Title: Pathologic Evaluation of Cesarean Scar Ectopic Pregnancy

Author: Christopher Weston

Background:
Cesarean scar pregnancy (CSP) is a type of ectopic pregnancy that occurs when a fertilized ovum is embedded within the fibrous scar of a previous cesarean section. Recognition of this rare form of ectopic pregnancy has increased considerably since it was first described in 1978. The rising number of CSP cases is closely related to the increased prevalence of C-sections and a significant improvement in detection methods.

Methodology:
The numerous treatment options for CSP indicate the absence of one standard protocol. The modality of treatment is dependent on severity of the case, prompting either conservative or surgical treatment. Elective methotrexate therapy has been reported as a successful option for conservative management and may be administered either systemically or locally. Surgical management has yielded successful results when conservative treatment is insufficient. Included among the various methods of surgical management are uterine curettage, hysteroscopic evacuation, uterine artery embolization, and laparoscopic resection. In surgically unstable patients, hysterectomy may be the most appropriate option. Surgical intervention prompts a definitive diagnosis and quick resolution of b-HCG levels.

Results:
Hysterectomy specimens received prior to rupture will typically reveal a uterus with notable bulging at the site of the cesarean scar. A ruptured uterus will show remarkable hemorrhage with a protruding gestational sac. If hysteroscopic evacuation or laparoscopic resection are utilized, the gestational sac may appear dusky red with or without identifiable fetal parts. Thin myometrial tissue near the implantation site is often observed in surgical cases.

Histological features of excised tissue will reveal chorionic villi and interstitial trophoblasts throughout the fibromuscular tissue. Further microscopic evaluation will typically show a thinning myometrium that merges with the fibrous cesarean scar. Confirmation of these microscopic features differentiate CSPs from cervical pregnancies, a common misdiagnosis.

Conclusion:
Although CSPs are still relatively rare, they are being reported more often as the number of elective cesarean sections increase. Early detection of CSP is essential in order to avoid potential life-threatening hemorrhages. Diagnostic imaging tools such as US and MRI are pivotal in ensuring a definitive diagnosis prior to surgical intervention. Images from these tests may be utilized by the PA to help pinpoint the exact location of the gestational sac.

References:


