

*Case Report*

## Primary Ectopic Ovarian Pregnancy - Rare Case

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*Received: 30/11/2015**Revised: 16/12/2015**Accepted: 17/12/2015*

### ABSTRACT

Primary ovarian pregnancy occurs quite rarely. We report a case where a multigravida presented with 8 weeks amenorrhoea; abdominal pain diagnosed as ectopic pregnancy and was confirmed intra-operatively and histopathologically as primary ovarian pregnancy, managed with ovariectomy.

**Key words:** Ectopic pregnancy, Ectopic ovarian pregnancy, Ovarian pregnancy, Ovariectomy.

### INTRODUCTION

Ectopic pregnancy is one of the most common gynaecological emergencies. The diagnosis of which continues to challenge the practicing clinicians. The first case reported by St. Maurice in 1689. Ovarian pregnancy occurs in one in 25,000-40,000 pregnancies. <sup>[1]</sup> Its frequency is 0.3-3.0 of all ectopic gestation. <sup>[2]</sup> In primary ovarian pregnancy the ovum is fertilized in the peritoneal cavity and then implants onto the ovary. In the secondary type, there is a tubal abortion or perforation of the tube with secondary implantation of the embryo on the ovarian surface.

### CASE REPORT

We report a case of 35 year old lady presented to the emergency department with 8 weeks of amenorrhoea, complained of pain abdomen on and off from one and half months. Her previous menstrual cycles were regular, normal with average flow. Patient had history of 3 full term normal deliveries. Last childbirth was 4 years back. She was not using any

contraception. On general examination pulse rate-130/min, BP-100/70 mm of Hg, pallor was present. On per abdominal examination there was moderate distention of abdomen present. Per speculum examination-cervix, vagina was healthy. Slight vaginal bleeding noted. On bimanual examination-uterus size could not made out due to haemoperitonium, cervical movements were nontender, tenderness felt in posterior fornix. Abdominal paracentesis revealed non clotting blood. Investigations- urine pregnancy test positive, blood group O positive. Ultrasonography of abdomen pelvis-suggestive of haemoperitonium with gestation sac present in left adnexa? Rupture ectopic.

Intra-operatively, haemoperitonium approx. one litre and clots approx. 800gm was found. The uterus was normal in size and could not be exteriorized out, bilateral fallopian tubes were intact and oedematous. Right side ovary was normal. Left side ovary enlarged with haemorrhagic surface which was adhered to posterior surface of uterus. Deep in pouch of Douglas omentum

and intestinal loops were adhered on posterior surface of uterus. Left side ovariectomy done with difficulty and tissue sent for histopathological examination followed by bleeding from the separated bed. Call sent to general surgeon. Bleeding continued at the same side then B/L internal iliac artery ligation was done. Thereafter bleeding was controlled. But oozing was there from raw area so gel foam was placed over it followed by hemostatic solution. Abdominal drain was inserted. After

achieving hemostasis and counting of instruments abdomen closed back in layers. Four unit PCV and FFP were transfused intra and post operatively. Patient shifted to ventilator and wean off from ventilator after 24hrs. The postoperative period was uneventful. Abdominal drain was removed on postoperative day 3. Thus, the intra-operative findings and the histopathology examination satisfied the criteria for ovarian pregnancy as described by Spiegelberg.<sup>[3]</sup>



Fig.1: Ultrasonography showing rupture ectopic pregnancy.

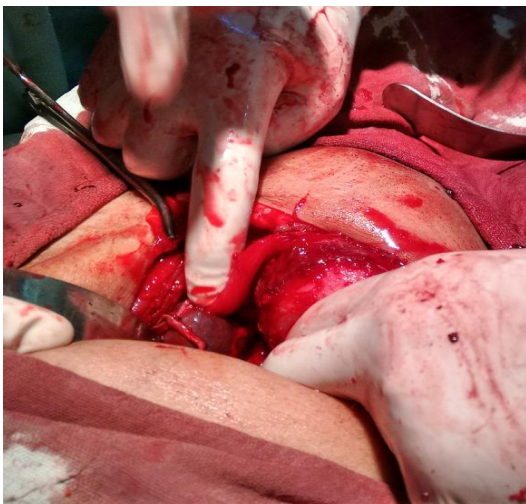


Fig.2: Intraoperative finding showing primary ovarian pregnancy.

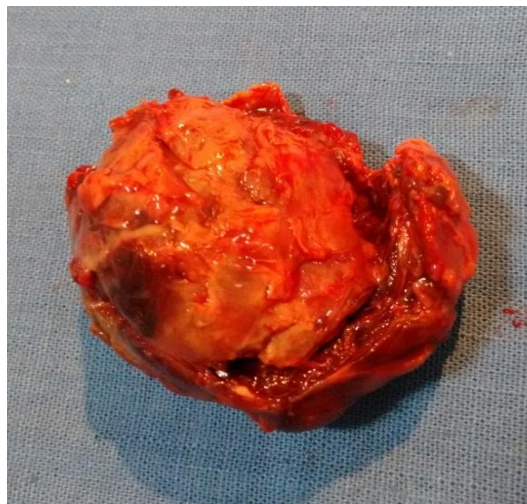


Fig.3: Ovarian tissue for HPR after ovariectomy.

## DISCUSSION

Primary ovarian pregnancy is one of the rarest types of extra-uterine pregnancy. In most cases, the initial

diagnosis is made intraoperatively and the final diagnosis only on histopathology on the basis of the four Spiegelberg criteria.<sup>[3]</sup> Which is as follows: (a) intact fallopian

tube on the affected side, (b) fetal sac must occupy the position of the ovary on the affected side, (c) ovary connected to the uterus by ovarian ligament, (d) ovarian tissue must be located in the sac wall,

which was confirmed by histopathology. In our case these criteria's were fulfilled & histopathology further confirmed the diagnosis of ovarian ectopic pregnancy.

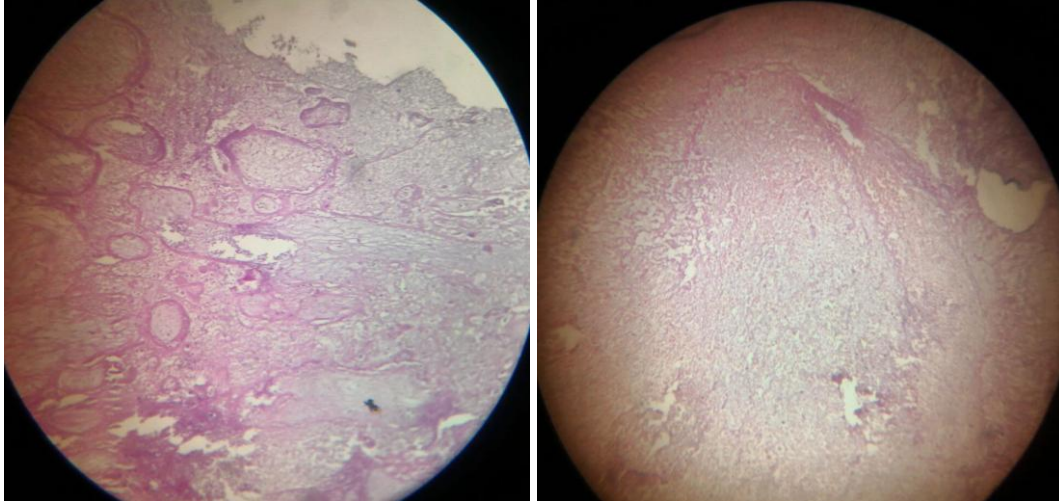


Fig.4 and 5: Histopathology showing chorionic villi along with areas of haemorrhage and acute inflammatory infiltrate in ovarian tissue.

The cause of primary ovarian pregnancy remains obscure. Bouyeret.al reported that unlike tubal gestation, ovarian pregnancy is neither associated with pelvic inflammatory disease nor infertility. [4] The only risk factor associated with the development of ovarian pregnancy is the current use of intrauterine device. Intrauterine device is effective in preventing intrauterine and tubal pregnancies in 99.5% and 95% respectively. However it has little effect on the prevention of an ovarian pregnancy. [5] The rate of intrauterine device use in reported ovarian pregnancies is 17 to 25%. [6] Raziel et al reported that 90% of ovarian pregnancies occurred in intrauterine device users. [7] In addition, De Seta et al reported that pelvic inflammatory disease causes an increased risk of intrafollicular pregnancy due to hampered follicular dehiscence by inducing reduction in tubal motility and thickening of ovarian albuginea. [8] Grimes and Matseoane noted prior history of pelvic inflammatory disease in 42% and 46% of ectopic pregnancies, respectively. [6, 9]

Ovarian pregnancies are similar to disturbed tubal pregnancy in sign and symptoms. Differential diagnosis of ovarian pregnancy is ruptured hemorrhagic corpus luteum and chocolate cyst or tubal ectopic pregnancy. [10] Rupture in the first trimester is the usual rule in an ovarian ectopic, but the pregnancy may advance to full term. [11] Especially with the use of TVS, ovarian pregnancy can be diagnosed pre-operatively. [12]

No case of repeat ovarian pregnancy has been reported in contrast to approximately 15% recurrent tubal pregnancy. [13] Classical management for ovarian pregnancy has been surgical. Ovarian wedge resection, ovarian pregnancy enucleation, trophoblastic curettage with coagulation of bed of ovarian pregnancy and ovariectomy are different surgical options which are available. [14-16] In our case we performed ovariectomy on affected side.

## CONCLUSION

It is difficult to diagnose the ovarian pregnancy because it may occur in



the absence of classical risk factors for ectopic pregnancy. When the clinician is suspecting a ruptured tubal pregnancy, should keep an ovarian pregnancy in mind when intact fallopian tubes are seen intraoperatively. Management is essentially surgical and early diagnosis and prompt treatment can prevent mortality.

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How to cite this article: Khoiwal S, Rachhoya P, Chandra K. Primary ectopic ovarian pregnancy - rare case. *Int J Health Sci Res.* 2016; 6(1):571-574.

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