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**Original Research Paper** 

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# TWO ENDS IN THE SPECTRUM OF SURGICAL MANAGEMENT OF CAESAREAN SCAR ECTOPIC

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ABSTRACT Here we present two cases of caesarean scar ectopic, one managed successfully by minimally invasive technique, which is hyterolaparoscopy vs the other requiring hysterectomy by laparotomy. A Caesarean Scar Pregnancy occurs when a pregnancy implants on a caesarean scar. The most accepted theory is blastocyst invade into the myometrium. Mode of treatment may be medical or surgical. Early diagnosis and prompt treatment is essential to avert a catastrophic event. Conservative optons are excision of ectopic by hysterolaparoscopy; intralesional KCl, local or systemic methotrexate; dilatation and evacuation with Foley balloon tamponade. In hemodynamically unstable patient there maybe need of laparotomy and excision of the gestational mass. Sometimes excision of scar site with uterine repair may also be required. UAE may be used to decrease blood loss. with any conservative procedure to prevent excessive bleeding and conserve fertility. Intractable haemorrhage may warrant the need for obstetric hysterectomy.

# **KEYWORDS**:

# INTRODUCTION:

The blastocyst normally implants in the uterine cavity. Implantation elsewhere is considered as ectopic pregnancy and comprises 9.1/1000 pregnancies[1].

A Caesarean scar pregnancy occurs when a pregnancy implants on a Caesarean scar. It is rarest of all ectopic pregnancies [2]. Incidence estimated in overall caesarean delivery is 1/1800-1/2500 [3]. It can be called by various names as "Caesarean scar pregnancy" (CSP), Caesarean ectopic pregnancy or simply Caesarean scar ectopic [4].

## Case A:



Figure 1 : MRI Image Figure 2: Hysterolaparoscopic Image

A 28-year-old woman, with one previous caesarean delivery and one abortion, came with complaints of 7 weeks amenorrhoea, abdominal pain, and bleeding per vaginum of about 10 pads in one day followed by spotting per vaginum for 5 days. On examination pulse was 100 beats per minute, blood pressure 100/60 mm of Hg. Abdomen was soft. Per vaginal examination revealed uterine motion tenderness with uterus of six weeks gestation size. Hemoglobin was 8.2 g/dl. Ultrasonography was suggestive of intrauterine gestation of 6 weeks and 4 days with fetal pole without cardiac activity seen at LSCS scar site in miduterine segment. MRI confirmed diagnosis. Operative Hysterolaparoscopy done for evaluation and treatment of caesarean scar pregnancy.

Intraoperatively 1.PCV given. Hysteroscope inserted with saline infusion at 250 mm of mercury and products of conception of about 2\*2 cm visualised in lower uterine segment in anterior wall. Product of conception mobilized, coagulated with hysteroscopic resectoscope and dislodged product removed with ovum forceps followed by gentle curetting. Product of conception sent for histopathological examination. Visualisation for hemostasis done at 150 mm of mercury saline infusion. Hemostasis achieved. Further procedure proceeded with diagnostic laparoscopy. Bladder noted to be advanced covering anterior portion of lower uterine segment. Right lower uterine segment thinned out. Catheter number 8 inserted at internal OS and inflated with 5 CC for haemostatic purpose. Procedure uneventful.

## Case B:

A 32 year old gravida 3, parity 2 and live 2 with h came to the emergency room of our hospital with h/o amenorrhea since 3 months(14 weeks 2 days) followed by bleeding per vaginum since 1 month. The patient had a history of 2 prior cesarean sections and were uneventful in the post operative period. Patient had no significant medical history. On admission, the patient was pale and had a pulse rate of 120 bpm with blood pressure and oxygen saturation within normal limits. On systemic examination, her abdomen was soft, uterus was 12 weeks size. On per speculum examination, os was closed, cervix was deviated to the left, bleeding present. On per vaginal examination, mass of size 4\*5 cms was felt in the right adnexa, firm in consistency, cervix was deviated to the left. Her complete blood count showed hemoglobin of 9 gm% .Other biochemical tests including liver function and kidney function tests were within normal limits. Quantitative  $\beta$  hCG was 322 mIU/ml. A transvaginal ultrasound was performed demonstrating a 4.5\*3.6 cm hypo echoic lesion with cystic areas seen in the anterior uterine wall more in the lower uterine segment suggestive of retained products of conception. The lesion appeared to encroach the myometrium with increased vascularity on colour Doppler thereby suggesting placenta acrreta.



hological Figure 3: Hysterectomy Specimen GJRA - GLOBAL JOURNAL FOR RESEARCH ANALYSIS 🕸 37

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Decision of performing suction and evacuation along with exploratory laparotomy was taken and an informed consent regarding the same was obtained. General surgeon was available for backup if needed for any degree of bladder invasion. A complete preanaesthetic workup and availability of cross matched blood products was made. Procedure started with suction evacuation where around 40-50 cc of retained products of conception was suctioned out. As the size of the mass did not decrease, decision of proceeding through the abdominal incision was made. Adhesions were present between the anterior wall of uterus and the bladder which were separated by sharp dissection. There was evidence of scar ectopic of size 4\*5 cm with evidence of increta seen at the previous scar site. Attempt to excise this lesion was made but due to massive hemorrhage, decision of obstetrics hysterectomy was made. The patient was transfused with adequate blood and blood products and was observed in the surgical ICU for 2 days. Histopathology report was suggestive of products of conception with evidence of placenta increta.

### DISCUSSION:

As the pregnancies with previous caesarean section have increased the risk of CSP has also increased. Caesarean ectopic pregnancy can also occur due to trauma done in assisted reproduction techniques like IVF and embryo transfer, myomectomy, adenomyosis, dilation and curettage.

Uterine scar is deficient or may have a faulty layer of degeneration. Ectopic pregnancy is not implants into fibroid scar tissue and myometrium. The most accepted pathophysiological theory is blastocyst invasion into the myometrium through a microscopic dehiscent tract, which may be due to previous uterine surgery like Caesarean section, manual removal of placenta etc. [4]. It has also been proposed that pregnancy enters the caesarean scar via microscopic fistulae.[7]

CSP can be of two types, endogenic or exogenic. The endogenic type could result in a viable pregnancy with a high risk of bleeding at the placental site. The exogenic type could lead to uterine rupture and bleeding early in pregnancy. Some authors believe that the difference between those 2 types of pregnancy is of paramount importance to delineate development to adherent placenta versus scar ectopic.

Patients of scar ectopic commonly present with painless heavy vaginal bleeding.

Diagnosis is made by USG and Doppler.. Caesarean section scar defect is identified by the presence of fluid within the incision site or filling defect at the presumed site of the scar [5]. MRI is confirmatory. Its differential diagnosis includes a normal pregnancy and cervical pregnancy as the management of each type differs drastically. Diagnostic criteria on Doppler to differentiate from cervical ectopic pregnancy are:[8]

- 1. Gestational sac located between bladder wall and anterior isthmic portion of uterus
- 2. No trophoblastic tissue in uterine cavity or cervical canal
- 3. Visible circular blood flow surrounding the sac

Jurkovic has described a negative "sliding organ sign" as diagnostic of scar ectopic –the inability to displace the gestational sac from its position at the level of the internal os by gentle pressure applied by the transabdominal probe.[5]

### Mode of treatment may be medical or surgical.

Conservative modalities are excision of trophoblastic tissue through hysterolaparoscopy; intralesional KCl, local or systemic methotrexate; dilatation evacuation under laparoscopic guidance with Foley balloon tamponade. In hemodynamically unstable patient there maybe need of laparotomy and excision of the gestational mass. Sometimes excision of scar site with uterine repair may also be required. Selective UAE may be prophylactically used to prevent excessive bleeding and conserve fertility. Intractable haemorrhage may warrant the need for obstetric hysterectomy.

Intragestational injection of methotrexate is preferable to systemic regimen as it achieves a high concentration locally and interrupts the pregnancy more rapidly.Baseline  $\beta$ hCG of >5,000mIU/ml is associated with failure of systemic methotrexate and better response to intralesional administration[7]. Success of treatment is monitored by hemodynamic status, regression of gestational sac on USG, and falling  $\beta$ hCG levels, as seen in our case. Long-term outcomes after conservative treatment include concerns about future fertility and persistence or recurrence of cesarean scar ectopic, arteriovenous malformations, systemic drug toxicity, placenta accreta.

Various case reports support the surgical option . The benefit of surgery is less recurrence and shorter follow-up period [5].

Hysterolaparoscopy is elaborated in a case series by Ash et al. [6]. If patient is hemodynamically stable, laparoscopy is the best choice as it provides both diagnosis and definitive management.

## CONCLUSION:

Outcomes of CSP can be uterine rupture, massive haemorrhage and maternal death. Thus, early diagnosis and prompt treatment is essential to avert a catastrophic event. It is important that accurate diagnosis of caesarean scar pregnancy is obtained in order to avoid complications and preserve fertility. Hence, the treating clinicians must have high index of suspicion and plan management of all cases of ectopic accordingly.

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