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Introduction

The last decade has seen an increase in caesarean section (CS) rates in Ireland and internationally with a concomitant rise in the incidence of caesarean scar ectopic. Greater awareness of the common sonographic presentations of caesarean scar ectopic at different gestational ages may improve detection rates and reduce morbidity (Timor-Tritsch et al, 2012).

Ultrasonic Appearance

1. Empty uterine endometrial cavity and cervical canal.
2. Gestational sac (GS) +/- embryo located anteriorly at the level of the CS scar above the internal cervical os.
3. Appearance of a thin myometrium anterior to the GS adjacent to the bladder.
4. The presence of GS bulging out of the uterine wall contour.
5. Colour Doppler demonstrating evidence of prominent trophoblastic vessels surrounding the scar.

Trans-vaginal scanning (TVUS) greatly expedites diagnosis due to higher resolution imaging of the implantation site (Sieczko et al, 2014).

Ultrasound Appearance

Case 2

38 yr. old G4 P3, 2 vaginal deliveries, 1 previous CS and 1 ERPC for miscarriage. Presented to E.P.A.U. at 7 weeks gestation, reporting mild pelvic cramping. A TVUS identified a GS containing a live embryo within the caesarean scar. β-Hcg was 9775mIU/ml.

Management

The management options in Caesarean scar ectopic pregnancy include expectant management, methotrexate, suction curettage, and hysterectomy. The use of methotrexate or expectant management can be advantageous to reduce morbidity and preserve future fertility if Caesarean scar ectopic is detected in the first trimester (Zosmer et al, 2015).

Ipswich law currently states that termination of pregnancy is only permissible when there is a real and substantial risk to the life of the mother (Protection of Life during Pregnancy Act, 2013). Jurkovic (2014) questions whether there is strong enough evidence to conclude that all cases should be terminated as one may progress to a normal pregnancy. The challenge is to discriminate between those at risk using ultrasound predictors (Timor-Tritsch et al, 2012) discuss how acute emergency can develop of uterine abruption, massive hemorrhage or morbidity adherent placenta with a poor obstetric outcome after the first trimester. These cases demonstrate the critical decision making required to manage challenging cases within the current Irish legislative framework to successfully save these women’s lives.

Case 3

36 yr. old G3P2, 2 previous CS. She presented with brown PV spotting and back pain at 6 weeks gestation. TVUS demonstrated an empty thin fundal endometrium with a gestational sac containing only a yolk sac positioned in the CS scar (Fig.1). There was absence of vascular flow on colour Doppler, as mentioned by Sieczko et al (2014), suggestive of a failing pregnancy.

Management

The knowledge of the ultrasound presentation of caesarean scar ectopic is an essential skill for all obstetric sonographers for accurate diagnosis of this dangerous complicated pregnancy in the current climate of high rates of CS delivery.

Case 4

39 yr. old G6P5, 3 previous CS. Presented at 16 weeks gestation from a regional center with substantial vaginal blood loss and pain and was haemodynamically unstable. A live fetus was seen on TVUS with the placenta identified to the anterior uterine wall and absence of endometrium between the sac and the maternal bladder. An emergency hysterectomy was performed, she received 6 units of blood, and ICU care required for 3 days. Pathology showed morbidity adherent placenta to the CS scar.

Conclusion

References