CASE REPORT

IMPLANTATION IN PREVIOUS CAESAREAN SECTION SCAR: A CASE REPORT

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ABSTRACT: uterine rupture is a life threatening condition, and associated with high morbidity and mortality if not recognized early and managed properly. Here we are reporting a case of spontaneous rupture of uterus in early second trimester, where placenta had implanted on the previous uterine scar and perforating to uterine surface, resulting in spontaneous uterine rupture.

KEYWORDS: Silent rupture uterus, early second trimester, scar implantation,

INTRODUCTION: In normal pregnancy, placenta gets implanted at fundus of the uterus. Implantation of placenta into the scar of previous section in the lower segment is rare. In the past, the uterus was closed using a double layer of multiple sutures inverting the first layer with the second row. However, a single non-inverting running suture technique is currently more frequently used. Increasing number of Caesarean sections, together with the change of the surgical technique, might have some impact on the site of implantation¹. When elective procedures were performed in a non-developed lower uterine segment, the healing processes following the operations might facilitate implantation of the blastocyst within the scar.

CASE REPORT: Lady about 24 years of age, presented to casualty with h/o 4months amenorrhea, giddiness, pain abdomen, and spotting. She had been shifted to labor room for evaluation and management. G2 p1L1, with history of LSCS, done two years back, for leaking membranes and non-progression of labor. She gives h/o continuous mild pain abdomen since starting of pregnancy, and scanning was not done earlier for this pregnancy.

General condition was poor, pallor present, 90/60 mmHG, pulse rate 110/mt. Respiratory rate 20/minute.

Obstetric Examination: uterus corresponds to 14- 16 weeks size, Pfannenstiel scar present, tenderness all over lower abdomen, no fluid thrill. Cervix is 50% effaced, os admitting fingertip, mild bleeding per vagina present. Tenderness present on cervical movement.

Trans Abdominal USG: Shows 14 weeks pregnancy with intrauterine death with anterior placenta, with? Blood in uterine cavity.

Patient was treated for shock, with fluids and blood transfusion, and submitted for emergency laparotomy as she suffered a bout of acute bleeding, with provisional diagnosis of suspected rupture uterus.

Treatment Planned: Laparotomy and hysterectomy/ hysterotomy.

Under General anesthesia, laparotomy was done.

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Laporotomy findings:

1. Blood stained peritoneal fluid about 200- 300cc.
2. Hematoma on the previous caesarean scar region.
3. Very friable lower segment, mimicking like incomplete spontaneous rupture.

Fig 1: showing Hematoma on the previous caesarean scar region.

Fig 2: Placenta is separated from both edges of the scar with thin umbilical cord attached to placenta.

Procedure done: Uterovesical fold pushed down, myometrium on the scar region given away with minimal touching, with placenta just underneath. Placenta is separated from both edges of the scar. Dead fetus of around 14- 16 weeks size removed from uterine cavity. Margins of the previous scar region is cleaned, edges are trimmed, and sutured with vicryl no1 in two layers. Abdomen is closed in layers after securing hemostasis. Tubal ligation not done as patient is not willing at that time. Two units of blood transfusion given and patient discharged on 9th post-operative day in a stable condition.

DISCUSSION: Implantation of the gestational sac on the uterine scar may progress towards the cervico-isthmic surface or towards the uterine cavity. Distance between implantation site and the scar influences the risk of spontaneous abortion, placenta praevia, adherent placenta and post-partum hemorrhage.² If progress towards uterine cavity, expectant management is justified since pregnancy may continue to a viable birth, but with increased risk of life-threatening bleeding from the site of implantation. Placenta percreta in the subsequent pregnancies, considered to be more aggressive than placenta previa or accreta.

If there is a deep implantation into a post-Caesarean section defect, it will progress towards uterine surface, resulting in rupture during the first trimester of pregnancy. Risk of late first-trimester life-threatening bleeding is increased if immediate treatment is not undertaken.

Pathogenesis: Blastocyst enters into the myometrium through a microscopic dehiscence tract, created through a trauma of a previous Caesarean section, any other uterine surgery or following manual removal of the placenta. Another mechanism for intramural implantation is IVF and embryo transfer, even in the absence of any previous uterine surgery.³

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Role of USG: After Caesarean, sometimes uterus gets adherent anteriorly and pulled superiorly out of the focal range of the vaginal transducer, negating the higher resolution. Therefore, TAS, with its more panoramic field of view, can be more helpful in demonstrating the true nature of the pathology.

Sonographic diagnosis of pregnancy in scar: ⁴

- I. An empty uterus;
- II. An empty cervical canal;
- III. On a sagittal view discontinuity in the anterior uterine wall while running through the amniotic sac.
- IV. The gestational sac on the anterior part of the isthmic portion of the uterus with a diminished myometrial layer between the bladder and the sac.
- V. Prominent peritrophoblastic flow on Doppler flow sonography.

Treatment options: currently, there is no consensus regarding the optimal management of patients with Caesarean scar ectopic pregnancies.⁵

1. Methotrexate treatment if diagnosed early. A) sonographically guided intra-amniotic injection of 25 mg (MTX)/I.M. MTX only).B) (systemic) administration of (50 mg/m²) on the basis of actual body weight.⁶
2. combined potassium chloride (KCl) injections directly into the fetal thorax, with MTX being injected into the sac and the surrounding myometrium.⁷
3. Tran's cervical aspiration of the gestational sac with advice of early pregnancy scans for future pregnancies.
4. Hysterectomy and excision of the pregnancy located in the scarred uterus.
5. Expecting line of management: It may progress to term with associate complications like rupture, placental adherence, and PPH.
6. A minimally invasive approach that has recently been described is endoscopic surgery (Lee et al., 1999),⁸ includes hysteroscopy for visualizing the uterine cavity combined with incision and aspiration of the ectopic mass by operative laparoscopy.

CONCLUSION: Scar implantation in caesarean scar is relatively rare condition. With the advent of sonography and with the use of saline infusion, post-Caesarean section uterine wall integrity can be detected even in the non-pregnant state. Caesarean section scar defect, defined by the presence of fluid within the incision site or any filling defect ('niche'), defined as a triangular anechoic structure at the presumed site of the scar might alert for uterine scar complication in the subsequent pregnancy^{9,10} Our patient did not undergone USG earlier and presented with early second trimester uterine rupture because of scar implantation. Timely intervention and surgery had saved her life.

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