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Heterotopic Pregnancy : A Rare Case

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ABSTRACT *We report a case of heterotopic pregnancy in a 24 year old woman with haemoperitoneum from ruptured ovarian pregnancy with a live intrauterine pregnancy at 6 weeks amenorrhoea presented with pain in abdomen and one episode of vomiting. The diagnosis was made on trans vaginal ultrasonography , established on laprotomy and confirmed by histopathology.*

Introduction:
Heterotropic pregnancy is defined as intrauterine and extrauterine implantation of one or more embryos .The incidence of heterotopic pregnancy is very low(1 in 30,000). [1]

There is significant increase in incidence of heterotopic pregnancies in women undergoing assisted reproductive techniques (1 in 7000) such as in IVF(In Vitro Fertilisation) 1.8% and GIFT (Gamete Intra Fallopian Transfer)4.3% [2]. An adverse effect of elevated hormone levels in IVF cycles on tubal transport function is possible mechanism. Also suggested is the lower efficiency of oocyte- cumulus complex capture or a decreased tubal ciliary beat frequency induced by chemical components like cigarette smoke. Further more as Goldman et al pointed out that the risk in population approaches 100 in 10,000.[3]

However it is a very rare occurrence in natural pregnancy(1 in 10,000). The timely diagnosis and appropriate management needs a high index of suspicion. Clinical examination, serum beta human chorionic (beta hCG) assay and transvaginal scanning as a diagnostic algorithm has a sensitivity of 100% and a specificity of 99%.[4]

Case Report:
A 24 year old $G_2P_1L_1$ presented with history of 6 weeks amenorrhoea, complaining of pain in abdomen and one episode of vomiting .Urine pregnancy test was positive. The calculated gestational age was 6 weeks 5 days. On admission her pulse was 108/minute regular and blood pressure was 120/70mmHg.On examination her abdomen was soft with vague tenderness in suprapubic region more in right iliac fossa with mild guarding.

On per vaginal examination uterus was soft, bulky with tenderness and fullness in left adenexa.

Transvaginal ultrasound confirmed hetrotopic pregnancy with live)intrauterine pregnancy of AGA 6 weeks 4 days(fig.2) and extra uterine pregnancy in left adenexa with doubtful cardiac activity of AGA 6weeks 2 days,mostly in ovary(Fig.1) with the 'Ring of fire' sign. There was moderate haemoperitoneum as well.

The patient underwent emergency laprotomy.Right sided fallopian tube and ovary twisted and presented on left side (Fig.3) with right sided ruptured ovarian ectopic pregnancy(1.5 litres of haemoperitoneum was suctioned).The ovarian pregnancy was removed(fig.4) and remaining ovarian tissue preserved.Left sided tube was normal and left ovary streak.

Sections studied on histopathology were commented as ovarian tissue with follicular cysts, convoluting corpus luteum and a large functioning corpus luteum along with many chorionic villi, sheets of trophoblastic tissue and membrane suggestive of ectopic pregnancy right ovary(Fig .5).Care of intrauterine pregnancy was taken by giving micronized progesterone 200mg twice a day. An ultrasound on 6th post operative day stated single intrauterine pregnancy. Foetal pole with CRL 7.8 mm=6 weeks 5 days but cardiac activity was absent. Small area of subchorionic haemorrhage approximately 5mm present. The final impression was missed abortion.

Discussion:
Such clinical presentation can be seen in normal intrauterine pregnancy and a ruptured ovarian Cyst[5],a corpus luteum or an appendicitis. Attention is needed to save life and preserve fertility. The mortality rate for intrauterine pregnancy is approximately 35 %.

Nearly 95% of ectopic pregnancies are implanted in various segments of fallopian tube. Traditional risk factors for ovarian ectopic are similar to tubal pregnancy. Rupture of ovarian ectopic occurs at early stage of gestation. Nonetheless there are recorded cases of which ovarian pregnancies reached term with survival of infants(Williams and associates 1982). According to Grimes (2006) estimated mortality rates for ectopic pregnancies were 32 per 100 thousand with maternal deaths of 7 per 100 thousand for live borns.

The classical management is surgical (wedge resection or cystectomy or ovariectomy). Methotrexate has also been successfully used in unruptured cases(Chelmow 1994,Raziel and Golan 1993).

Fig .1 Ultra sonography showing ectopic pregnancy in ovarian tissue.

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Fig2.Ultrasonography Intrauterine pregnancy 6 weeks and 4 days.

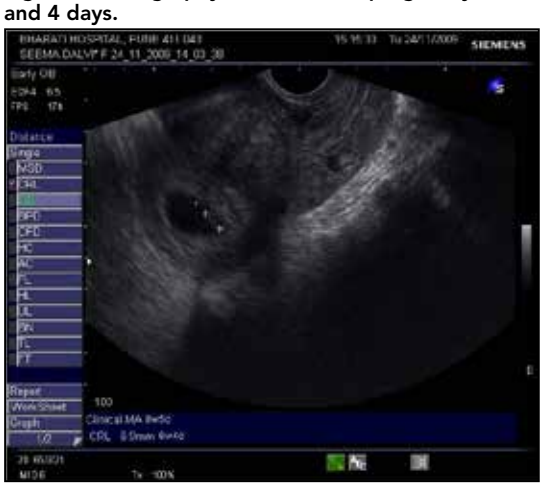


Fig.3 Right sided twisted ovary and fallopian tube.

Fig.4 Ectopic pregnancy was removed.

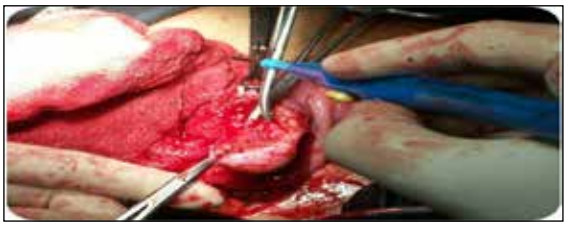
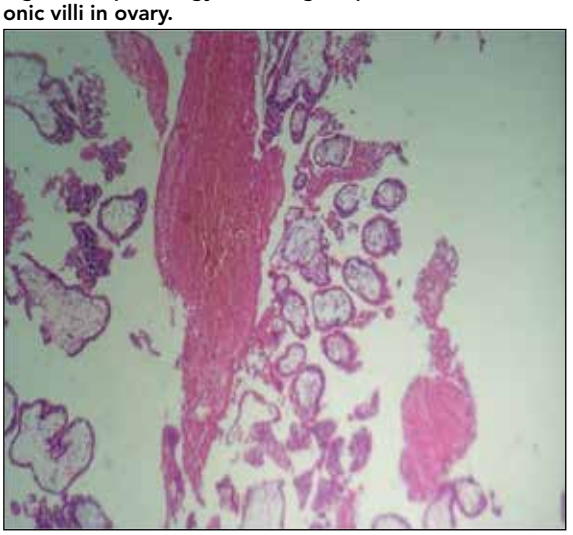


Fig.5 Histopathology revealing corpus luteum and chorionic villi in ovary.



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