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INCISIONAL HERNIA IN PREGNANCY A SILENT BUT POTENTIAL FATALITY - CASE REPORT

Jombo SE¹, Emejulu CI², Obi RA¹, Onwusulu DN¹, Iloh AA², Ilikannu SO¹

¹Department of Obstetrics and Gynaecology, FMC, Asaba

²General Surgery Unit, Department of Surgery, FMC, Asaba.

ABSTRACT

Rupture of incisional hernia, with consequent emergency laparotomy and repair, is an uncommon complication of pregnancy. The risk to the mother and baby is enormous. We present an unbooked 29 year old G4P2+1 (1- alive) with one previous caesarean section at 29 weeks of gestation. She had a huge anterior abdominal wall incisional hernia with gravid uterus as content. She was admitted on conservative management on account of abdominal pain and preterm contractions, but subsequently developed spontaneous rupture from an ulcer with bowel evisceration. She had emergency laparotomy and repair but unfortunately had unavoidable bowels injury as they were morbidly adherent to the anterior abdominal wall with injury necessitating resection and re-anastomosis with caesarean section. The neonate suffered early neonatal death. The presence of ulceration may be a predictor of adverse maternal and foetal outcome

Keywords: Incisional hernia in pregnancy, ulceration, emergency laparotomy, bowel resection and anastomosis, caesarean section.

*Correspondence to Author:

Jombo Sunday Emmanuel
Department of Obstetrics and Gynaecology, FMC, Asaba.

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INTRODUCTION

The herniation of a gravid uterus through an incisional hernia site is a rare occurrence and an uncommon condition in obstetric practice.^{1, 2} It may pose a very serious risk to both the mother and the foetus more especially if it becomes complicated with incarceration and strangulation but more rarely rupture.^{1, 2} Incisional hernia is a complication of abdominal wall closure, however with increasing rate of caesarean section globally it may not be rare as such. The management of a pregnancy with a large incisional hernia is challenging because there is no consensus on the optimal treatment.^{1, 2}

There are various areas of concerns including active versus conservative management, use and none use of mesh, timing of repair before and after pregnancy and during pregnancy. It becomes very challenging as to the timing with respect to trimester of gestation with associated maternal and foetal risk. Generally conservative approach is most favoured with use of manual reduction and abdominal binder. However in case of complications, emergency repair is inevitable irrespective of gestational age.²⁻⁵ For elective repair in pregnancy, the first and third trimesters are usually avoided with most favouring second trimester.^{6,7} Repair in pregnancy may be complicated by miscarriages, preterm labour and delivery, increase operative intervention, haemorrhage and increased perinatal morbidity and mortality.

We present a case of silent but fatal ruptured incisional hernia in a multipara who had emergency laparotomy, caesarean section and hernia repair.

CASE REPORT

A 29 year old un-booked G₄P₂⁺¹ with one living child, who presented at 29 weeks gestation with a one day history of abdominal pain and labour pains

She has had an emergency lower segment caesarean section in her 2nd confinement in 2016 at a secondary facility on account of footling breech at term. This was a midline

incision that was complicated by wound dehiscence and surgical site infection. Incisional hernia was diagnosed at booking at the said secondary facility at 18weeks gestation but defaulted care only to present at 27weeks with complaint of abdominal pain of which she was referred to our facility for expert management.

Examination revealed a young lady in painful distress. She was afebrile and not pale. The pulse rate was 92beats per minute, blood pressure was 100/70mmHg and respiratory rate was 20cycles per minute. Her chest was clear and cardiac examination revealed no abnormality.

Abdomen was gravid with a huge anterior abdominal wall swelling with expansile cough impulse containing the uterus. There were two chronic ulceration sites each about 3cm by 2cm. The uterus was gently reduced manually with palpable contractions 2 in 10 minutes. This gave her an apparent relief of pain. She was admitted on co-management with the general surgeon, she was hydrated with intravenous fluid, tocolytic and dexamethasone were administered with abdominal binder applied. Two days later there was sudden evisceration of the bowel and the omentum through one of the chronic ulcer site. She was counselled on her condition and for emergency laparotomy and repair. Unfortunately the bowels were plastered to the anterior abdominal wall with dense adhesion leading to unavoidable bowel injuries that necessitated resection and re-anastomosis. She subsequently had emergency caesarean section and was delivered of a live female neonate that weighed 1.25kg with poor Apgar score. Unfortunately the baby had an early neonatal death.

She received 2 units of blood transfused post-operatively. Post-operatively she had high grade fever for 48 hours despite adequate antibiotic treatment otherwise was uneventful.

Base line investigations

FBC:

PCV= 30%, TWBC= 10,000cells/mm³,
Neutrophils 65%, Lymphocytes 30%, Monocytes 3%, Basophils 2%
Urinalysis: Normal

SEUCR:
Na= 133mmol/l, K= 3.7mmol/l, Cl= 100mmol/l,
HCO³= 26mmol/l, Urea=5.0mmol/l, Cr= 90umol/l
RBS: 90mg/dl



Figure 1 Incisional hernia with Ulcerations



Figure 2. Dense adherent bowel



Figure 3. Post operative status

DISCUSSION

Incisional hernia is one of the rare complications of laparotomies including gynaecological surgeries and caesarean section. It occurs in about 3.1% following midline incision for caesarean section.⁸ There is a higher incidence of spontaneous rupture in cases of incisional hernia than other forms of hernia.⁹

Incisional hernia in pregnancy, though a rare occurrence poses quite a dilemma to the Obstetrician especially for complicated ones. Occasionally, they do become real obstetric problems if complications like incarceration, strangulation or spontaneous rupture occurs.²⁻⁵ These complications can result in miscarriage, preterm delivery and increased maternal and perinatal morbidity.⁶

The risk factors for incisional hernia may be from the surgeon or the patient. The patients' risk factors include obesity, wound infection, poor nutritional status, anaemia and post-operative chest infection.^{2,3,5} The surgeons' factors include emergency procedures, midline vertical

incisions, poor surgical technique and the use of inappropriate suture material to close the rectus sheath.^{3,5,8} There were a combination of these factors in the patient under review.

She had the previous caesarean section in a private hospital as an emergency, incision was a midline incision and she had wound sepsis. Moreso, poor surgical technique and the use of inappropriate suture material for the rectus sheath cannot be ruled out. Spontaneous rupture is rare, however the following has been suggested as reasons for rupture in incisional hernia; neglect of long standing disease causing the overlying skin to thin out, becoming atrophic, avascular with increase in intra-abdominal pressure.^{8, 9} In this patient there was the presence of a gravid uterus and chronic ulcer on the overlying skin that was not associated with pain as she lacked sensation, this may have predisposed to spontaneous rupture with bowel evisceration. This may suggest a prognostic index, as such prompt and diligent management of ulcers may help prevent rupture

Controversies abound in the management of incisional hernia in pregnancy as no evidence based approach has been described in the literature. Conservative management such as manual reduction and use of abdominal binder until term has been utilized with variable outcomes.^{2, 4}

Surgical intervention such as hernia repair in the antepartum period has been undertaken in some patients whilst allowing for normal vaginal delivery.^{2,4} Some other authorities are of the view of postponing herniorrhaphy until the post-partum period as the enlarging uterus itself and laxity of the abdominal wall may either prevent optimal repair or further disrupt the repair.^{2,7} Thus, delayed mesh repair between 6-8 weeks post-partum has been described as an option considering the risk of bleeding and infection.^{2,7} Some other authorities have recommended that herniorrhaphy can be performed during pregnancy if there is evidence of gross incarceration, strangulation or skin necrosis.^{3, 4} In this patient, plan was initially made for dressing and closure of the chronic ulcer as the depth was increasing but suddenly she had spontaneous rupture with bowel evisceration necessitating emergency laparotomy and repair. Recently, the repair of incisional hernia with the use of surgical mesh has been widely performed as it reduces recurrence rate of hernia after repair. The rate of recurrence in hernia repair without mesh is said to be higher than that of repair with mesh but the complication rate is similar with both procedures.⁸

Herniorrhaphy without a mesh was successfully performed as part of the caesarean section for our patient and she made marked improvement. Successful laparoscopic hernioplasty during pregnancy has been reported in the literature.^{10, 11, 12} More data are still required to standardize such procedures and safety in pregnancy.^{11, 12}

CONCLUSION

Incisional hernia in pregnancy remains a silent but potentially life threatening condition. A multidisciplinary care remains a major key in the

management. The presence of ulceration may be a predictor of adverse maternal and foetal outcomes.

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The woman whose story is told in this case report gave written consent for its publication. On the premises that others who has similar feature may be help as the ordeal was very terrific.

DECLARATION

Authors declares no conflict of interest

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