cancerous disease may originate the adhesions, which may be to any of the surrounding parts or to a contiguous coil of intestine. The lesser bowel is that most frequently implicated. No tumour need be looked for at the seat of such bands or adhesions, and there are no characteristic indications of the source of the embarrassment beyond the history of the patient, the mode of attack, and the local nature of the pain at first.

Intra-abdominal Hernia.—Many of the accidents referred to in the last paragraph are of this nature; but more correctly what is now alluded to are protrusions and strangulation of the more movable portions of the bowel into some of the orifices in the parietes. The patient, often young and healthy, is suddenly and violently affected with symptoms of strangulation after some exertion. There is great pain at the part or about the navel, and collapse may occur early. There is no tumour and no bloody discharge. We can only surmise the cause. It cannot be distinguished from twists.

Enlargement or Displacement of Neighbouring Organs and Tumours are formed slowly, and are generally recognised before they come to affect the bowel. Uterine tumours, fibroids and even pregnancy, ovarian growths, hydatid cysts, enlarged mesenteric glands, abscesses in the neighbourhood of the caput cæcum, floating kidneys, enlarged spleen, intra-abdominal tumours of any kind—may constrict the bowel and close its canal. In an interesting case of perityphlitic abscess afterwards described, the symptoms of obstruction did not set in till late in the history of the case. I have lately had in hospital a man

with so greatly enlarged a prostate, that extreme constipation was occasioned by it, and, since he went home to a distant part of the country, I am informed complete obstruction has taken place. The preparation lies before you connected with a curious case, in which, in consequence of gelatinous cancer of the sigmoid flexure, a free communication between the bladder and bowel was established and obstruction occasioned.

Thus, then, it may be said generally that the lesser bowel is most liable to spasm, adhesions and bands, and internal herniary formations, while the great gut is more liable to be obstructed by foreign bodies, feculent accumulations, invagination, stricture, and twists.

As regards age, it may also be considered approximately correct that obstruction arises from invagination most frequently in male children under six months old; from bands and adhesions in young and middle-aged persons, especially in females; from volvulus, foreign bodies, strictures, bands and loops, and internal hernias, in middle-aged men; and from cancer, feculent accumulations, gall-stones, and incarcerated hernia in the old.

[To be continued.]

TWO CASES OF HYDATID TUMOUR OF THE LIVER SUCCESSFULLY TREATED BY ASPIRATION: WITH REMARKS.*

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AT the Norwich meeting of the British Medical Association, I read notes of six cases of hydatid tumour of the liver treated by puncture. Of these six cases, five were cured, and, so far as I can ascertain, remain well up to the present time. These cases are recorded in detail in the second volume of the *BRITISH MEDICAL JOURNAL* for 1874. Since their publication, two additional instances of this disease have come under my notice, one in private, the other in hospital practice.

CASE I.—The first case is that of a married gentleman (J. I. E.), aged 36, without family, and living in Cambridgeshire, who consulted me last October for intense pain in his right side. He had been ill for a long time, and under treatment for some obscure affection of the liver. When I first saw him, he was suffering from acute pleurisy on the right side; friction-sounds of a very marked character and friction-fremitus being present. The patient's countenance betrayed great suffering. I ordered him to go home to bed at once, and prescribed eight grains of Dover's powder at bedtime, with a saline mixture to be taken the following day. He was enjoined to keep perfectly quiet, and a large linseed-meal poultice was applied to the right side. It is unnecessary to give all the details of the treatment, and it may suffice to say that the pleuritic friction-sounds disappeared in a few days, and the patient was very much relieved. On October 4th, three days after first seeing this gentleman, I elicited the following additional facts with regard to his previous illness. He had been in his usual health (never very good) till June 4th, when he had in the night a severe bilious attack, the vomited matter being slightly streaked with blood. He was attended by his usual medical attendant for congestion of the liver, being confined to bed for two weeks. He was very unwell for some time after this; and on July 17th, at the urgent wish of his friends, consulted a very distinguished physician, who told him he had enlargement of the liver. About a month previous to my seeing him, he had a severe rigor, which was succeeded at intervals by several shivering fits. At times, indeed, he had attacks not unlike those of ague. On September 26th, he had a very severe pain in his side, which continued up to the time of my seeing him on October 1st, 1875.

When the patient was relieved of his intense pain, I made a more careful examination of his chest, and found the percussion-dulness on the right side higher in front than behind. The line of dulness also descended with deep inspiration. Behind, there was not that complete dulness and absence of vocal fremitus which one would have expected in simple pleurisy. The intercostal spaces were completely obliterated. The patient was ordered a drachm of syrup of the iodide of iron twice daily in water. I told the friends I suspected my patient had hydatid tumour of the liver, and that the pleurisy was secondary to this.

On October 6th, I visited my patient again, and had the advantage of a consultation with Mr. Prince of Sawston, a friend of the family.

Mr. Prince coincided in the diagnosis. On this day, I made a note to the effect that the dulness was decidedly higher in front than behind, and that there was good breathing posteriorly almost to the base.

On October 8th, my friend Dr. Banham, at that time house-physician to Addenbrooke's Hospital and now physician to the Sheffield General Infirmary, accompanied me to see my patient. He had seen the cases of hydatids which I brought before the Norwich meeting, and I was anxious to see if he would confirm the diagnosis of Mr. Prince and myself. After making a most careful examination, Dr. Banham thought the case was not one of hydatids of the liver, although there could be no doubt of the liver being enlarged. The girth of the chest on a line with the ensiform cartilage was 34 inches; the right semicircumference being 17½ inches, and the left 16½ inches. The patient felt much better.

On October 9th, the friction-sounds and fremitus returned, and the patient had to resume the linseed poultices, etc. In the course of a few days, the fremitus disappeared, but friction-râles remained audible for a long time. He was, however, sufficiently well to go into Suffolk for three weeks towards the end of October, and was benefited by the change.

On December 30th, he was not so well. For some days he had had a good deal of pain in his right side, and the friction-sounds were still audible. Before puncturing the cyst, I recommended him to have another opinion, and the following day I accompanied him to London to see Sir William Jenner, who regarded the case as one of hydatids of the liver with attendant pleurisy. A distinct "hydatid-fremitus" was now manifest, and Sir W. Jenner recommended the immediate insertion of the needle of an aspirator.

January 2nd, 1876. To-day one of my surgical colleagues at the hospital accompanied me to tap the cyst. After carefully examining the patient, however, he hesitated to use the aspirator—(1) because he was not sure there was a cyst, although he thought he could feel hydatid-fremitus; (2) because, if there were a cyst, it was so near the gall-bladder that it would be dangerous to operate. He also thought the symptoms not sufficiently urgent for operative interference. After this expression of opinion, I at once wrote to Sir W. Jenner, and asked him if, after all, we were both wrong in our diagnosis. He replied as follows.

"Dear Dr. Bradbury,—I cannot see myself why the vicinity of the gall-bladder should be any objection to opening a hydatid cyst; and I can see no injury that could follow the insertion of an aspirator, and I think such insertion ought to be made. I know nothing but a hydatid cyst which could give the fremitus present in this case—a fremitus, be it observed, on percussion, not on auscultation. I should not hesitate to have it punctured were I the patient; and I think, if it be a hydatid cyst, that it is the right thing to puncture it. As to the gall-bladder giving any such fremitus, it is out of the question. I can only repeat that, in my opinion, it is a case in which an aspirator ought to be introduced.—Yours very truly, "W. JENNER."

January 7th. I visited him again with my surgical colleague, who introduced an aspirator and drew off two pints of a clear fluid, which had all the characters of hydatid-fluid. After the operation, the patient went on uniformly well, the temperature and pulse quickly becoming normal. There was no urticaria after the puncture. The patient was at a dance on January 28th, having previously undertaken a long railway journey.

February 28th. He had not been so well for the last fortnight. He had had a bad cold, cough, and considerable pain in the right side, which had been somewhat relieved by poultices, etc. At the end of a deep inspiration, a friction-râle could be heard at the right base in front. There was still tenderness over one point of the liver. He looked worse, and had been sweating again, and not sleeping well.

March 22nd. He still felt very unwell, with pain in both sides, cough, etc. He at times lost his voice, and had shortness of breath. The right side of the chest measured one inch more than the left at the most prominent point. No hydatid fremitus could be detected. Another puncture was recommended.

March 25th. The needle of the aspirator was again introduced at the site of the old puncture, and a pint and a half of a fluid like pus withdrawn. The withdrawal of the fluid gave the patient more pain than on the first occasion. For some days previous to the operation, he had been exceedingly nervous, not sleeping, depressed in spirits, etc. He had diarrhoea (nervous?) on the day of the operation, and could not micturate without discomfort.

March 26th. He passed a restless night; not an hour of sleep. He had gripping pains in the abdomen, sickness, and diarrhoea. Pulse 92. The temperature was not taken till 3.40 P.M. to-day, when it was 101.6 deg. Fahr. He had no cough. The tongue was much coated with white fur. He had no appetite, and was very thirsty. Dr. Burrell

* Read before the combined annual meeting of the South Midland and Cambridgeshire and Huntingdonshire Branches.