C A S E
OF
OBTURATOR HERNIA,
SIMULATING INTESTINAL OBSTRUCTION WITHIN THE
ABDOMEN;
TO RELIEVE WHICH GASTROTOMY WAS PERFORMED.

By JOHN HILTON, F.R.S.,
ASSISTANT-SURGEON TO GUY'S HOSPITAL.

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Miss ———, aged 36 years, a tall, thin person, and in delicate health, had an attack of vomiting, with constipation of the bowels, in September 1847, which, after continuing four or five days, yielded at that period to the effect of aperients with laxative injections, and the application of leeches and fomentations to the seat of pain in the right inguinal region, above Poupart's ligament. Since that time she has frequently had pain in the bowels of a spasmodic character, which has been relieved by her taking brandy and water. The bowels have been generally constipated.

On the morning of Thursday, January 20th, without any obvious cause, she had an attack of vomiting, which continued, with intervals of relief, until 11 p.m.

When Mr. Blackmore, surgeon, of Old-street Road, first saw her, no hernia was perceptible; there was not any pain on pressing the abdomen, nor was there any distention of it. The pulse was 84. She had taken castor-oil twice, and rejected it each time. Mr. Blackmore ordered a large

mustard plaster to be applied over the stomach, two grains of calomel and five of ext. coloc. co. to be taken every two hours with some effervescing medicine.

21st, Friday—10 A.M.—Much the same; no action of the bowels; the vomiting continues; pressure upon the abdomen relieves somewhat the spasmodic pain; an aperient injection to be used, and one-half drop of croton-oil added to the pills. 8 o'clock P.M.—No change in symptoms, except more pain around the umbilicus, at which part eight leeches are to be applied, and their application to be followed by a warm-bath; the aperient pills to be omitted; one grain of powdered opium to be given at night.

22nd, Saturday—10 A.M.—Has had some sleep and is more free from pain, and there is less frequent vomiting: pulse 84. Omit all medicine, and give a little fluid nourishment. Secretion of urine scanty but healthy. Fomentations to abdomen. 9 P.M.—Continues much the same as in the morning; an aperient injection to be administered.

23rd, Sunday—10 A.M.—Is in about the same state as yesterday. 9 P.M.—Dr. Fox met Mr. Blackmore in consultation. Pulse 96. Tongue more dry. Slight hiccough. Has vomited faecal matter several times to-day; no distention of the abdomen, and but little pain on pressure. Apply mustard plaster, followed by large linseed-meal poultices over abdomen, and give calomel gr. x., with one grain of powdered opium at night. Discontinue other means.

24th, Monday—9 A.M.—Has passed a good night; symptoms much the same in other respects. 10 P.M.—Has had no vomiting nor any action of the bowels: repeat the opiate, with calomel gr. v.

25th, Tuesday—10 A.M.—Has not passed a good night; vomiting has returned with occasional hiccough; tongue more dry in centre; pulse 108. A blister to be applied at the only painful part of the abdomen, namely, the left side of the umbilicus; this to be followed by a linseed-meal poultice: omit the opium, as it made her sick the last time she took it.

26th, Wednesday—10 A.M.—Has had a good night, and appears upon the whole better. Vomiting much diminished. An injection of castor-oil brought away some fæculent matter from the bowels; continue to give nourishment in small quantities, and discontinue medicines.

From this time until Saturday night, the 29th, she continued in the same state, when Dr. Fox saw her again, in consultation, and ordered small doses of hydrochlor. morphicæ every two hours, and the lower bowel to be stimulated by a small turpentine injection in the morning. The morphicæ retained; the injection did not cause any sickness, nor did it give any relief to the bowels. She expressed herself as feeling better, notwithstanding the fatigue occasioned by the injection.

31st—9 A.M.—She has not had any vomiting during the last forty-eight hours; no increase of pain in the abdomen, but no relief from the bowels: the pulse is 120, soft; tongue moist, and clean at the edges.

At this period I was requested to see the patient, in consultation with Dr. Fox and Mr. Blackmore.

The patient was lying upon her back; the face was thin, with a distressed aspect: tongue dry and brown, its centre furred on either side; breath very offensive, smelling like fæculent matter: pulse 120, small. The abdomen was soft, somewhat pliant, and but little distended; neither gentle pressure upon the abdomen, nor the examination by concussing it, produced much pain. On pressing deeply on any part below the level of the umbilicus the patient complained, and more especially so about an inch to the left of the umbilicus. The abdomen was very resonant over all the gastric and intestinal portion of the abdomen, excepting below the umbilicus, where it was chiefly dull on percussion, although there were portions of that surface quite resonant. Every now and then the whole surface of the abdomen became remarkably retracted, uneven, and quite undulatory or wavy, during which time the patient experienced spasm of the belly, and the course of the subjacent convolutions of intestines could be distinctly felt and seen. This condition

lasted about a minute, or less, then subsided, and again returned after a lapse of several minutes. No hernia could be detected. Whilst at the bed-side she vomited the fæculent contents of the small intestines, well coloured with bile, and looking more red than natural. The quantity of urine secreted had been very small, about four ounces in the preceding twenty-four hours.

On consulting, we could come to no other conclusion than to consider this a case of mechanical obstruction in the small intestine, and one which offered no hope for the patient by any means short of opening the abdomen. That the obstruction was not in the large intestine might be legitimately inferred from the abdomen not being much distended, from the capability of the colon to retain nearly three pints of injection without distress, from the vomiting having come on so early in the attack, and from the secretion of urine being very scanty.

It had been suggested that metallic mercury should be administered; but ultimately, on reflection, it was not employed. Guided in part by the history of the symptoms which occurred last autumn, our impression was, that the cause of the obstruction would be found either to the right of, or rather lower than, the umbilicus, where the chief pain was at that time experienced, or to the left of the umbilicus, where deep pressure now produced some pain.

After explaining to the friends of the patient, and to the patient herself, her then condition, and her prospect, without something could be done by surgical means; and letting her understand that the inhalation of chloroform would cause her to experience but little, if any, pain during the operation, the patient herself and her friends acquiesced in our suggestion to explore the abdomen the next morning, provided no manifest improvement should intervene. Two or three doses of morphia were prescribed to be administered during the night, and directions were given for the house to be made as warm as possible, and to be kept so. On the following morning, no important improvement was observable in the

patient's symptoms, but there had not been any vomiting during the night, and she had had some sleep. The tongue was more extensively dry. The pulse about 120 in the minute; the abdomen more prominent; the breath still of a fæculent odour.

The catheter was introduced, and about an ounce of urine abstracted. The hair was shaved off the pubes. The patient's head and shoulders were raised, and under the thighs was placed a large pillow, so as to relax as much as possible the abdominal walls. Chloroform was then administered by Dr. Gull. A napkin was folded into the form of a hollow cone, with the apex open, a piece of sponge was placed within it, and the chloroform poured upon it. This was held over or allowed to rest upon the patient's face so as to cover the nose and mouth, and in about two minutes, the insensibility appearing to be complete, I began my incision at the umbilicus, but the patient evidencing some sensibility I did not proceed for about another minute. I then continued the incision downwards to near the pubes, cutting through skin and cellular tissue and numerous small veins, so as to expose the median line of tendons. The natural colour of the tendinous structures and the more opaque line of the *linéa alba* were obscured by blood, and when the vertical median section was extended into the parts then exposed, it divided the *linea alba* in part only, and opened also the sheath of the left rectus; so that it was clear the *linea alba* was somewhat deflected from its normal course. Two little arteries required ligatures. When all bleeding had ceased, the peritoneum was opened near the umbilicus, and its division completed downwards upon a broad director. A small quantity of serous fluid, coloured with blood, flowed from the peritoneum. The small intestines, somewhat distended and presenting numerous small red ecchymosed spots of inflammation upon them, occupied the opening. On introducing the hand into the peritoneum to ascertain the cause of obstruction, nothing abnormal could be detected. As it was now my wish to get a view of empty intestine I found the opening I had made was not long

enough ; it was, therefore, extended upwards, close to the left side of the umbilicus, to about an inch above it ; in doing this a small artery was divided, and required a ligature. The convolutions of the small intestines were now displaced from the left side of the opening, and a piece of the colon, somewhat distended with gas, brought unexpectedly into view. This distended condition of the colon complicated, at first thought, the prospect of finding the obstructing cause ; but the conclusion was obvious that this cause must be so located as to press upon the colon and to obstruct the small intestine at the same time. On separating the left side of the colon from the small intestines a few coils of perfectly pale, contracted and empty small intestine were seen, and, on tracing them downwards, I found that one of them had entered the obturator foramen of the left side, so that, in fact, we had met with an obturator hernia. I endeavoured to withdraw the intestine from the foramen by pulling it gently, and with a little perseverance in this traction, and by pressing at the same time deeply and firmly in the thigh, I succeeded in displacing it from the obturator foramen, and then retaining the portion of intestine between my finger and thumb, I brought it into view ; it was very dark coloured but not gangrenous, nor was it ruptured. Seeing it in a recoverable condition, it was allowed to find its own position amongst the convolutions of the intestines. The omentum was not seen during the operation. The intestines were carefully replaced in the abdomen, although with some little difficulty. The edges of the wound were brought together by a continued suture from below to above, including the skin and cellular tissue. A pad of lint was placed over the wound and maintained there by some broad straps of plaster across the abdomen. The patient being much collapsed was not moved from her then position, and bottles of hot water enclosed in a blanket were applied to the hands and feet, and some brandy was administered.

Within a quarter of an hour after the operation was completed the patient had entirely recovered her sensibility, having been completely under the influence of chloroform

for about an hour. The pulse was then 156. She says she has not felt anything of the pain from the operation, but complains much of griping and twisting pains in the abdomen. She rejected from her mouth, with slight efforts at vomiting, some feculent matter. A small quantity of brandy, diluted to one half, was given her, and as the pain in the abdomen was very much complained of, a suppository of ten grains of opium and soap pill was passed into the rectum. During the next hour the pulse was uniformly as rapid as 156, very feeble; hands cold and clammy; no further vomiting. The patient was quite calm and collected, but complained very bitterly of pain in the abdomen.

11½ A.M.—Pulse 156, feeble but distinct; skin moist and warm; respiration 26; tongue dry and coated. She passes a considerable quantity of flatus upwards from the stomach.

1 P.M.—She complains of pain in the abdomen at intervals,—“a contracted feeling,” as she expresses it. The pulse is now 144, rather more full. She has dozed at intervals for about ten minutes or a quarter of an hour at the time. She continues to pass a quantity of wind; ordered a third of a grain of hydrochlorate of morphia to be administered, and small quantities of beef-tea and brandy from time to time.

2½ P.M.—She is much in the same condition; she has not complained of so much pain since she took the morphia; pulsations about the same (144); skin cold and moist; respirations 26 or 28 per minute.

4 P.M.—Is still very comfortable. She continues to doze, and wakes up complaining of slight pain; pulsation and respiration about the same; one-sixth of a grain of morphia given.

5 P.M.—Pulse more rapid (150), and less distinct; her hands are cold and clammy; she wished to pass some water, but objected to the use of the catheter; she continues to take beef-tea and brandy at intervals.

7 P.M.—She is very much lower; the pulse is more rapid and almost indistinct; she has become very restless, throwing her arms about continually; she has passed a small quantity of urine (about 3ij.); beef-tea and brandy continued,

and another dose of morphia given ; hot bricks were placed at her sides as she complained of being very cold.

8½ P.M.—She is sinking rapidly ; great restlessness ; pulse scarcely to be felt ; skin cold and clammy ; is continually asking to be moved ; respiration more rapid : morphia, one-sixth of a grain.

10 P.M.—There has been no perceptible pulse for some little time ; respiration hurried ; complains of pain. She was moved higher up in the bed about 10 o'clock, after which she moaned for about five minutes, and expired.

After the operation Mr. Robert Stedman, a most praiseworthy Guy's student, kindly remained with the patient, and superintended, with Mr. Blackmore, the treatment of the case.

Post-mortem examination, sixteen hours after death.—The edges of the external wound were found adherent by recent lymph, and on separating them the convolutions of the small intestines were seen feebly affixed to each other, and to the abdominal parietes. On exposing completely the whole of the abdominal cavity no distention of the intestines was manifest, and the colon had returned to its natural position. There was very marked evidence of general inflammation of the peritoneum in the lower half of the abdominal cavity ; no distinctly empty intestine could now be seen ; the small intestines below the strictured portion being now equably distended. The cæcum and right colon were occupied by fæculent matter. The previously strangulated piece of intestine, about an inch and a half long, was lying to the left of the umbilicus, and could be readily recognized by its much darker aspect than the surrounding intestines ; but there was no evidence of a gangrenous condition. This portion was situated rather above midway between the cæcum and duodenum.

The stomach presented an hour-glass contraction, and contained some of the same kind of intestinal matter as that which the patient had previously vomited.

The obturator foramen on the left side, through which the

piece of intestine had passed, admitted, without much pressure, the little finger only; its fascial edge was very distinct and unyielding, and on its peritoneal circumference there was a vascular fringe of fibrine, most observable towards the pubes, and to which, no doubt, the portion of intestine had been attached, and so retained in its abnormal position. The patulous condition of the obturator foramen on the right side was more distinct than on the left side; it was large enough to admit freely the forefinger, but there was no evidence of any adhesions connected with it.

No pathological evidence was discovered of any old inflammation in the form of bands or cellular adhesions in the general cavity of the abdomen. The hernial sac and the surrounding parts were removed for further examination. The hernial protrusion had taken place at the usual position of an obturator hernia, and the sac remained fixed in the upper part of the thigh.

The obturator nerve passed with the artery by the outer side of the sac. The artery, in this instance, was derived directly from the external iliac artery. These structures were not adherent to the sac, but enclosed or attached to a layer of the abdominal fascia which had descended with the peritoneum.

On prosecuting the dissection below Poupart's ligament, by raising the pectineus, adductor longus and brevis, a dense layer of fascia was exposed, covering the obturator externus muscle and the hernial sac: after dissecting this fascia from the anterior surface of the obturator muscle, and turning it upwards, the fundus of the hernial sac was seen somewhat thickened and strongly adherent to the inferior surface of this same fascia, having perforated the upper part of the obturator muscle. Only a small portion, however, of the muscle was crossing over the sac. The relation of the hernial sac to the surrounding structures is well seen in the accompanying sketch of the parts. The portion of the obturator muscle which passed over the sac would have been in this case more than sufficient to produce strangulation of the

contents of the sac. It is clear this muscle may be the cause of the stricture in obturator hernia, and in a like case, until the fibres of this muscle could be relaxed, it would be perhaps impossible to reduce a strangulated obturator hernia, even if detected during life.

Description of the Wood-cut.

- No. 1. Symphysis pubis of left os innominatum.
- „ 2. Pectineus divided and turned upwards.
- „ 3. Adductor longus.
- „ 4. Adductor brevis.
- „ 5. Gracilis.
- „ 6. Obturator externus perforated by the hernial sac.
- „ 7. The fascia which covered the obturator externus muscle drawn upwards, with the obturator nerve attached to it.

Before opening the abdomen of this patient I thoroughly examined her in reference to any hernial tumour, without finding any evidence of it. Being still satisfied that the symptoms were produced by some mechanical obstruction to the small intestine, I proceeded, with the expectation of finding the cause within the abdomen. Judging from the character of the previous inflammatory symptoms in Sep-

tember 1847, and from the local tenderness now experienced by the patient near the umbilicus, I was in hopes to have found the obstruction near the umbilicus, or in the right groin. In neither of these positions could I find any obstructing cause; and it was only by observing the pale, empty and contracted intestine toward the left side, that I was enabled to reach the true cause. Having ascertained the existence of an obturator hernia, I endeavoured to discover whether any tumour could be detected by an external examination below Poupart's ligament; but nothing of the kind could be felt, so that I may affirm, with confidence, that in this case, and at the same period of the symptoms, no evidence, or indication, or even suspicion of an obturator rupture strangulated could have been acquired from the existence of any tumour in the thigh.

Obturator hernia strangulated may be considered a rare occurrence, and has been so little associated with the question of opening the abdomen to relieve internal strangulation, that I admit my attention was pre-occupied with the idea of discovering one of the more common causes of obstruction. If, however, the probable existence of an obturator hernia had occurred to me before, or at an early period of the operation, the ulterior intention of the operation might have been accomplished without exposing the patient to the risk associated with so prolonged an exploration as was found necessary, by at once introducing the hand into the pelvis, where the intestine might have been discovered passing through the obturator foramen.

As I stated in the report of the case, the administration of metallic mercury was thought of but not employed; yet it is possible that the use of a considerable quantity might have been of service, from its weight sinking into the pelvis below the level of the obturator foramen, and by thus dragging upon the intestine it might have displaced it from its incarcerated position; so that I think, in a like case, provided it could be diagnosticated, metallic mercury ought to be had recourse to.

In this case the secretion of urine was small in quantity ; and this fact is, as far as I have seen, in accordance with previous observation, associated with the position of the intestinal obstruction ; so that it may be stated that the nearer the obstruction may be to the stomach, the less will be the urinary secretion ; with this diminished secretion of urine should be associated the great vomiting as one of its causes, which takes place in such a case. Whilst I think it right to attach some degree of importance to this urinary test, as one of the contributing means towards a correct diagnosis, and as an interesting physiological observation, yet I am anxious to admit that, in the instance before the Society, it gave no aid whatever in discovering the locality of the obstructing cause.

The symptoms which the patient experienced in September were most likely not the result of an inflammatory attack, but of an obturator hernia on the right side. This inference may be arrived at by the negative indication of there being no post-mortem evidence of the result of any inflammation, and from the fact of there being ample room on that side for the entrance of a portion of intestine or omentum into the obturator foramen, which was very remarkably patulous.

Reflecting upon all the associated circumstances of this case, I think it must be admitted there was no probability that any other means than those employed would have offered her any hope of prolonging her life, excepting the obturator hernia could have been discovered before the abdomen had been opened ; and from what has been already stated, it is pretty clear that it could not have been so detected by external examination, and there were certainly no special or peculiar symptoms portraying its existence.

It is evident this patient died from the effects of acute and rapid peritonitis, the result of opening the abdomen.

Although in this case, as in my previous operation, the details of which are recorded in the last volume of the

Transactions of this Society, the issue has been unfavourable, still I am strongly impressed with the propriety of making such attempts at relieving cases, which, if left to themselves and medicine, would almost certainly be fatal; and I am quite sincere in the belief that some few lives will be prolonged by persevering in the same operative procedure of opening the abdomen.