A C A S E
OF
STRANGULATED FEMORAL RUPTURE,

WHERE, ON A FORMER OCCASION, THE NECK HAD BEEN TORN FROM
THE BODY OF THE SAC, IN THE TAXIS, AND THE ESCAPING
BOWEL HAD FORMED A SUBPERITONEAL POUCH,
WHICH FINALLY ATTAINED AN
EXTRAORDINARY SIZE.

BY
J. W. HULKE, F.R.C.S.,
ASSISTANT-SURGEON TO THE MIDDLESEX AND ROYAL LONDON
OPHTHALMIC HOSPITALS.

Received Jan. 1st.—Read Feb. 9th, 1864.

In strangulated femoral hernia true reduction in mass has been proved by many well-authenticated cases to be a not very infrequent event, whilst tearing of the neck of the sac, with extrusion of the strangulated bowel between the peritoneum and abdominal muscles (which Mr. Birkett has shown to occur frequently in cases of inguinal hernia thought to have been reduced in mass¹), is so rare an occurrence, that it is not described in Scarpa and Lawrence on hernia, nor in the text-books of surgery in common use. The loose manner in which the sac is commonly connected to the surrounding structures in femoral hernia so conduces

¹ 'Med.-Chir. Trans.,' vol. xlii, p. 247.

to true reduction in mass, that these connections are stretched or broken, so as generally to allow the sac to be displaced by a less force than is requisite to tear its neck; but the possibility of laceration of the neck of the sac in femoral hernia is shown by the following case.

CASE.—A woman, æt. 70, was admitted into the Middlesex Hospital with a strangulated femoral rupture, Tuesday night, October 12th. It had existed thirty years, had been several times strangulated, and always reduced by the taxis. The present strangulation took place on the preceding Sunday afternoon, during an attack of diarrhœa. The house-surgeon, who had reduced the rupture by the taxis in a warm bath when it was last strangulated, three months before, could not do so this time, and sent for me in the absence of the surgeon of the week, Mr. De Morgan.

She had a tender, tense, elastic, globular swelling in the left groin, of the size of a billiard-ball, circumscribable everywhere, except at its lower border, where it dipped into the femoral canal; retched frequently, was very exhausted, and her bowels had last acted the previous day.

Mr. De Morgan arriving, requested me to take charge of the patient, and gave me the advantage of his assistance.

Complete muscular relaxation having been induced with chloroform, I repeated the taxis for a few minutes unsuccessfully, and, supposing the case to be an ordinary femoral rupture, proceeded to operate by the customary incision along the inner border of the swelling.

After dividing the subcutaneous fatty tissue, and turning aside a dark-red, deeply congested, lymphatic gland, covered by a thin fascia, the sac was laid bare, and the deep femoral arch, Gimbernat's ligament, and part of the conjoined tendon, having been divided, an attempt was made to return its contents without opening it. As this was impossible, the sac was opened. It had all the usual characters of a common peritoneal sac, and contained a knuckle of dark, claret-coloured, small intestine, coated with lymph, and a few drachms of serum. The neck of the sac and some tight

threads immediately outside it were next divided ; but still the protruding bowel could not be returned into the belly, notwithstanding that so much space had been gained that the finger passed freely through the femoral ring. As the bowel was not adherent to the neck or body of the sac, the obstacle to its return was presumed to be inside the belly above the femoral ring, and in order to reach it Poupart's ligament was cut. Having gained considerably more space by this, on running the finger along the mesentery some deep transverse bands were felt and divided ; but even after this the bowel could not be fairly replaced in the belly, but remained in the neck of the sac. Passed through the femoral ring into the belly, the finger could be moved freely in a large space, the anterior boundary of which, above and behind the pubis, felt like omentum ; whilst directed towards the iliac fossa it met a rounded edge, such as a twisted mesentery might form, and beyond this, at its full depth, sometimes, but not always, the smooth inner surface of the peritoneum was felt. The exact nature of the obstacle could not be made out, and, as it was evident from the subsidence of the distension and congestion of the bowel that the strangulation was removed, the exploration was discontinued, and the wound closed with wire sutures.

13th, at 9 a.m., the lower part of the belly was very painful and tender. During the day the pain and tenderness increased, and she grew weaker, and died at 7 p.m., nearly seventeen hours after the operation.

At the examination of the body the knuckle of bowel was found where it had been left, in the bottom of the wound, and the finger could be passed easily through the femoral ring, as at the operation. On opening the belly by a crucial incision, and turning back the flaps, a large pouch was found outside the peritoneum, between it and the abdominal and pelvic walls. It reached upwards about three inches above the pubis, outwards as far as the deep epigastric artery on each side, downwards in front of the bladder, behind the pubis, at each side of the vagina, to the floor of the pelvis, and extended into the left sciatic notch. The

posterior wall of this immense pouch consisted of peritoneum, strengthened above by the fascia transversalis, and contained below the bladder, which had been displaced from behind the pubis towards the sacrum in the hollow of which the uterus was lying in the mesial line, at the left of the rectum, which descended on the right side. In this wall, opposite the left femoral ring, but about two and a half inches distant from it, there was a circular aperture, three quarters of an inch in diameter, by which the pouch communicated with the peritoneal cavity. It was evidently the original neck of the hernial sac. The margin was formed by smooth, opaque, white, thickened peritoneum, which extended a quarter of an inch upon the inner surface of the pouch, where it ended by a sharply defined cicatricial edge. Springing from the posterior wall, at the lower half of this edge, a slip of fascia ran forwards across the pouch, and lost itself in the fascia propria, in the femoral canal, behind the hernial sac. Through the aperture eight feet of small intestine had passed from the peritoneal cavity into the pouch; and it was also through it that the finger, directed towards the iliac fossa, had reached the smooth surface of the peritoneum at the operation. The inner surface of the pouch was smoothly lined with condensed cellular tissue, except in the neighbourhood of the left femoral ring, where there were several bands, some of which had been divided by the hernia knife. The knuckle of bowel in the sac, which had been strangulated, was continuous with that in the pouch. The entire bowel in the pouch was inflamed, and the inflammation had been most intense nearest the strangulated portion. The aperture in the posterior wall of the pouch did not exert any constriction.

Fig. 1.

1. Rectum, descending at the right side. 2. The bladder. 3. Uterus, thrown back into hollow of sacrum. 4. Elongated vagina. 5. Subperitoneal hernial pouch. The dotted line shows its limits. 6. Communication between this pouch and the peritoneal cavity; original neck of hernial sac. 7. Pubes. 8. Portion of hernial tumour in groin.

Fig. 2.

1. Bladder, contributing to posterior walls of pouch. 2. Rectum. The dotted lines mark the limits of the hernial pouch.

I conclude the following to be the true explanation :—On a remote occasion the neck had been completely torn by the taxis from the body of the hernial sac, a true reduction *en masse* being prevented by the smallness of the femoral ring, which in this case was very marked. The fascia propria had been torn at the same time, and the bowel squeezed up out of the body of the sac through the femoral ring, and, still girt by the neck of the sac, had insinuated itself under the peritoneum and fascia transversalis, near the femoral ring, where it formed a subperitoneal pouch. The strangulation ceased when the bowel re-entered the femoral ring, and was not caused by the neck of the sac. The pouch had been gradually enlarged by the entrance of fresh bowel from the peritoneal cavity, during which the neck of the sac became stretched, which made the entrance of additional bowel easier, and was removed further from the femoral ring.

The femoral ring, not the old neck of the sac, was the seat of strangulation on the present occasion. Death was caused by inflammation of the large extent of bowel in the subperitoneal pouch, which proceeded from the strangulated knuckle in the groin. The distension of the pouch to its utmost limits, so that it was unable to receive more in addition to the eight feet of bowel it already contained, would seem to have been the cause which prevented the return of the bowel from the sac after the free division of the structures at the inner side of the femoral ring. The survival of the patient after the reduction of the bowel, still girt by the neck of the sac, and the large dimensions which the subperitoneal pouch ultimately attained, are very remarkable.