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## Heterotopic pregnancy: A case Report.

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### Abstract:

Heterotopic pregnancy (HP) is a rare phenomenon. It is defined as simultaneous presence of intrauterine and extrauterine pregnancy. A case of HP is discussed. A young patient presented initially with two months amenorrhea and lower abdominal pain. Initial ultrasound showed only 6 weeks intrauterine pregnancy. But, due to increasing severity of pain ultrasound was repeated showing heterotopic pregnancy, which was later confirmed by histopathology.

**Keywords:** Tubal pregnancy, Ectopic pregnancy, Heterotopic pregnancy .

### Introduction:

Heterotrophic pregnancy is rare entity but increasing in incidences mainly due to assisted reproduction techniques. It is defined as co existent intrauterine and extra uterine pregnancy<sup>1</sup>. Extrauterine pregnancy usually occurs in the fallopian tube in about 80 – 85% of cases<sup>2</sup>. The estimated incidence is 1/30,000 pregnancies<sup>3</sup> which rises to 1% with assisted reproductive techniques<sup>4</sup>.

Diagnosis and management of the heterotrophic pregnancy is a challenging problem and mainly it is diagnosed after the tube ruptures and patient presents with severe lower abdominal pain, bleeding per vagina and hemodynamic instability. High suspicion in patients with the risk factors can help in early diagnosis and timely management of heterotrophic pregnancy. In expected cases, a thorough history, clinical examination and ultrasound scan and serum hCG will help in prompt diagnosis.

### Case presentation:

A 38 years old G2-P1 presented in outpatient department with history of 2 months overdue and lower abdominal pain. Pregnancy was confirmed by beta HCG. Ultrasound was done to find out the cause of pain, which showed an alive intrauterine pregnancy of about 6 weeks. No other abnormality was detected. Conservative treatment of pain was given but she continuously complained of pelvic pain which was increasing in intensity. One week later her ultrasound scan was repeated, which showed intrauterine pregnancy of

about 7 weeks along with an oval complex mass of about 6.2 \*5 cm in right adnexa with possibly of right tubal ectopic pregnancy. Laparotomy was performed under general anesthesia. Right tubal pregnancy was confirmed with small amount of hemoperitoneum. Right salpingectomy was performed, tissues sent for biopsy which confirmed the presence of chorionic villi and decidual tissues. Post-operative period remained uneventful. Beta HCG support was given for the intrauterine pregnancy. Ultrasound was repeated 2 weeks postoperatively showing a normal intrauterine pregnancy. She has had regular antenatal checkups done. At 33 weeks she developed pre-eclampsia which was managed on usual grounds. Her elective cesarean section was performed at 37 weeks due to previous c section and severe preeclampsia. A healthy baby boy weighing 2.7 kg was delivered.

### Discussion:

Duverney in 1708 was first to describe heterotopic pregnancy<sup>5</sup>. Although previously a rare phenomenon, the incidence of heterotopic pregnancy is increasing after the increasing trends of assisted reproductive techniques and ovulation induction reaching up to 1 in 5000 to 10000 of general population and still higher in patients undergoing ovulation induction i.e. 3%.<sup>6,7</sup> Any risk factor that increases the risk for ectopic pregnancy also predisposes to heterotopic pregnancy.

Multiple factors have been attributed to the increasing inci-

dence of heterotopic pregnancy which includes ovulation induction, pelvic inflammatory disease<sup>8</sup>, pelvic surgery and use of IUCD etc. females having diseases tubes mainly due to infection have 7-10 fold increased risk of ectopic pregnancy including heterotopic pregnancy.<sup>9</sup> Tubal ligation is another risk factor for ectopic pregnancy with up to 16% chances if failure occurs.<sup>10, 11</sup> Heterotopic pregnancy has been seen in women without risk factors, but the actual incidence is not yet known. Many cases of heterotopic pregnancy are reported in both, high risk and low risk women.<sup>12</sup> In our case most probable risk factor was prolonged infertility and ovulation induction with clomiphene citrate.

Clinical presentation is variable is variable and less helpful in prompt diagnosis unless patient presents in shock and there is high suspicion due to risk factors.<sup>13</sup> The diagnosis is made with ultra sound<sup>14</sup> but usually the presence of intra uterine pregnancy masks its prompt diagnosis and the patient usually presents in emergency with ruptured ectopic. The highly sensitive hCG testing also fails to recognize the condition.<sup>10</sup> Only a high suspicion in patients with risk factors can help in early diagnosis and management. Trans vaginal scan has detection rate between 41-84% with higher diagnostic sensitivity when routinely performed in high risk patients with previous history of ectopic pregnancy or in patients conceived after infertility treatment.<sup>15</sup> In a study conducted by Abbott et al, 28 patients attending emergency department were recognized with ectopic pregnancy only on next visit.<sup>16</sup>

Our patient initially had diagnosis of only intrauterine pregnancy but persistent lower abdominal pain was only symptom along with risk factors which helped in diagnosis. Our patient remained vitally stable. In our case the initial ultrasound did not recognize the HP but repeat ultrasound due to persistent pain showed a complex mass present in right adnexa with suspicion of ectopic pregnancy.

When diagnosed the treatment of choice is laparotomy or laparoscopy with salpingectomy or salpingotomy.<sup>4,17</sup> Expectant treatment can be applied in some selected cases with good success rate, but treatment choice is made according to individual cases. Fertility remains same after laparotomy or laparoscopy however 40% loss of intrauterine pregnancy has been reported by some authors.<sup>7</sup> In our case patient has had ruptured tubal pregnancy so salpingectomy was done by laparotomy. Pregnancy remained unaffected by timely laparotomy and proceeded to term and a live baby was born.

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