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## Spontaneous rupture of incisional hernia in a 7 month concealed pregnancy: a rare case report

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### Abstract

Incisional hernias have been reported in up to 20% of patients undergoing laparotomy. The incidence of incisional hernia following Caesarean section by vertical incision is 3.1%. Spontaneous rupture of abdominal hernia is very rare and usually occurs in incisional and recurrent groin hernias. Conservative management such as manual reduction and use of abdominal binder until term has been applied with unreliable success.

Additionally, surgical intervention such as antepartum hernial repair has also been undertaken in few women while allowing for normal vaginal delivery at term. The rarity of this condition prompted us to report a case of spontaneous rupture of incisional hernia in a 35 years old pregnant lady who had developed incisional hernia following caesarean section.

**Keywords:** incisional hernia, concealed pregnancy, caesarean section, normal delivery, mesh repair

### Introduction

A postoperative ventral abdominal wall hernia, more commonly termed incisional hernia, is escape of organs from their physiologic position through an area of weakness in the surgical scar. It results as a failure of fascial tissues to heal and close following laparotomy. These hernias can increase in size to enormous proportions, and giant ventral hernias can contain a significant amount of small or large bowel. Incisional hernias have been reported in up to 20% of patients undergoing laparotomy [1-3]. The incidence of incisional hernia following Caesarean section by vertical incision is 3.1% [4]. Spontaneous rupture of abdominal hernia is very rare and usually occurs in incisional and recurrent groin hernia [5]. Rupture of incisional hernia during pregnancy is an extremely rare entity [6]. The rarity of this condition prompted us to report a case of spontaneous rupture of incisional hernia in a 35 years old pregnant lady who had developed incisional hernia following caesarean section.

### Presentation of the Case

A female patient, 35 years old, presented to the trauma and emergency section of Jawaharlal Nehru Medical College and hospital with abdominal pain and evisceration of small bowel and uterus through lower part of incisional hernia (Fig-1). It was associated with serosanguinous discharge from the rupture site. There was history of cough for last 6 days. There was no history of trauma or exertion during defecation and micturition. The patient had undergone classical Caesarean section 5 years back. This was complicated by wound infection with resultant healing by secondary intention. She was diagnosed with incisional hernia 4 years back and was advised operation, which she had neglected. At presentation she had 28 weeks amenorrhea. The pregnancy was concealed with the family members. On examination she had fever, tachycardia and blood pressure of 102/58 mmHg. Abdominal examination revealed a lower abdominal swelling overlying a previously stretched Caesarean scar with protrusion of small bowel loops and part of uterus through the lower part of the swelling. The swelling was irreducible. Skin over the swelling was necrosed and the uterus could be palpated. The protruded bowel loops and uterus appeared healthy. On auscultation, bowel and fetal sounds were audible. Per-vaginal examination revealed a retroverted gravid uterus with closed and healthy internal os. The patient was diagnosed with ruptured incisional hernia and was planned for emergency exploration after resuscitation. Intraoperative findings included large defect on the anterior abdominal wall of

about 6 by 6 cm, massive peritoneal adhesions with healthy bowel (Fig-2). Lower segment hysterotomy was done delivering a live 1500 gm male baby (Fig-3). Uterus was closed after the removal of placenta and hemostasis was achieved. The hernial sac was dissected. The rectus sheath was mobilised and repaired with Prolene no-1 RB followed by onlay polypropylene mesh repair (Fig-4). Excess lax, necrosed and thinned out skin was trimmed and the wound was closed with a suction drain. The drain was removed on 8<sup>th</sup> postoperative day. Recovery was uneventful and the patient was discharged on the 9<sup>th</sup> postoperative day with a contraceptive advice of IUCD placement. The baby could not survive and died 2 weeks after surgery. The patient is still on follow up and is doing well.

### Discussion

In pregnancy, ventral hernias are very difficult to understand because of its rare occurrence and becomes serious obstetric problem if complications such as incarceration, strangulation or spontaneous rupture occur [7, 8]. Incisional hernia following Caesarean section has been associated with wound infection, malnutrition and poor surgical technique. Other associated factors include additional operative procedure, presence of postoperative abdominal distension, intra-abdominal sepsis, residual intra-abdominal abscess, wound dehiscence and postoperative fever [4]. Conservative management such as manual reduction and use of abdominal binder until term has been applied with unreliable success [8]. Additionally, surgical intervention such as antepartum hernial repair has also been undertaken in few women while allowing for normal vaginal delivery at term [8]. Some studies recommend postponing herniorrhaphy until post-partum because the enlarged uterus itself and laxity of the abdominal wall may hinder optimal repair and enlargement with advancing gestation may further disrupt the repair. On the contrary, few other authorities have recommended that herniorrhaphy can be performed during pregnancy if there is evidence of gross incarceration, strangulation or skin necrosis [7, 8]. With the tension-free mesh technique the recurrence rates for hernias compared to tissue repairs has drastically reduced. Thus, in our case, herniorrhaphy with tension-free mesh placement has been successfully performed as part of the caesarean section with no incidence of wound infection and recurrence.



**Fig 2:** Large anterior abdominal wall defect with bowel evisceration



**Fig 3:** Live male baby delivered



**Fig 4:** Onlay polypropy mesh repair of the defect

Figure-Eviscerated bowel loops and delivery of a live baby along with onlay mesh repair

### Conclusion

There is a dilemma in the management of incisional hernia in pregnancy because no evidence-based approach has been



**Fig 1:** Evisceration of small bowel and uterus

described in the literature. Conservative management with manual reduction and use of abdominal binder has been used with some success. Surgery is the definitive management for large incisional hernias and for those impending rupture and is judiciously used in pregnancy.

**Conflict of interest**

The authors declare that there are no conflicts of interests regarding the publication of this article.

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