

# Spontaneous rupture of incisional hernia: A case report

M Husain, M Mohsin, I Mir, Peethambaran, A Quadir, S Khan

## Citation

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## Abstract

**Background:** An incisional hernia develops in the scar of a surgical incision. Spontaneous rupture of an abdominal hernia is very rare and usually occurs in incisional or recurrent groin hernia.

**Case presentation:** This is a report of 46-year-old female who presented with sudden spontaneous rupture of an incisional hernia. This hernia was repaired by Shoelace darn technique after repositioning the bowel into the peritoneal cavity and excising the excess atrophied skin.

The patient recovered well and was discharge after the 10th day.

**Conclusion:** Spontaneous rupture of abdominal hernia is a very rare complication. It is a potentially fatal but preventable clinical condition and should be managed by primary repair if there is only minimal contamination and by secondary repair if grossly contaminated.

## BACKGROUND

An incisional hernia develops in the scar of a surgical incision. Rarely, a particularly thin-walled large incisional hernia may actually ulcerate at its fundus so that omentum protrudes or there is even the development of an intestinal fistula. Spontaneous rupture of an abdominal hernia is very rare and usually occurs in incisional or recurrent groin hernia<sup>1</sup>. Von Helwig (1958) reported 47 cases of spontaneous exteriorization of bowel through abdominal hernia, out of these 17 cases were through incisional hernia while others were through inguinal, femoral, umbilical and epigastric hernias<sup>2</sup>. The site of rupture is different in different studies. Hartley RC (1962)<sup>3</sup>, and Hamilton RW (1966)<sup>4</sup>, reported rupture through lower midline incision while Aggarwal PK (1986)<sup>5</sup>, found herniation after upper abdominal surgery following perforated duodenal ulcer.

## CASE PRESENTATION

A 46-year-old lady was under treatment in the outpatient department for her incisional hernia following midline caesarean section 12 years before. She was planned for mesh repair but operation was postponed because of cough and fever. The hernia was large and protruding through a defect of 8 x 6cm in the lower abdomen. The skin over the hernial sac was atrophic, depigmented and thinned out, but there was no ulceration. She presented in casualty with a loop of

bowel protruding through a defect of 3 x 2cm in the hernial sac following a severe bout of cough (Fig. 1). Around 4 ft of bowel was outside which could not be replaced; it was healthy but slightly edematous (Fig. 2). Immediate surgery was planned and the patient was shifted to Emergency OT.

## Figure 1

Figure 1: Bowel protruding through the defect in the hernial sac



**Figure 2**

Figure 2: Bowel loops which could not be replaced; healthy but slightly edematous.



At operation, the defect was enlarged and bowel repositioned into the peritoneal cavity, no adhesions were found. After removing all the atrophic and scarred skin, repair was done by Shoelace darn technique. The patient was put on prophylactic antibiotics for three days and she was discharged home on tenth day after removing the stitches. The wound healed without any infection. She was followed for six months without any recurrence.

**DISCUSSION**

Spontaneous rupture of abdominal hernia is a rare event which can affect any abdominal hernia but is more commonly reported in incisional hernia<sup>2,6,7</sup>. This rupture may be sudden following any event which can increase the intrabdominal pressure like coughing or lifting a heavy weight, or it may be gradual after developing an ulcer at the fundus of the sac<sup>2,4</sup>. In both situations the main reason is weak and thinned out atrophic skin. In our case, rupture of the hernial sac occurred because of sudden increase in intrabdominal pressure due to excessive coughing.

Various factors which can contribute to the rupture of a hernia are friction by the patient's external corset or abdominal support, thin atrophic skin, lack of any adhesions between bowel and sac, allowing the bowel to act as a

hammer-head upon the skin<sup>3</sup>. Eversion of bowel or omentum demands emergency operation and this may or may not be combined with an attempt of definitive hernia repair. If the bowel can be reduced easily and the defect readily closed, it has been recommended that primary repair be carried out, but if strangulation occurs or bowel resection is required the primary repair is hazardous<sup>3,5</sup>.

**CONCLUSION**

Spontaneous rupture of abdominal hernia is a very rare complication, it usually occurs in cases of incisional hernia. This rupture may be gradual because of ulceration of the overlying skin or sudden due to any event which can increase the intrabdominal pressure. These cases should be managed by primary repair if there is no gangrenous segment and the contamination is minimal or by delayed repair if there is gross contamination and resection and anastomosis is required.

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**Author Information**

**Musharraf Husain, M.S., DNB, MRCS Ed.**

Assistant Professor, Department of Surgery, JNMCH, A.M.U.

**Mir Mohsin, M.S.**

Senior Resident, Department of Surgery, JNMCH, A.M.U.

**Iqbal Saleem Mir, M.S.**

Lecturer, Department of Surgery, SMHS Hospital

**Peethambaran, M.S.**

Senior Resident, Department of Surgery, JNMCH, A.M.U.

**Abdul Quadir, M.S.**

Senior Resident, Department of Surgery, JNMCH, A.M.U.

**Sabina Khan, M.D., Path**

Senior Resident, Department of Pathology, JNMCH, A.M.U.