Scar Ectopic Pregnancies

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Introduction

- Scar ectopic pregnancy (SEP) is becoming increasing common
- It is a new life-threatening abnormal implantation within previous scar (hysterotomy, myomectomy…)
- Incidence: 1:1800 -2216 pregnancies
- Most cases occurred after one CS

Physiopathology

- Uncertain mechanism
- Scar defect due to poor healing => microtubular tract => implantation
- SEP is different from intrauterine pregn with accreta (absence of *decidua basilis*, but pregn is primarily in ut cavity)
- In SEP gestational sac is surrounded by myometrial and fibrotic tissue and it is separated from ut cavity

Physiopathology

- 2 types of SEP:
  - Type I: implantation in scar and progression -> cervico-isthmic space
  - Type II: deep implantation in scar defect -> infiltration into myometrium & serosa => may result in ut rupture and/or severe haemorrhage in 1st trim

Presentation & Diagnosis

- **Painless vaginal bleeding**: most common sign
- At 71/2 weeks +/- 2.5
- **Mild to intense pelvic pain**
- 39-45% asymptomatic
- In some cases: severe haemorrhage, haemoperitoneum, shock

Transvaginal Ultrasound

- Empty uterine cavity & cervical canal
- Gestational sac located at the anterior wall of the isthmic portion, separated from endometrial cavity in previous caesarean scar
- Gestational sac embedded within the myometrium and the fibrous tissue of caesarean section scar

US


RAB 2-5L/Obstetric
MI 1.2
SONOSCAN-Genetic Sciences
54345 GA=09w3d
13.3cm / 49Hz
TIs 0.2
01/17/2007 02:54:40 PM
1. Trim
Harmony
Pwr 100
Gn -2
C6 / M5
E3
CRI 2
Uterine Cavity
myomet
sac
Bl
vag
cervix

Transvaginal Ultrasound

- Gestational sac embedded within the myometrium and the fibrous tissue of caesarean section scar at the lower uterine segment with absence of defect in the myometrium between the bladder and the sac
- High-velocity low-impedance vascular flow surrounds the gestational sac
- High-resolution and color ultrasound scanning is essential for differential diagnosis

MRI

- Diagnosis of scar ectopic pregnancy is relatively easy in early pregnancy.
- It is recommended that magnetic reso-nance imaging (MRI) can be performed when diagnosis by transvaginal color Doppler USG is difficult

MRI

Management

- The aim of management is to prevent massive haemorrhage and conserve the uterus for further fertility
- Various interventions have been proposed, but there is no consensus on the optimal therapeutic protocol for SEP
- Treatment approach depends on various factors like gestational age, haemodynamic stability, availability of endoscopic expertise, further fertility

Management

- Conservative medical management includes systemic methotrexate or local embryocides
- Surgical management indicated in haemodynamically-unstable patients or after failure of medical therapies and includes hysteroscopy, laparoscopy, laparotomy and uterine artery embolization

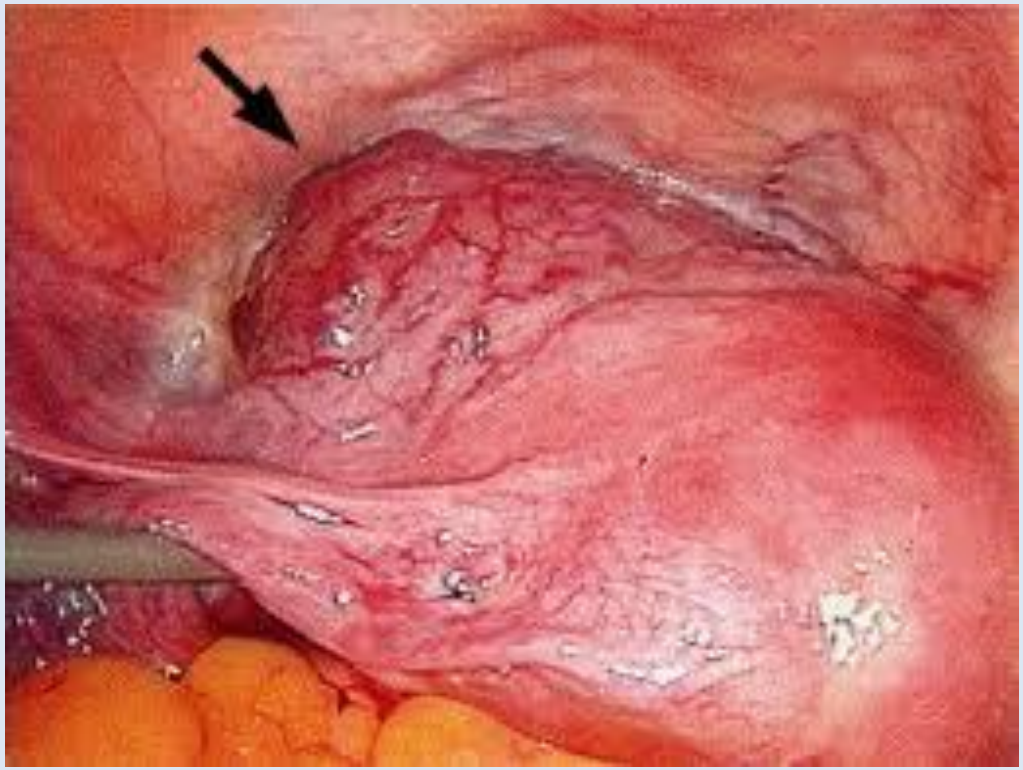
Medical Management

- Systemic Methotrexate
  - < 8 weeks, success: 71-80%
- TVS-guided local Methotrexate when poor vascularization of fibrous scar
- Combination with surgical aspiration of sac has been recommended in certain cases
- To prevent and control profuse bleeding: intrauterine balloon, local injection of vasopressin or selective uterine artery embolization

Surgical Management

- **Hysteroscopic** evacuation of scar ectopic pregnancy Direct visualization of scar pregnancy with careful evacuation and coagulation of blood vessels at the implantation site prevent massive haemorrhage
- **Laparoscopic** surgery : scar pregnancy is excised and removed, +/- local injection of vasopressin, haemostasis by bipolar diathermy and suturing of uterine defect

SEP



Surgical Management

- Surgical treatment by laparotomy whenever laparoscopic treatment is not available
- Exploratory laparotomy is necessary in case of uterine rupture

Conclusion

- SEP is a dangerous & complex disorder with increasing occurrence in recent years
- Accurate early diagnosis and effective management are important to reduce maternal mortality and mortality
- Effective treatment should be carried out in first trimester
- Treatment objectives include termination of pregnancy before rupture, resection of pregnancy mass and preservation of future fertility