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CASE STUDY

LUMBAR HERNIA FOLLOWING BLUNT INJURY ABDOMEN: DELAYED DIAGNOSIS STILL A CONCERN

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ABSTRACT

Lumbar hernia is a rare condition and can occur due to blunt injury following motor cycle accident. The condition can result in chronic pain and small unrecognisable swelling. Delay in diagnosis can occur in such cases and result in poor quality of life for years. We report a case of lumbar hernia which occurred following blunt injury and was not diagnosed until five years after its first presentation. Computerized Tomography (CT) scan along with clinical findings confirmed the diagnosis. Patient underwent successful herniorraphy using a prolene mesh. Timely diagnosis is desirable in case of lumbar hernia not only because it is associated with serious bowel complications but also because associated chronic pain results in poor quality of life. High index of clinical suspicion along with imaging modalities can clinch the diagnosis. Repair using a mesh can be performed for the condition.

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INTRODUCTION

Lumbar hernia is a rare condition and can occur due to blunt injury following motor cycle accident. Patients may present with pain, a palpable or reducible bulge or even with intestinal obstruction (Teo *et al.,* 2010; Delabrousse *et al.,* 2005; Mismar *et al.,* 2013). However, diagnosis can sometimes get delayed when pain is not acute and swelling is not large enough to be picked up by clinical examination. Delay in diagnosis can occur in such cases and result in poor quality of life and sometimes, lead to bowel complications (Teo *et al.,* 2010; Delabrousse *et al.,* 2005). We report a case of lumbar hernia which occurred following blunt injury and was not diagnosed until five years after its first presentation. CT scan along with clinical findings confirmed the diagnosis. Ultimately, patient underwent successful reconstruction using a prolene mesh.

CASE

A 46 years old female, known hypertensive presented in surgical OPD with swelling in left lumbar region and pain (Fig 1) which occurred following motor cycle accident five years ago. The swelling appeared five days following the incidence. It gradually increased in size and was reducible.

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It was also associated with pain which increased on prolonged sitting and decreased in supine position. There were no associated bowel and bladder complaints. She had not undergone any abdominal surgery previously. She was not diagnosed correctly despite multiple visits to multiple practitioners. Finally, patient was referred to us. Her local examination revealed a 5x5 cm, non-tender swelling in left lumbar region with demonstrable cough impulse.

Fig. 1. Bulge in the left flank

It was reducible with difficulty and increased in standing position. Ultra sonogram revealed a 4x5 cm defect in left lumbar region, superior to iliac crest and with hernia ting bowel contents.

Fig. 2. CT scan showing a 3.3 x 4.4 cm. (APxCC) defect in the abdominal wall musculature just above the left iliac crest between the Quadratus Lumborum muscle, Latissimus dorsi muscle and iliac crest postero-inferiorly and the internal oblique, external oblique and Transversus abdominus muscles antero-superiorly. The distal descending colon was seen herniating out through this defect

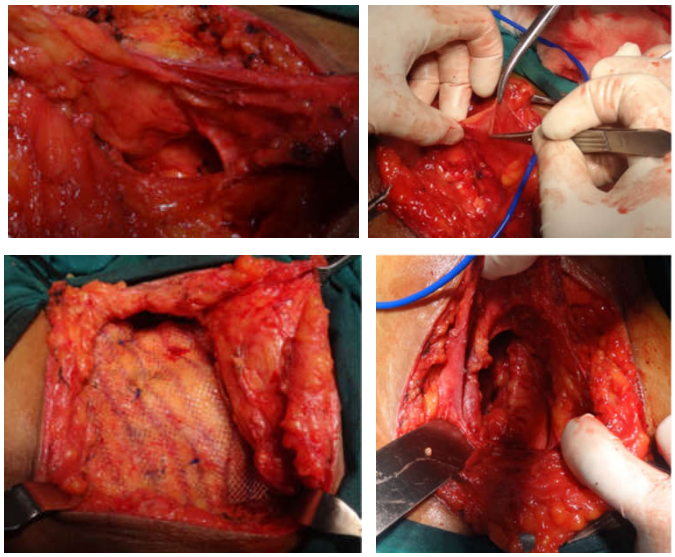

Fig. 3. Clockwise: Hernial defect with its contents. Hernial sac after reducing its contents. Defect through the triangle of patite after its contents has been reduced. Mesh overlay after repair of the hernia defect

Ct scan (Fig 2) revealed a 3.3 x 4.4 cm. (APxCC) defect in the abdominal wall musculature just above the left iliac crest between the Quadratus Lumborum muscle, Latissimus dorsi muscle and iliac crest postero-inferiorly and the internal oblique, external oblique and Transversus abdominus muscles antero-superiorly. The distal descending colon was seen herniating out through this defect. Anatomical repair with mesh replacement was performed. The hernia defect was in the triangle of petit and measured 5 cm × 4 cm. The sigmoid colon was found incarcerated and adhered to the hernia sac. After reducing the sigmoid colon, the herniorrhaphy was performed by securing a 10 cm × 10 cm polyester mesh as an overlay with transfascial sutures (Fig. 3). The length of the operation was 35 min and blood loss was minimal. The patient was discharged home on postoperative day 7.

DISCUSSION

Lumbar hernia is an uncommon entity. It can be a congenital condition but the majority are acquired and present following surgery, trauma or inflammation (Salemis *et al.,* 2007). Weak posterolateral wall is the common site for lumbar hernia which usually occur in 2 weak sites – the superior (Grynfeltt-Lesshalft) and the inferior (Petit) lumbar triangles (Cavallaro *et al.,* 2009; Tobias-Machado *et al.,* 2005). Timely diagnosis is desirable in case of lumbar hernia not only because it is associated with serious complications like bowel obstruction and incarceration (Mellnick *et al.,* 2014) but also because chronic pain associated with this condition debilitates the quality of life. However, delayed diagnosis is not uncommon as occurred in this case. In a series reported by Burt *et al*. the incidence of delayed diagnosis was nearly 27% and the time of diagnosis ranged from months to years (Burt *et al.,* 2004). Diagnosis gets delayed because clinical examination alone is not sensitive enough to reveal the diagnosis especially when the mass is small. Another reason for the delayed diagnosis is the associated distracting injuries. The incidence of such associated injuries has been reported to be as high as 61%. In the Burt *et al*. series, mesenteric injury was found to be the commonest associated injury, with an incidence of 36% followed by pelvic fractures seen in 21% cases (Burt *et al.,* 2004).

A high index of suspicion is required to clinch the diagnosis of lumbar hernia. In this case, patient's diagnosis got delayed for five years. Though clinical examination alone is not very sensitive for diagnosis however, the constant complaint of lumbar pain should have warranted further investigations. CT scan is a reliable diagnostic modality and its usage has improved the identification rate of lumbar hernia (Hickey *et al.,* 2002), It has the advantage of delineating the anatomy of the disrupted musculature layers, the presence of herniated intra-abdominal viscera or retroperitoneal fat, and associated intra-abdominal injuries (Killeen *et al.,* 2000). Lumbar hernias are managed operatively and can be repaired using either an open, laparoscopic or retroperitoneoscopic approach (Cavallaro *et al.,* 2000; Heniford *et al.,* 1997; Meinke, 2003; Habib, 2003). Repair can be performed with mesh patches and with muscle and fascial flaps, especially for larger defects (Salemis *et al*., 2007). The timing of hernia repair vary. Immediate exploratory laparotomy should be undertaken whenever there is a suspicion of intra-abdominal injury (Esposito, 1994). However, repair can be delayed when there is a high risk for surgical infection.

Conclusion

Delay in diagnosis can be avoided in case of lumbar hernia by timely referral, high clinical suspicion and usage of imaging modalities. It will prevent any serious bowel complication and address the quality of life issue.

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