CASE REPORT

A 55-Year Old Man with Acute Painful Flank Mass, a Case Report

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Abstract

Lumbar hernias (LH) accounts for less than 1.5% of total hernia incidence. It can occur in two separate triangular areas of the flank. About 300 cases have been reported in the literature. Here, we report a 55-year old man with acute painful left side flank mass and final diagnosis of LH. The mass was appeared about three hours before admission and his pain was slight at first but became more severe gradually. He had stable vital sign and the only positive finding on his physical examination was the sphere shape, firm, mobile, and mild tender mass at his left flank.

Key words: Hernia; flank pain; case report

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Introduction:

Lumbar hernias (LH) are rare; about 300 cases have been reported. It can occur in two separate triangular areas of the flank (1-3). The superior triangle (Grynfeltt's lumbar triangle) is bound by the 12th rib superiorly, the internal oblique muscle inferiorly, and the sacrospinous muscles medially. The inferior triangle (Petit's lumbar triangle) is bound by the latissimus dorsi muscle posteriorly, the external oblique muscle anteriorly, and the iliac crest inferiorly (4). LHs are more common on the left side. This may be because the liver pushes the right kidney inferiorly in development, leading to the protection of the lumbar triangles (5). LH may contain a number of intra or retroperitoneal structures including large intestine, small intestine, stomach, kidney, spleen, and mesentery omentum. 25% of all LHs are secondary acquired that may be caused by blunt-penetrating or crushing trauma; fractures of the iliac crest; surgical lesion; hepatic abscesses; infection in pelvic bones, and ribs or lumbodorsal fascia (1) . Incisional hernias develop in 3.8%-11.5% of cases after abdominal –surgical procedures (6). The incidence depends on a number of risk factors including old age, sex, obesity, suture type and wound infection. Here, we report a 55-year old man with acute painful left side flank mass.

Case report:

A 55-year-old homeless man came to the emergency department (ED) with pain and a mass in his left flank. The patient was awake and oriented. This mass was appeared about three hours before admission and his flank pain was slight at first but became more severe gradually. On admission, he had 18 per minute respiratory rate, 88 per minute pulse rate, 110/80 mmHg blood pressure, 90% O_2 saturation in room air, and 37°C auxiliary temperature. The pain score was about 9 to 10 according to visual analog scale (VAS). The only positive finding on physical examination was the sphere shaped, firm, mobile, and mild tender mass at his left flank (Figure 1). There was a 5 cm scar on this site because of previous penetrating trauma injury due to a motor vehicle collision. There was an abdominal wall defect about 8 cm in diameter and bowel loop was trapped in the neck of hernia sac on computed tomography (CT) (Figure 2). As a result, a Petit's triangle LH was diagnosed. Surgery was performed immediately by diagnosis of strangulated LH. Finally, the report of surgery finding confirmed diagnosis.

Discussion:

LH accounts for less than 1.5% of the total hernia incidence (7). The inferior lumbar hernia is less common because of attachment of external oblique and latissmus dorsi to the iliac crest. Lumbar hernia could be divided into two groups congenital and acquired (8). Congenital LH accounts for 20% of all LHs. Congenital LH usually could be seen in superior lumbar triangle. Complica-

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tions ofLH include irreducibility, incarceration and strangulation (9). In LH symptomatology limited to lower back pain. In less than 10% of cases the onset is acute with bowel obstruction (10). Treatment depends on the size and type of hernia. If the defect is small, it can be closed with continuous polypropylene. For large defect, preperitoneal meshplasty is the best treatment. Laparoscopic repair has been used in different reports with less pain and good functional result (11). Motor vehicle accidents are the most common cause of post-traumatic LHs (1, 4). If a LH is found after a motor vehicle accident, it is critical to assume that the patient has other intra-abdominal injuries. These patients should undergo urgent laparotomy because more than 60% of them will have major intra-abdominal injuries.

Figure 1: The Patient's left flank mass ⇧

Figure 2: Abdominal computed tomography of patients⇧

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References:

1. Abrahamson J. Postoperative ventral abdominal hernia. In: Zinner MJ, Schwartz SI, editors. Hernias. 10 ed. Stanford: Appleton and Lange; 1990. p. 479–580.
2. Astarcioglu H, Sokmen S, Atila K, Karademir S. Incarcerated inferior lumbar (Petit's) hernia. Hernia. 2003;7(3):158-60.
3. Baratloo A, Safari S, Rouhipour A, et al. The Risk of Venous Thromboembolism with Different Generation of Oral Contraceptives; a Systematic Review and Meta-Analysis. Emergency. 2014;2(1):1-11.
4. Bohn D. Congenital diaphragmatic hernia. Am J Respir Crit Care Med. 2002;166(7):911-5.
5. Bucknall T, Cox P, Ellis H. Burst abdomen and incisional hernia: a prospective study of 1129 major laparotomies. Br Med J (Clin Res Ed). 1982;284(6320):931.
6. Dinger J, Assmann A, Möhner S, Do Minh T. Risk of venous thromboembolism and the use of dienogest and drospirenone containing oral contraceptives: results from a German case-control study. J Fam Plann Reprod Health Care. 2010;36(3): 123-9.
7. Gronich N, Lavi I, Rennert G. Higher risk of venous thrombosis associated with drospirenone-containing oral contraceptives: a population-based cohort study. Can Med Assoc J. 2011;183(18):E1319-E25.
8. Hegarty M, Bryer J, Angorn I, Baker L. Delayed presentation of traumatic diaphragmatic hernia. Ann Surg. 1978;188(2): 229.
9. Le Neel J, Sartre J, Borde L, Guiberteau B, Bourseau J. Lumbar hernias in adults. Apropos of 4 cases and review of the literature. J Chir (Paris). 1993;130(10):397-402. [French].
10. Manzoli L, De Vito C, Marzuillo C, Boccia A, Villari P. Oral Contraceptives and Venous Thromboembolism. Drug Saf. 2012;35(3):191-205.
11. Wiechmann RJ, Ferguson MK, Naunheim KS, et al. Laparoscopic management of giant paraesophageal herniation. Ann Thorac Surg. 2001;71(4):1080-7.