

## CASE REPORT

# Traumatic Abdominal Wall Hernia With Acute Intestinal Obstruction: A Rare Presentation

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### ABSTRACT

**Introduction:** TAWH is defined as herniation through disrupted musculature and fascia without skin penetration, and no evidence of a prior hernial defect at the injury site (1). TAWH is a rare clinical entity but quite vital for experts treating trauma patients.

**Patient:** A 29-year male complained of abdominal pain and vomiting following blunt trauma abdomen in a road traffic accident. Computed tomography revealed small bowel obstruction secondary to an infra-umbilical hernia with small bowel as the content. Exploratory laparotomy with hernioplasty was done.

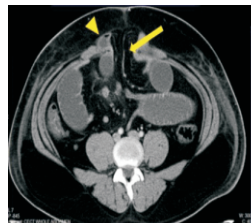
**Results:** Postoperative course remained uneventful.

**Conclusion:** To avoid complications associated with TAWH, it must be identified and managed promptly.

**Keywords:** Traumatic abdominal wall hernia (TAWH), abdominal wall hernia, bowel obstruction, JMS: 2021; 24(1):36-37 DOI: <https://doi.org/10.33883/jms.v24i1.809>

### CASE PRESENTATION

A 29-year male presented with acute abdominal pain and bilious vomiting a day after a road traffic accident. History was unremarkable. He had tachycardia, the abdomen was distended with seat-belt signs, diffusely tender without signs of peritonitis. Computed tomography abdomen was done (figure 1).



**Fig. 1:** CT abdomen - herniation of bowel (arrowhead) and hernial defect (arrow)



**Fig. 2:** Intraoperative photographs - hernial defect and herniated bowel loop

Infraumbilical mid-line laparotomy revealed avulsion of subcutaneous fat, tear in rectus sheath along with muscles

and peritoneum creating a hernial defect (figure 2), and herniation of jejunal loop with constriction ring causing an obstruction. Contents were reduced. The defect was repaired. On-lay polypropylene mesh was placed along with the intraparietal drain. The postoperative period was uneventful and the drain was removed on the third postoperative day.

### DISCUSSION

The prevalence of TAWH is less than 1% at dedicated trauma centers<sup>2</sup>. TAWH is usually caused by a direct blow to the abdominal wall resulting in disruption of muscles, but force doesn't generate sufficient energy to breach the skin due to its elastic nature<sup>3</sup>.

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Diagnosis is made when there is bowel herniation through disruption of musculature and fascia with the absence of skin penetration and no history of the previous hernial defect<sup>1</sup>. Computed tomography abdomen is the most accurate imaging test for diagnosing TAWH<sup>4,5</sup>.

Surgical treatment is divided into immediate or delayed and laparoscopic or open. Regarding small defects caused by low-velocity injuries, local exploration may be an option. for small defects caused by low-velocity injuries. However, exploratory laparotomy should be performed in patients with abdominal wall hernia following high-energy trauma through a midline incision due to the high prevalence of associated intra-abdominal injuries<sup>6</sup>.

Exploration can be divided into immediate or delayed. The timing of surgery depends mostly on concomitant injuries requiring treatment priority. The timing of surgery for TAWH should be considered depending on the severity of the trauma, size of the hernial defect, clinical and radiological findings, associated injuries, and clinical status of the patient. Elective hernia repair may be more suitable in stable patients<sup>7</sup>. Most authors support immediate laparotomy with the repair of defect because of the high incidence of associated intra- abdominal injury (up to 30%) and to avoid complications such as incarceration or strangulation and subsequent morbidity. Besides, mesenteric and bowel injuries that are liable to be missed on CT scans can also be managed well in time<sup>8</sup>. TAWH can lead to bowel obstruction which must be diagnosed and treated immediately.

## CONCLUSIONS

We described a rare case of traumatic abdominal wall hernia requiring surgery for bowel obstruction. In such cases, clinicians must be familiar with the occurrence of TAWH

which may lead to bowel obstruction.

**Consent:** Written informed consent from the patient was taken.

**Competing interests:** The authors declare that they have no competing interests.

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