Case Report

Traumatic lumbar hernia

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BACKGROUND: Trauma has various presentations ranging from common injuries that are easily managed to uncommon presentations such as traumatic hernia that may be missed.

METHODS: Despite being operated for fracture of the femur after a road traffic accident, a 50-year-old female patient remained undiagnosed with a right sided traumatic lumbar hernia for nearly six months after the accident. In this period, the patient underwent incision and drainage thrice for swelling in the right flank which was diagnosed as an infected hematoma by a doctor.

RESULTS: The patient underwent surgery for repair of traumatic lumbar hernia by combined fascia lata graft and mesh hernioplasty. She remains well on follow-up.

CONCLUSION: This case underscores the need for awareness of this entity for correct diagnosis and appropriate management that are the key to avoiding complications.

KEY WORDS: Trauma; Femur; Hematoma; Hernioplasty; Fascia lata

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INTRODUCTION

In the normal course of events after blunt abdominal trauma, the brunt of injury is borne by intra-abdominal organs, and the musculature is spared. However, at times, the shearing forces sustained during trauma may be transmitted in such a way so as to cause disruption of the abdominal musculature with subsequent herniation at the site. Traumatic lumbar hernia is such a type of hernia that occurs after blunt trauma and muscle disruption, and arises within the lumbar triangle, bounded by the erector spinae posteriorly, the 12th rib superiorly and the iliac crest inferiorly.^[1]

The diagnosis can often be missed if one is not aware, since at times, abdominal wall bruising or tenderness may be the only finding, and the presence of other injuries (intra-abdominal or otherwise) tend to draw attention away from the diagnosis.^[1-3] The present report is to highlight the delay and morbidity that can be associated with such missed diagnosis.

Case report

A 50-year-old female patient was referred to our

outpatient department with a complaint of swelling in the right flank for six months. Six months ago, she was involved in a road traffic accident and had sustained a fracture of the left femur for which she had undergone surgery (intramedullary nailing). She had repeatedly asked her treating doctor to assess the swelling in her right flank, but had been assured that it was a hematoma that would resolve with time. After having been discharged from the hospital, her local surgeon had attempted to drain this 'collection' by incision on three separate occasions, but the swelling did not subside. Ultimately, her orthopaedist referred her to us for a second opinion.

On examination, the patient had a large swelling in the right flank, extending posteriorly, and crossing the midline towards the left. There were multiple scar marks of the attempts at incision and drainage (Figure 1). The swelling was boggy in consistency and irreducible, but the presence of a cough impulse alerted us to the possibility of a traumatic lumbar hernia. Computed tomography (CT) confirmed the diagnosis, showing the presence of bowel

Figure 1. A large swelling in the right flank, extending posteriorly, and crossing the midline towards the left.

Figure 2. CT film showing the presence of bowel loops in the subcutaneous plane through a large defect in the parietes.

loops that had entered the subcutaneous plane posteriorly through a large defect in the parietes (Figure 2).

The patient was operated on electively. She was placed in a left lateral position after induction of general anesthesia and a skin incision was made to access the bowel loops in the subcutaneous plane. Posteriorly, there were dense adhesions of the bowel (large and small) to the parietes and skin, possibly as a result of the previous attempts at drainage. These adhesions were carefully separated, and the bowel reduced to reveal a large defect in the abdominal muscles (Figure 3) that was bounded above by the 12th rib, inferiorly by the iliac crest and measured about 12 inches in the anteroposterior extent. A fascia lata graft was raised from the right thigh and placed as an 'inlay' to cover the defect in all its extent. This was then buttressed by a polypropylene mesh that was placed and fixed as an 'overlay'. The skin was closed over a closed suction drain.

The postoperative period was uneventful, and the patient has been well on a follow up of nearly one year, with no recurrence of the hernia.

Figure 3. At operation, a large defect seen in the abdominal muscles, bounded above by the 12th rib and inferiorly by the iliac crest.

DISCUSSION

Lumbar herniae are usually classified as congenital (more common) or acquired (due to surgery or trauma) herniae of the bowel contents through a defect in the lumbar triangle.^[3] Although the congenital variety is far commoner than the acquired, at times, one may encounter herniation due to disruption of the musculature at the lumbar region arising from some form of non-penetrating abdominal trauma. As such, these rare herniae must also adhere to the criteria laid down for their diagnosis: the hernia must not be present before the trauma, must appear immediately after trauma, must have intact skin over the hernia, and a peritoneal sac at the time of operation.^[4]

Clinically, the features of herniation may be missed since these patients have severe intra-abdominal injuries (up to 30%) or other associated injuries, and these may divert the attention away from a hernia that is not grossly apparent.^[1-5] However, since CT scan has been the investigation of choice in hemodynamically stable trauma patients who do not require immediate laparotomy, such herniae may be demonstrated well by showing disruption of the musculature, the presence of the intestine in the parietes, and any vascular compromise in addition to the other findings of organ trauma. At times, there may be delayed herniation, and a CT scan taken soon after admission may not show the herniation. In such patients whose diagnosis is suspected, it may be advisable to repeat the CT scan at a later stage to document and assess the extent of herniation.^[2,3]

Surgery is the treatment of choice for patients with traumatic lumbar herniation, although the timing of surgery is still not well established. When an urgent laparotomy is required for intra-abdominal trauma, a layered closure of the disrupted musculature or a mesh

repair (for large defects) may be performed at the time of initial laparotomy. If missed initially, repair must be performed at the earliest time after the diagnosis is made to avoid the chances of complications such as strangulation and perforation of the herniated bowel. Repair can be open or laparoscopic, depending upon the expertise available.^[2-4]

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