Primary Ovarian Pregnancy – Histopathology Remains the Key to Confirming Diagnosis

Abstract

Background: Ectopic pregnancy occurs in 2% of all pregnancies. Primary ovarian pregnancy is a rare entity and accounts for only 0.15-3% of all ectopic gestations. It usually ends with rupture before the end of first trimester. The diagnosis is often made intraoperatively and confirmed histopathologically.

Case Report: A 23 yr old female presented with severe hypogastric abdominal pain with no history of amenorrhea. She underwent laparotomy and a right sided salpingo-oophorectomy and the excised material was sent for histopathological examination. Chorionic villi were seen within the ovarian stroma suggesting the likely possibility of an ovarian pregnancy.

Conclusion: Ovarian pregnancy is rare; although awareness of this condition is important for reducing its associated morbidity and mortality.

Discussion: Ovarian pregnancy is a rare form of ectopic pregnancy. The widespread use of transvaginal ultrasonography and serum beta-hCG assays have improved the preoperative diagnosis of ectopic gestations, however diagnosing ovarian pregnancy remains a challenge and often intraoperatively it may be misdiagnosed as a hemorrhagic ovarian cyst. Histopathology plays a key role in clinching the diagnosis [7].

In 1882, Speigelberg described certain criteria for diagnosis of ovarian pregnancy [8].
1) An intact ipsilateral tube, clearly separate from the ovary
2) Gestational sac occupying the normal position of the ovary
3) Gestational sac connected to the uterus by utero-ovarian ligament
4) Ovarian tissue in the wall of the gestational sac.

Younger age and high parity along with endometriosis have been suggested as risk factors. Intrauterine contraceptive device usage causes relative increase in the incidence of ovarian pregnancy but, itself does not cause ovarian pregnancy [4].

Chronic pelvic pain alone is the most frequent symptom of an ovarian gestation as in our case, also an adnexal mass may be palpable on examination [9,10]. The diagnosis is often made at surgery and requires a confirmation histopathologically. A correct diagnosis during surgery is only possible in 28% of the cases, because it is difficult to differentiate from a hemorrhagic corpus luteum intraoperatively [11].
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Figure 1: Microphotograph; Low power (4x) view: showing ovarian stroma above and trophoblastic tissue above.

Figure 2: Microphotograph; Low power (4x) view: Showing chorionic villi (confirms products of conception) in the ovarian tissue.

Figure 3: Low power (4x) view; showing trophoblastic tissue.

Figure 4: Low power view; showing chorionic villi embedded in the ovarian stroma which confirms ectopic ovarian pregnancy.

Figure 5: 10X view showing fibroed chorionic villi.

Figure 6: Low power view showing corpus luteum of the ovary on the right side of image.

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Conclusion

Ovarian pregnancy remains a rare entity and a diagnostic challenge. Histopathological examination is mandatory for confirming diagnosis and is the key to effective therapy and outcome.

References


Figure 7: Low power view (4x) showing fibrosed chorionic villi towards the left lower side and membrane (part of the ovary) seen in the right part of the image.