

# Traumatic Spigelian Hernia in Adults: A Rare Clinical Scenario.

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## ABSTRACT

Handlebar hernias are very rare and arise following a sudden force from a handle-like object impacting a focal area of the abdomen, which results in a disruption of the underlying abdominal muscle and fascia without necessarily disrupting the overlying skin. Other than a reducible swelling on the abdominal wall, the physical examination of such patients is usually unremarkable and the diagnosis could easily be missed. Delay in the diagnosis can lead to incarceration or strangulation of bowel loops and subsequent morbidity. A large proportion of reported cases are in children. Here, we are reporting a case of traumatic Spigelian hernia following blunt trauma in an adult male. The significance of our case is that it provides some evidence that blunt trauma to abdomen may play an etiological role in development of some Spigelian hernias in adult as well.

**Keywords:** Blunt trauma, Spigelian hernia, Handlebar hernia.

## INTRODUCTION

The criteria for traumatic abdominal wall hernia include immediate appearance of the hernia through the disrupted muscle and fascia after blunt abdominal trauma, and failure of the injury to penetrate the skin as defined by Damschen et al.,<sup>[1]</sup> Spigelian hernia is a variety of interparietal hernia occurring at the level of arcuate line. It accounts for 0.1 to 2 percent of all abdominal wall hernias.<sup>[2]</sup> We are reporting a case of traumatic Spigelian hernia in a 21-year-old male patient who presented in the emergency department with appearance of a painful swelling in the right lower abdomen following fall from a motorcycle.

## CASE REPORT

A 21-year-old male, with no relevant past history, visited our emergency department with abdominal pain and swelling after a fall from his motorcycle. Whilst riding his motorcycle, he had fallen and his abdomen had landed on the handlebar. A visible swelling was present in the right iliac region with overlying bruising of the skin [Figure 1]. On palpation, it was tender, soft, non-pulsatile, and reducible and the fascial defect was felt through

intact skin [Figure 2]. Ultrasound showed herniation of gut through a defect in anterior abdominal wall in the right iliac region. Contrast enhanced CT scan showed herniation of ileal loops through a defect measuring 1.2 cm in the anterior abdominal wall lateral to rectus sheath in the right iliac region. . During the operation, an incision was given over the fascial defect, revealing a rupture of the anterior rectus sheath, as well as a total rupture of the right rectus fascia with rupture of peritoneum [Figure 2]. The rectus sheath was closed with a continuous Vicryl suture. The muscle defect was approximated with interrupted Vicryl sutures. The skin was closed with interrupted 2-0 mersilk suture. He was discharged after four days and recovered uneventfully.



**Figure 1:** Showing 6 × 3 cm swelling in Right iliac region of the abdomen in upright posture.

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**Figure 2: Fascial defect felt through the intact skin.**



**Figure 3: Showing the 7×3 cm defect in anterior abdominal wall. The rectus sheath, omentum and ileum are marked a, b and c respectively.**

## DISCUSSION

Traumatic abdominal wall hernia (TAWH) was first described by Selby.<sup>[3]</sup> The pathophysiology of TAWH involves the application of a blunt force to the abdomen over an area large enough to prevent penetration of the skin.<sup>[4]</sup> Three types of traumatic abdominal wall hernia were described (by Wood et al.,) according to the mechanism and size of the defect. Type I are small defects caused by blunt trauma. Type II are larger defects occurred during motor vehicle crashes. In Type III, there are abdominal wall defects with bowel loop herniation following deceleration injuries, which are extremely rare.<sup>[5]</sup> CECT abdomen is the investigation of choice in evaluation of blunt trauma abdomen.<sup>[1]</sup> Diagnostic laparoscopy seems to be an excellent adjunct in the management of TAWHs. In the event of a negative diagnostic laparoscopy, one can repair the hernia by the local approach and avoid unnecessary general abdominal exploration.<sup>[6]</sup>

Most authors have advocated immediate laparotomy with repair of the defect because of the high incidence of associated intra-abdominal injury i.e.

upto 30 percent and to avoid the complications such as incarceration or strangulation and subsequent morbidity.<sup>[7]</sup> Local exploration through an incision overlying the defect may be an option for small defects caused by low velocity injury, but TAWHs following high-energy trauma should undergo exploratory laparotomy through a midline incision owing to a high prevalence of associated intrabdominal injuries.<sup>[8]</sup> Primary mesh repair should be considered in cases with no hollow viscous injuries, relatively large defects, and the presence of tension for direct closure.<sup>[9]</sup>

## CONCLUSION

Traumatic abdominal wall hernia should be suspected in a patient with tender, localised swellings of the abdominal wall following blunt trauma. Computed tomography of the abdomen is the investigation of choice to diagnose spigelian hernia and associated intra-abdominal injuries. Urgent surgical measures to prevent further bowel injury and associated complications are necessary.

## REFERENCES

1. Damschen DD, Landercasper J, Cogbill TH, Stolee RT. Acute traumatic abdominal hernia: Case reports. *J Trauma.* 1994;36:273–76.
2. Montes IS, Deysine M. Spigelian and other uncommon hernia repairs. *Surg Clin North Am.* 2003;83:1235.
3. Selby CD. Direct abdominal hernia of traumatic origin. *JAMA.* 1906;47:1485–86.
4. Ganchi PA, Orgill DP. Auto penetrating hernia: A novel form of traumatic abdominal wall hernia: case report and review of the literature. *J Trauma.* 1996;41:1064–6.
5. Hassan KA, Elsharawy MA, Moghazy K, AlQurain A. Handlebar hernia: A rare type of abdominal wall hernia. *Saudi J Gastroenterol.* 2008;14:33–35.
6. Goliath J, Mittal V, McDonough J. Traumatic handlebar hernia: a rare abdominal wall hernia. *J Paediatr Surg.* 2004;39:e20–e22.
7. Dreyfuss DC, Flancbaum L, Krasna IH, Tell B, Trooskin SZ. Acute trans-rectus traumatic hernia. *J Trauma.* 1986;26:1134–6.
8. Lane CT, Cohen AJ, Cinat ME. Management of traumatic abdominal wall hernia. *Am Surg.* 2003;69:73–76.
9. Drago SP, Nuzzo M, Grassi GB. Traumatic ventral hernia: report of a case, with special reference to surgical treatment. *Surg Today.* 1999;29:1111–14.

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