Histopathological Study of Ectopic Pregnancies – A Rare case of Bilateral Ectopic Pregnancy

Amrutha Gorva¹, Saritha Karre², Satyanarayana Veeragandham³
¹Assistant Professor, Kamineni Academy of Medical Sciences, LB Nagar, Hyderabad.
²Assistant Professor, Kamineni Institute of Medical Sciences, Narketpally, Nalgonda.
³Head of Department, Department of Pathology, Kamineni Institute of Medical Sciences, Narketpally, Nalgonda.

Abstract: Implantation of blastocyst anywhere else, other than uterine cavity is considered as an ectopic pregnancy. About 95% of ectopic pregnancies are implanted in the various segments of the fallopian tubes. Of these most of the implantations are ampullary. The present study aims to analyze the distribution of the ectopic pregnancies at various sites. This is a study done in collaboration with Department of Obstetrics and Gynaecology at Kamineni Institute of Medical Sciences (KIMS) hospital, Narketpally. Twenty three cases of ectopic pregnancies were evaluated in 2 years from January 2012 to December 2013. The study included tubal pregnancies (22) and one rare variant of bilateral ectopic pregnancy. Tissues were processed and histopathological findings were studied on Hematoxylin and Eosin stained sections. Thus, most common ectopic pregnancies were seen in subjects who were on treatment for infertility followed by subjects with previous pelvic infection and intrauterine device.

Key Words: Ectopic pregnancies, Ovarian pregnancy, Bilateral ectopic pregnancy, Infertility.

I. Introduction:
Normally blastocyst implant occurs in the endometrial lining of uterine cavity. Implantation anywhere else, other than uterine cavity is considered as an ectopic pregnancy. It is derived from Greek word ektopos-out of place. 95% of ectopic pregnancy occurs in various segments of fallopian tube, of these most are in ampulla, remaining 5% occur in ovary, peritoneal cavity, or within cervix. More recently caesarean scar pregnancies are more common than in past¹. Ovarian ectopic pregnancy are rare, constitute 3% of all ectopic. Risk factors are same, but use of IUD seems to be disproportionately associated. There are few recorded cases in which ovarian pregnancy went to term with few infants survived². Ovarian pregnancy mimic like tubal pregnancy or a bleeding corpus luteum. Heavy bleeding is seen in 1/3rd of cases. Transvaginal USG has helped in early diagnosis of unruptured ovarian pregnancy³.

II. Materials And Methods:
This is a two years study done from January 2012 to December 2013 at Kamineni Institute of Medical Sciences, Narketpally in a rural area. We have received 23 cases of ectopic pregnancy and tissues were processed and studied on Hematoxylin and Eosin stained sections in relation to site, age, side and associated risk factors.

III. Results:
In our study of ectopic pregnancies, we got 23 cases, of which 22 were tubal and one case of bilateral ectopic with one side tubal and other side ovarian pregnancy. This was a case of primigravida who was on treatment for infertility. Of the remaining 22 cases, 10 were on left side and 12 were on right side (Table 1). In 22 tubal pregnancies majority of them were seen at ampullary region. Most of the patients were between 25-30 years followed by 21-25 yrs (Table 2). The ectopic pregnancy were seen most commonly in subjects, who were on treatment for infertility followed by previous genital infection and those using intrauterine device (Table 3).

In our study we are highlighting a case of primigravida who was on treatment for primary infertility presented with vaginal bleeding associated with pain abdomen. On Ultrasonography (Fig-1), bilateral ectopic pregnancy with one side ovarian pregnancy and opposite side tubal pregnancy was diagnosed. The patient was taken for laparotomy, during surgery ovarian pregnancy was diagnosed using Spiegelberg criteria⁴. In this case ovary was preserved and only ectopic tissue was removed, the opposite side tube was removed for tubal ectopic and sent for histopathology. Histopathological examination from ovarian ectopic showed well-formed villi and decidua tissuer (Fig-2). In tubal ectopic, well formed decidual tissue was seen, on deeper section chorionic villi were seen (Fig-3).
IV. Discussion:

An ectopic pregnancy is characterized by implantation and development of an embryo outside of the uterine cavity. Hertig estimated that ovarian pregnancy occur one in 25000 to 40000 pregnancies. It is characterized by a poor clinical symptomatology and a difficult ultrasound diagnosis. The surgical criteria remain hard to prove. Intrauterine contraceptive devices may also be a cause. As a matter of fact, an intrauterine contraceptive device is found in 14-30% of patients with a nonovarian extra uterine pregnancy, while it is found in proportions ranging from 57-90% of patients with a primary ovarian pregnancy. Its cause could be explained by altered tubal motility, thereby facilitating the implantation in the ovary. Fertility treatment had also remained important associated risk factor.

In our case, patient presented with vaginal bleeding associated with pain abdomen, ultrasound was done, ectopic ovarian pregnancy was confirmed and laparotomy was suggested. Patel et al showed that the most surgical treatment of ovarian ectopic pregnancy consists of wedge resection and oophorectomy. In our study, an ovarian pregnancy was clearly seen during laparotomy and confirmed by histopathology. If Gray scale and color Doppler, as well as high levels of serum HCG and sonographic experience, the diagnosis is suspected during laparoscopy or laparotomy and confirmed by histopathology.

Diagnosis of ectopic pregnancies is based on the classic description of a cyst with a wide ectogenic outer ring using ultrasound. A high index of suspicion is based upon a combination of ultrasound findings, (both gray scale and color Doppler), as well as high levels of serum HCG and sonographic experience. Diagnosis is suspected during laparoscopy or laparotomy and confirmed by histopathology.

V. Conclusion:

Early diagnosis by clinical, radiological findings will help unnecessary complications of ectopic pregnancy and histopathological examination will confirm the diagnosis as a part of pathologist’s repertoire.

References:

Histopathological Study of Ectopic Pregnancies – A Rare case of Bilateral Ectopic Pregnancy

Tables:

Table-1: Side Wise Distribution of cases

<table>
<thead>
<tr>
<th>Side</th>
<th>No of cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left Tubal</td>
<td>10</td>
</tr>
<tr>
<td>Right Tubal</td>
<td>12</td>
</tr>
<tr>
<td>Bilateral (Ovary+Tubal)</td>
<td>1</td>
</tr>
</tbody>
</table>

Table-2: Age Wise Distribution of Cases

<table>
<thead>
<tr>
<th>Age in years</th>
<th>Percentage of cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;20</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>20-25</td>
<td>6(26.09%)</td>
</tr>
<tr>
<td>26-30</td>
<td>14(60.86%)</td>
</tr>
<tr>
<td>&gt;30</td>
<td>3(13.05%)</td>
</tr>
</tbody>
</table>

Table-3: Associated Risk Factors

<table>
<thead>
<tr>
<th>Risk factors</th>
<th>No of cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primi with Infertility treatment</td>
<td>17</td>
</tr>
<tr>
<td>Tubal corrective surgery</td>
<td>1</td>
</tr>
<tr>
<td>Previous genital infection</td>
<td>3</td>
</tr>
<tr>
<td>IUD (Intra uterine device)</td>
<td>2</td>
</tr>
</tbody>
</table>

Pictures:
Legends:
FIGURE 1: Minimal fluid noted in right and left iliac fossa. Evidence of Gestational sac outside the uterus with viable yolk sac in right fallopian tube.
FIGURE 2: A- Photomicrograph from right ovary shows plenty of decidual tissue, haemorrhage (H&E, 400x). B- Chorionic villi lined by trophoblastic epithelium, few syncytial trophoblastic cells (H&E, 100x).
FIGURE 3: A- Photomicrograph of fallopian tube with decidual tissue (H&E, 100x). B-Higher magnification of decidual tissue (H&E, 400x). C- Lining epithelium of fallopian tube with chorionic villi (H&E, 100x). D- Chorionic villi with nucleated RBC (H&E, 400x).