



GRAVID UTERUS IN POST CAESAREAN INCISIONAL HERNIA WITH SKIN DEFECT

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ABSTRACT

Incisional hernia after caesarean section is a well-known complication, especially if the convalescence period was not uneventful. Sepsis being a major causative factor. The rising trend of primary caesarean section has led to the rising trends of incisional hernia post C-section. In general the content of the sac are noted to be omentum or small bowel loops. Rarely it can have gravid uterus as hernial content. In even rarer cases, such hernia is associated with skin defect over the sac. Very few such cases are reported in the literature. We hereby report a similar case of full term gravid uterus in post C-section incisional hernia sac, with successful maternal and fetal outcome.

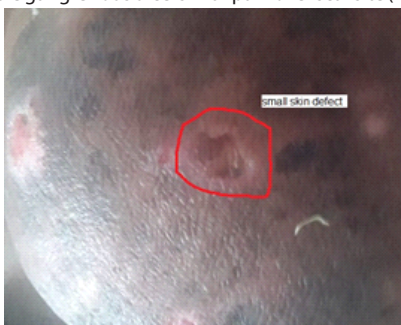
KEYWORDS : Gravid uterus, incisional hernia, caesarean section, burst abdomen**INTRODUCTION:**

Pregnancy associated with incisional hernia with whole of the gravid uterus as the content of the sac is a rare occurrence.¹ An incisional hernia results from an incompletely healed surgical wound. It is usually seen as an abdominal wall defect at the site of previous incision following breakdown in the continuity of the fascia closure.² In general the content of the sac are noted to be omentum or small bowel loops but hernias may very rarely contain gravid uterus and may be associated with complications like incarceration, strangulation and burst abdomen.^{3,4} Association with a skin defect over the sac is still rarer. When the skin defect is bigger, it is a challenge to continue the pregnancy as the risk of rupture and bleeding is high.

Diagnosis is based on clinical and radiological features. The management requires meticulous planning and individualized handling so as to achieve favorable outcome.

CASE REPORT:

33 years old women, G2P1L1 13+3 weeks of gestation with previous LSCS 3 yrs back came in OPD with incisional hernia. She had a rectus sheath defect of 5cm at previous scar site. She gave history of burst abdomen and resuturing in previous C-section and history of 3 BT received. She also complains of a small defect over anterior abdominal wall since 3 years which gradually increased in size. Surgical reference was done; a rectus sheath defect of 5 cm noted on USG with omentum as its content and advised conservative management with abdominal binder and routine follow-up. Later she was lost to follow up. She reported to surgery casualty at 23 weeks with skin changes and bleeding from scar site and managed conservatively. Her 2nd OBGYN visit was at 31+5 weeks when she came with skin changes over hernia leading to skin defect of 1*1cm and multiple gangrenous ulcers with pain over scar site (Fig 1).

**Figure 1 Showing small skin defect at 31 weeks of gestation.**

She was admitted and USG done suggestive of single live intrauterine fetus of 31 weeks in longitudinal lie breech presentation with adequate liquor. Gravid uterus was seen as its content. Surgery reference was done. MRI pelvis was done and USG findings confirmed of rectus sheath defect with gravid uterus in the Incisional hernia. She was managed conservatively till 37 weeks with daily dressing and antibiotics. Steroids were given for fetal lung maturity (betamethasone 12mg 2doses 24hrs apart). The skin defect was noted to be increased overtime (Figure 2).

**Figure 2 showing increased skin defect with multiple gangrenous ulcers at 37 weeks of gestation.**

Elective LSCS was planned with surgical unit at 37 completed weeks with hernia repair at same setting. Transverse incision was given over the bulging of anterior abdominal wall. Uterus was noted to be acutely anteverted. Uterus repositioned in normal position and Lower segment transverse incision given over uterus. 2.9kg, male child delivered with Apgar score of 8,9. Uterus sutured and hemostasis achieved. Uterus repositioned back into the defect (Figure 3 shows the hernia sac).

**Figure 3 showing the hernial sac.**

A 20*20cm paritex composite mesh was placed retro-rectus and secured with vicryl 1-0 (Figure 4).

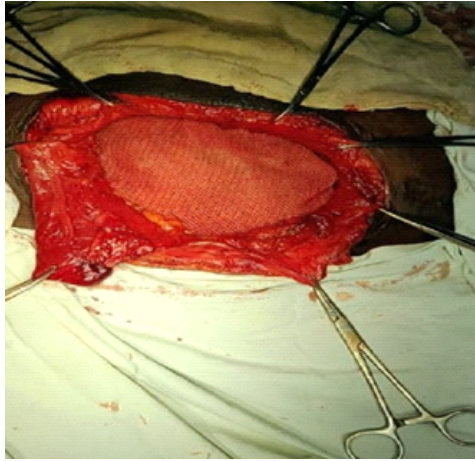


Figure 4 showing the mesh placed retro rectus.

Subcutaneous suction drain kept in situ and skin closed with staplers. Drain removed on day7 post-op. Staplers removed on day 12. Suture line was healthy with uneventful post-op period. She was discharged on day 14.

We feel simultaneous hernioplasty is a safe option as we did not encounter any postoperative complications.

DISCUSSION:

Incisional hernia occurring during pregnancy is not only a rare clinical entity but also an extremely challenging situation for the team of doctors attending her. In the present case, through the previous LSCS scar, a large irreducible incisional hernia was seen in the anterior abdominal wall region of a 31 weeks, gravida 2, woman, the content of which was gravid uterus. Herniation of gravid uterus in incisional hernia is a very rare but serious obstetric problem that has very high potential of maternal and fetal morbidity and mortality. Occurrence of incisional hernia is likely in presence of predisposing factors such as poor surgical suture technique especially with 'absorbable catgut'. Interrupted fascial suturing is more likely to give way and result in incisional hernia. Presences of obesity, sepsis, diabetes, anemia, poor nutritional status, smoking and chronic cough.

The contents of ventral incisional hernia are usually small bowel loops or omentum. Rarely has it been reported to be gravid uterus as in the present case. Less than 20 such cases have been reported till date in the medical literature of which less than a dozen are post LSCS, others being in umbilical hernia. The uncommon incidence of gravid uterus herniating through the incisional defect is explained by the fact that fascial incisional defect is placed high in the ventral wall and usually gravid uterus has already achieved a size large enough that is unable to protrude through the defect.

This condition can develop complications such as abortion, accidental hemorrhage, preterm labor, IUGR or even rupture of lower uterine segment during labour.^{5,6} Some of the specific complications of this condition are incarceration, strangulation, excoriation and ulceration of overlying skin and bleeding therefrom. These are noticed at the apex of pendulous herniation, a result of avascular necrosis of the skin and subcutaneous tissue due to stretching of skin aided by acute angulation of arteries supplying the tip of hernia.⁷ Post-operative incisional hernias following Caesarean sections are a common occurrence. Various studies have reported it to be in range of 3.1% to 5.6% of women who have had caesarean section.⁷⁻¹⁰ Risk of incisional hernia following midline vertical incision is much higher than in transverse Pfannenstiel incision or Joel Cohen incision.¹⁰ Incidence is significantly higher in patients with multiple caesarean sections than in those patients with single caesarean.¹¹ A review of the existing literature on

herniated gravid uterus appears to support the idea that infraumbilical vertical incisions, performed for caesarean sections or other pelvic procedures, account for most of the incisional hernias in this group of patients.⁷

"A case of hernia of the gravid uterus in incisional hernia" by Arthur N. Holmes dated April 1906 is the first reported case.¹²

Reported incidence of incarceration is about 53% and uterus is irreducible with or without any other symptoms. If it progresses to strangulation, severe abdominal pain, vomiting and even shock can set in. Absence of consensus in optimal treatment due to extreme paucity of reported cases, poses a dilemma regarding management. The management of incisional ventral hernia depends upon gestational age. For those cases that are diagnosed early in the course of pregnancy, bed rest, the use of abdominal binders and close monitoring allow for a normal progression of the pregnancy that can be completed at term by caesarean section followed by hernia repair.¹³ If strangulated at or near term, early hospitalization along with elective caesarian section is recommended. Herniorrhaphy can be performed during pregnancy only if there is risk of morbid incarceration or the skin is necrosed, otherwise it can be postponed until delivery as the enlarged uterus may interfere with healing.¹⁴ Hernia recurrence is an important complication even with mesh repair (24%) although less than in cases of sutural repair (43%).¹⁵ There is evidence offered in a report by a Swiss study that looked at the results of a combination of caesarean section with hernia repair (inguinal and umbilical).¹⁶ In this study, the authors demonstrated no significant difference in blood loss, complication rate and recovery time when the procedures were combined with no recurrences identified at 56 months, supporting the idea of immediate repairs being as effective, safe and cost-effective as delayed repairs and well accepted by patients.

The escalating numbers of caesarean sections and the reasons behind it are in the process of being elucidated, but it is very likely that the effect of such an increase may soon become obvious for the practicing surgeons, therefore, underlining the need to be familiar with this scenario and the treatment options.

CONCLUSION:

Gravid uterus in incisional hernia with skin defect is an exceedingly rare occurrence, and because of the rarity of the condition, no consensus exists regarding the optimal treatment. Management of these patients needs to be tailored to the individualized requirement depending on severity of complication and the gestational age at the time of presentation. Ultrasound and MRI are easily available and noninvasive methods which assist in exact evaluation of the condition of fetus and maternal abdominal wall status to plan course of management. Simultaneous hernioplasty with caesarean section is a safe option.

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