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Case Report

A rare case of live unruptured ovarian ectopic pregnancy

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ABSTRACT

Ectopic pregnancy is the implantation of embryo anywhere outside the uterus. The commonest location is fallopian tubes followed by previous scar, abdomen and ovary. Most of them terminates with rupture in first trimester and usually have an intricate diagnosis through surgery and histopathology. A lady in her early-thirties presented with brownish discharge per-vaginally with LMP 2 months ago and UPT positive 15 days ago. The scan revealed a good chorio-decidual reaction without any gestational sac in the uterus which was found live and unruptured along with the heartbeats in right adnexa. She was managed with emergency laparoscopic removal of the ectopic where the Gestational sac was not visualised in right tubes but astonishingly it was found in the right ovary. There were no complications post-operatively and patient was discharged in a stable condition. The overall increase in the incidence is admitted to IUCD, STI, ART, PID and many others. However, the actual factor remains unclear. The diagnosis is often made during surgery but histopathological confirmation is required. Spiegelberg Criteria defines the ovarian ectopic. Hence, it becomes peremptory to identify the cases early for complication prevention and the related deaths.

Keywords: Ovarian ectopic pregnancy, Laparoscopy, Embryo implantation

INTRODUCTION

Ectopic pregnancy is when nidation occurs anywhere outside the uterus. It is the commonest complication and a gynecological emergency. There is a high pregnancy-related mortality in the first trimester.[1] The commonest location of ectopic is the fallopian tubes i.e., in about 95% of the cases. While the residual 5% occurs in the previous scar, abdomen and ovary.[1] Ovarian Ectopic is a very rare entity of ectopic and constitutes around 0.5% to 3% of the cases i.e. around 1 in 7,000 to 1 in 40,000 live births.[2,3] Saint Maurice of France recorded first ever case of Ovarian Ectopic in 1682 and since then the prevalence continues to increase.[4] Usage of Intra uterine devices (IUD) increases the risk of ectopic.[5,6] It usually has an intricate diagnosis which is based on surgical and histopathological observations.[7] When an embryo implants on the surface of the ovary, it results in an ovarian ectopic. Although the ovarian size must be able to lodge the expanding pregnancy more freely than the fallopian tube, termination of around 91% occurs with a rupture in first trimester where they are often misdiagnosed as corpus luteum haemorrhage.[1,5,8] It may further lead to internal haemorrhage causing hypovolemic shock.[9] Ovarian ectopic that has advanced to full-term delivery is very rare and only 1 case has been reported as of now.[10]

CASE REPORT

A lady in her early-thirties, presented to the hospital with brownish discharge per-vaginally since a day. The discharge was sudden in onset, started a night before and amounted to mild spotting with a need to change a pad once a day. There was no history of abdominal pain. She

was a nulliparous and her last menstrual period (LMP) was 2 months ago with regular menstrual cycles at an interval of 28-30 days with 5 days of bleeding that required 2 pads per day and not associated with pain. Fifteen days ago, she was positive with the Urine Pregnancy Test (UPT) at home after missing the periods and having secondary amenorrhoea for 1 month and 7 days but not confirmed with the ultrasound. She had not consulted before to any Obstetrician regarding it. She is a primigravida with active married life of 6 years and has a history of using barrier method as contraception for 5 years, but the couple was trying to conceive since the last year. She had no prior medical history and no history of use of Intrauterine contraceptive devices (IUCD's) or any of the fertility treatments.

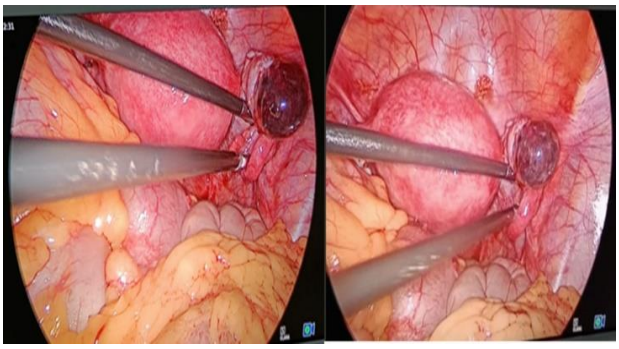

Figure 1: Unruptured ovarian ectopic with patent fallopian tube.

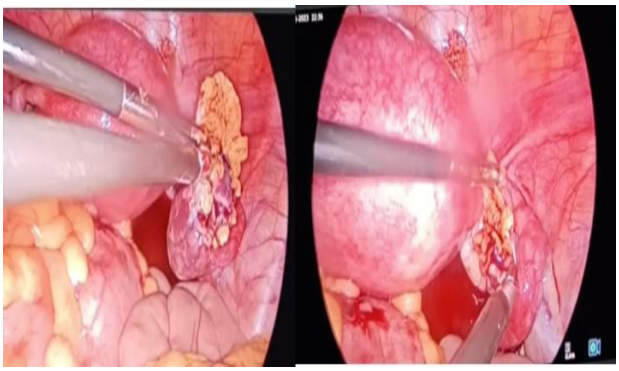

Figure 2: Wedge resection of ovary.

On examination, patient was conscious and well oriented to time, place and person. Her temperature was normal, pulse was 86 beats per min, blood pressure 124/80 mmHg and respiratory rate was 12 breaths per min. On Per Abdomen examination, abdomen was soft and non-tender. Per-Speculum or per-vaginal examination was not done. A primary Trans-vaginal scan was performed to confirm the pregnancy, that didn't showed any Gestational Sac (G-Sac) in the uterus. The scan was extended to visualise the adnexa, in which the sac was seen in right adnexa with the heart beats present. While the expert scan revealed Single Live un-ruptured ectopic G-Sac in the right adnexa adjacent to the right ovary with a good chorio-decidual reaction and fetal pole, corresponding to 6 weeks 0 days and no evidence of any Intra-Uterine Pregnancy. Fetal Heart was present with a rate of 124 beats per minute. Ovarian ectopic was diagnosed Intra-Operatively during laparoscopy. As the G-sac was not visualised in the right Fallopian tube, it was traced in the right adnexa. While tracing, it was found in the right ovary.

Histopathologic sections of the specimen showed the presence of chorionic villi and trophoblastic tissue, embedded in blood clots attached with ovarian tissue with corpus luteum. Initial serum Beta-hcg was 5776 mIU/ml, that decreased to 2029 mIU/ml on postop day 2 and 28 mIU/ml on postop day 7. As the patient was diagnosed with unruptured right adnexal ectopic pregnancy of 6 weeks with fetal pole and heartbeat, she was taken up for the emergency removal of the ectopic pregnancy through laparoscopy. However intraoperatively, no G-Sac was found in the right fallopian tube as reported by the USG. Then the right tube was traced upto right ovary where it was found. The G-Sac was removed and everted border of ovary was sutured.

Post operatively, patient was given antibiotics and monitored. No complications were encountered. On post-op day 2, dressing was done and patient was discharged in a stable condition. On post-op day 7, stitches were removed. Laparoscopic wound was healthy and clean, with minimal necrosis of the stitched site. The work has been reported in line with the SCARE criteria.[11]

DISCUSSION

Although the ovarian ectopic is a very rare entity, but the incidence is on rise. The incidences that are quoted in past as approximated by Hertig are 0.5-1% of all ectopic or 1 in 25,000 to 40,000 pregnancies.[12] Poor clinical symptomatology and a difficult ultrasound diagnosis are its characteristics. However, its surgical criteria remain hard to prove.[13] Ovarian Ectopic can further be divided into primary and secondary. Primary ovarian ectopic occurs usually due to the dysfunction in the ovulation where the fertilization occurs while ovum is still within the follicle.[3] When the fertilization takes place within the fallopian tube and the conceptus is regurgitated in ovarian stroma, it is known as the secondary ovarian ectopic.[3] Further, division can also be into intrafollicular and extrafollicular.[3]

Intrafollicular, also called Failure of follicular expulsion, occurs when ovum is fertilized with the follicle inside ovary.[13] Extrafollicular ovarian ectopic occurs when fertilization takes place outside and then it subsequently implants in the ovary.[13] The overall increase in the incidence of ovarian ectopic is admitted to IUCD, sexually transmitted infections (STI), use of assisted reproductive technologies (ART), increased prevalence of pelvic inflammatory disease (PID), prior pelvic surgery, previous ectopic, advanced maternal age, multiparity, salpingitis, endometriosis.[2,14] The actual factor causing abnormal implantation is unclear. However, there are some theories

that explain the abnormal implantation: There is an alteration of tubal motility and epithelial damage in the fallopian tube due to presence of certain conditions leading to embryo migration.[9] There is a impediment in the release of the ovum from the ruptured follicle.[2] Thickening of the tunica albuginea due to inflammation.[8]

The most significant risk factor is IUCD. Although there is protection form Intrauterine pregnancy with IUCD use, but it does not prevent ovarian implantation.[15] IUCD may also potentiate ovarian nidation by specific changes in prostaglandin synthesis that increases the tubal peristalsis.[15] There can be reduction of tubal motility or thickening of ovarian albuginea due to PID and natural inflammatory response. This thickening causes decrease in the follicular dehiscence that leads to an increased risk of ovarian ectopic.[14] Patients have symptoms similar to that of ectopic pregnancies at other sites.

The most persistent clinical symptom is the chronic pelvic pain. The diagnosis is often made during surgery but it is often confused with a hemorrhagic corpus luteum and so histopathological confirmation is required.[16] Although, Ultrasound may suggest the diagnosis, it is very difficult to differentiate it from tubal ectopic. During surgery also, there is a specified criteria for the diagnosis of Ovarian Ectopic. Spiegelberg Criteria as defined by Dr. Otto Spiegelberg in 1878 includes: an intact tube of ipsilateral side that is clearly separated from the ovary; a gestational sac seen occupying the position and or found inside of the ovary; a gestational sac found in the ovarian ligament; histologically proven ovarian tissue in the sac wall.[4] Our case fulfilled all the criteria and hence was diagnosed to be a case of ovarian ectopic pregnancy.

Treatment of the ovarian ectopic solely remains surgical. However, many other management options are tried such as medical therapy with methotrexate, etoposide assisted with laparoscopy.[17,18] As in our case the gestational age was about 7 weeks and heartbeat were present, our mainstay of treatment was surgical. Earlier, it was treated by ipsilateral oophorectomy but trend is shifted towards conservative surgeries such as cystectomy or wedge resection as demonstrated by Patel et al.[19,20]

CONCLUSION

During the laparoscopy conducted by us, an ovarian pregnancy was clearly seen and an ovarian wedge resection was done. Many cases report as a ruptured ectopic. However, in our case there was no rupture and HCG slowly declined after the removal. Histopathology report confirmed an ovarian ectopic pregnancy. Hence, it becomes peremptory to identify the cases early for complication prevention and the related deaths.

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