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RESEARCH ARTICLE

CAESAREAN SCAR ECTOPIC PREGNANCY- A CASE SERIES

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Abstract

The majority of ectopic pregnancies are located within the fallopian tube, but pregnancies have been reported to implant at unusual sites. Caesarean scar ectopic pregnancy is one of the rarest of all ectopic pregnancies, when blastocyst implants on a previous caesarean scar site. Incidence of caesarean scar ectopic is rising due to rise in caesarean section rates in this era. The diagnosis and management of caesarean scar ectopic poses a challenge for gynaecologist as well as radiologist and false negative diagnosis can lead to major complications. In this case series , I am reporting the case scenarios regarding early diagnosis and prompt treatment of caesarean scar ectopic with **3** cases from our institute over a period of 2 years.

Introduction:-

The 'caesarean Scar ectopic pregnancy' is a rare condition where the implantation occurs in tissue of previous caesarean scar. Incidence is 1 in 800 to 1 in 2500 of all ectopic pregnancies [1,2 ,3]. It comprises of 6.1% of all ectopic pregnancy and it has a recurrence rate of approximately 5%. Mortality rate is about 1 in 500 cases. The etiology of scar ectopic is not known but it is said that poor healing of caesarean incision on the uterus could be one of the major contributing factor to theetiopathogenesis of scar ectopic pregnancies. Early diagnosis and prompt management plays a very important role in preventing maternal mortality and morbidity. The scar ectopic is more common following caesarean section, hysterotomy, dilatation and curettage (D&C), and uterine surgeries like myomectomy, metroplasty, hysteroscopy and manual removal of placenta. [3,4]The Ultrasound is useful in diagnosis and gestational sac can be visualized at the site of prior caesarean scar , outside endometrial cavity, thin myometrium (1-3 mm) or absent myometrium between sac and bladder are the criteria required to diagnose the condition. MRI can also be performed when diagnosis by transvaginal color doppler USG is inconclusive.[3,4,11] The termination of the pregnancy is the mainstay of management. The termination can be performed through various methods like medical treatment with methotrexate or injecting potassium chloride into the G-sac, surgical method and expectant management.Here, We report surgical management of caesarean scar ectopic pregnancy in three patients from a tertiary care centre over a period of 2 years.

Case No.1 :

A 21 years , G3P2L1D1 with previous 2 LSCScame to the emergency ward with complaints of pain in abdomen with ultrasound finding of single live intrauterine pregnancy of 8w4d with chorio- decidual bulging overlying the uterine serosa.(**figure 1 and 2).** On examination, Tachycardia was present. On palpation,Tenderness over scar site on lower abdomenwas noted. OnPer vaginal examination, uterus was bulky and bilateral fornices were free.Relevant investigations were sent and patient was posted for exploratory laparotomy.Intraoperatively, bulging cesarean scar noted , a tiny gestational sac popped out after giving incisionon it.**(figure 3)**Entire products of conception en sac

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with scar resected, and gentle blunt uterine curettage done .Uterine scar repaired. Tissue sent for HPR and HPR was suggestive of chorionic villi on excised scar tissue,**(figure 4)**Patient was followed up with serum beta hCG levels on day 4 and day 7 which showed a declining trend.

Figure 1:- Ultrasound picture showing fetal pole and G -sac noted on anterior wall of uterus nearits lower pole.

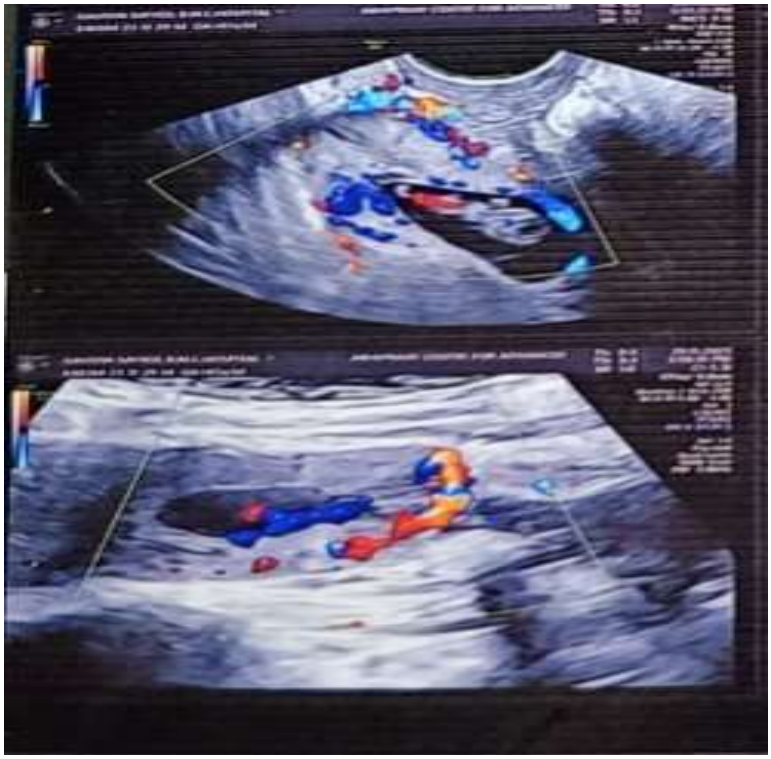

Figure 2:-Transvaginal ultrasound with colour doppler showing cesarean scar ectopic pregnancy.

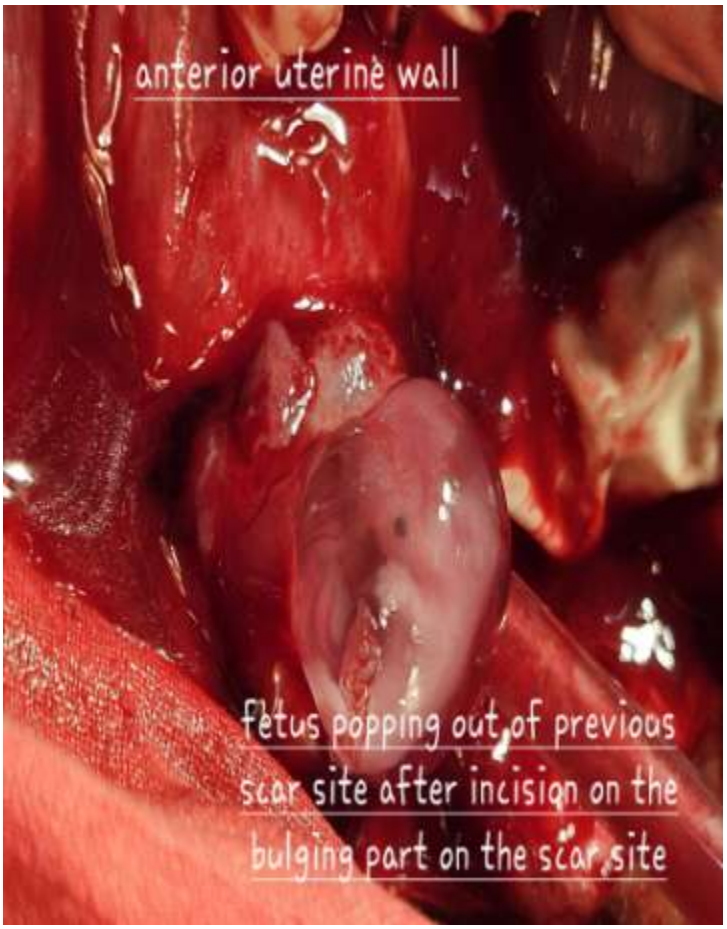

Figure3:-Intraoperative finding of fetus en-sac popping out of the bulging scar tissue after putting incision on it.

Figure 4:-Fetus en-sac withexcised scar tissue sent for Histopathology examination.

Case no. 2
A 28 years G3P2L2 with previous 2 LSCS came with complaints of severe pain in abdomen with intermittent vaginal bleeding. On examination, Patient looked pale ,tachycardia and mild hypotension was noted. Per Abdominal examination revealed tense abdomen with severe tenderness in lower abdomen. On pervaginal examination, bulky uterus with closed cervix and minimal spotting present along with tenderness on lower abdomen on bimanual examination. Patient was admitted and relevant investigations were sent.HerBeta hCG level was 7118 IU/L. Ultrasound done with findings of hemoperitoneum with empty uterine cavity with no e/o intra or extrauterineG-sac with normal adnexa. Exploratory laparotomy was done with intraoperative findings of extensive hemoperitoneum with disrupted scar tissue noted rest all other structures were healthy,suspicious of ruptured scar ectopic pregnancy.Edges of scar tissue excised and freshened followed by gentle uterine curettage done and sent for Histopathological examination. Anterior uterine wall repaired by vicryl no.1, 2 pint PCV transfused in the perioperative period. Postoperative period was uneventful.

HPR report was traced confirming the presence of chorionic villi on excised scar tissue.

Case no. 3
A 32 years, G4P3L3 with previous 3 LSCS came for routine ANC, On examination patient was stable. On per abdominal examination abdomen was soft , non-tender, uterus just palpable, previous transverse LSCS scar noted. On per speculum examination, Cervix and vagina healthy. On per vaginal examination uterus size corresponding to12 -14weeks. Routine investigations and ultrasound scan for dating is advised.Patient had followed up after 2 days with USG dating scan suggestive of single live intrauterine pregnancy of 12weeks 5 days within anterior lower uterine body doppler findings suspicious of scar ectopic pregnancy was noted.

Elective exploratory laparotomy done with intra operative findings of soft vascular mass at site of caesarean scar. Incision taken and products removed. Edges freshened and repaired with vicryl , uterine curettage was done along with tubal ligation as per patient's request.

Discussion:-

A caesarean scar ectopic pregnancy are two types ,Type I is caused by implantation in the prior scar which progresses towards the uterine cavity. Type II is due to deep implantation into scar defect with infiltrating growth into the uterine myometrium and to uterine serosal surface which may lead to uterine rupture and massive hemorrhage in the first trimester of pregnancy.[4,5,6] In this case series, case 1 and case 3 were type II with impending risk for rupture and case 2 was a case of ruptured uterus with hemodynamic changes warranting for surgical management. Studies have shown that risk for caesarean scar pregnancy does not correlate to the number of previous caesarean deliveries.[5,6], but the incidence of scar ectopic pregnancies has increased due to an increase in Caesarean section rate. There is no evidence that supports that double versus single layer closure of uterine incision can preventthe risk of scar ectopic gestation.[4,5,6]The management of caesarean scar ectopic pregnancy is termination of pregnancy. Various methods like medical, surgical and expectant managementare available for termination of pregnancy. The method to be chosenfor termination depends on clinical and laboratory values.The medical management is done with methotrexate 50mg/m^2either systemic or intra-gestational sacInjection of potassium chloride can also be tried. Surgical procedures include dilatation & curettage, vaginal hysterotomy, hysteroscopic resection of pregnancy, laparoscopy and laparotomy with wedge resection. A massive hemorrhage during any of these procedures may result inhysterectomy. Slight oozing or Bleeding at the end of procedure can be controlled by cauterization or by balloon tamponade with Foleys catheter.[3,4,8]In few scar ectopic pregnancies, the gestational sac may not be present in the uterine cavity instead chorionic villi implants on the scar. So, in such cases dilatation and curettage have a doubtful role in definitive treatment however ultrasound-guided trans cervical surgical evacuation is an effective method for the treatment of first-trimester caesarean scar pregnancies .[3,4,11]Laparoscopic removal of caesarean scar pregnancy involves identification of ectopic pregnancy which is incised with electrocautery and removed through one of the trocar sites and defect can be repaired in single or double layer closure[3,4,9].Laparotomy isthe bestwhen uterine rupture is suspected in those patients with hemodynamic instability or in the patients with advance scar ectopic pregnancy where, hysterectomy may be required.

Conclusion:-

Caesarean scar ectopic pregnancy is pregnancies as well as a life threatening one due to its risk of rupture and hemorrhage. The diagnosis and management of scar ectopic pregnancy poses a great challenge to gynaecologists as well as radiologists and often false negative diagnosis may lead to fatal complications . Early diagnosis and anappropriate line of management based on clinical scenarios can prevent serious maternal morbidity and mortality andpreserve future fertility of the patients as well.

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