Non Tubal Ectopic Pregnancy – Case Report Series in Obstetrics Department

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ABSTRACT

Cervical pregnancy where implantation has occurred in the cervical canal was first described in 1817 and its management has changed dramatically. Primary ovarian pregnancy accounts for 0.5% to 1% of all ectopic gestation and its incidence ranges from 1 in 7000 to 1 in 40,000. Ectopic pregnancy in unicornuate uterus with non communicating rudimentary horn ultimately terminates by rupture.

Keywords: Cervix uteri, ectopic pregnancy, mullerian duct anomalies, ovary, Spiegelberg criteria

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Introduction

Non tubal ectopic pregnancies range from 0.5% to 1% of all ectopic gestation and its incidence ranges from 1 in 7000 to 1 in 40,000.

Here we describe three such cases managed in our hospital.

CASE 1

A 35 year old, Para-3 with 1 previous Lower Uterine Cesarean Section (LUCS) attended the Out Patient Department (OPD) on 10th April, 2010 with complaints of bleeding PV for 15 days without h/o missed periods. P/S examination-Cervical hypertrophy with extensive area of ulceration which bled on touch. Uterus and adnexa were normal. Packed cells were transfused. Cervical punch biopsy was done. Postoperatively given 5 units blood.

A differential diagnosis of cervical pregnancy or choriocarcinoma was considered based on clinical suspicion and a positive urine pregnancy test. ß-HCG quantitative assay was 1309miu/ml. USG revealed uterine size

of 10.2x6.2x3.3cm. A hypo-echoic mass surrounded by fluid 5.5x3.3cm was attached to lower myometrium and endocervical canal. Rest of myometrium was heterogenous and internal os was closed. POD, adnexa and ovaries were normal. USG impression was of fibromyomatous polyp or gestational trophoblastic tumor. Cervical biopsy report came as infected adenomatous polyp.

In spite of the USG and biopsy reports, clinical suspicion & ß-HCG report, chance of choriocarcinoma was high and Methotrexate was started, bleeding completely subsided. A decision of total abdominal hysterectomy was taken.

Intra-operative findings showed a normal size uterus with highly vascular barrel shaped cervix. Cut section showed necrosed mucosa and myometrium below internal os. A fluid filled sac 5x5cm was noted on the posterior wall of uterus, attached to the myometrium around internal os and extending to endocervix. Yellow colour fluid resembling amniotic fluid was drained on puncturing the sac like structure. Postoperative period was uneventful.

Figure 1: Cut specimen of removed uterus showing cervical pregnancy

Histopathological report: - "Macroscopically lower part of body of uterus and cervix showed a Polypoid mass 6cm in its greatest axis projecting into the cervical canal. The cut surface of the mass showed hemorrhagic area. Microscopically section from Polypoid mass showed chorionic villi, sheets of decidual, cell and deposits of fibrin. No molar tissue was detected. The body of the uterus showed the endothelium with proliferative glands. Myometrium was unremarkable. The rest of external cervix showed chronic cervicitis.

The patient was discharged on 6th Post operative day and was normal at 6weeks follow up.

CASE 2

Mrs. F. A. a 28 years old Primigravida, married for four months was admitted on 15.8.09 with history of twelve weeks amenorrhea (LMP – 24.5.09) and spotting per vagina over last three days. Her past menstrual cycles were regular with no history of contraceptive use and no risk factor for ectopic pregnancy.

On physical examination she was pale, had tachycardia and her blood pressure was 90/60 mm of Hg. Abdominal palpation was normal. Per speculum examination, revealed blood stained discharge. Per vaginal examination: size of uterus normal, anteverted without any mobility restriction or cervical movement tenderness. Through left fornix a small non tender mass (2.5 x 2.5 cm) was felt.

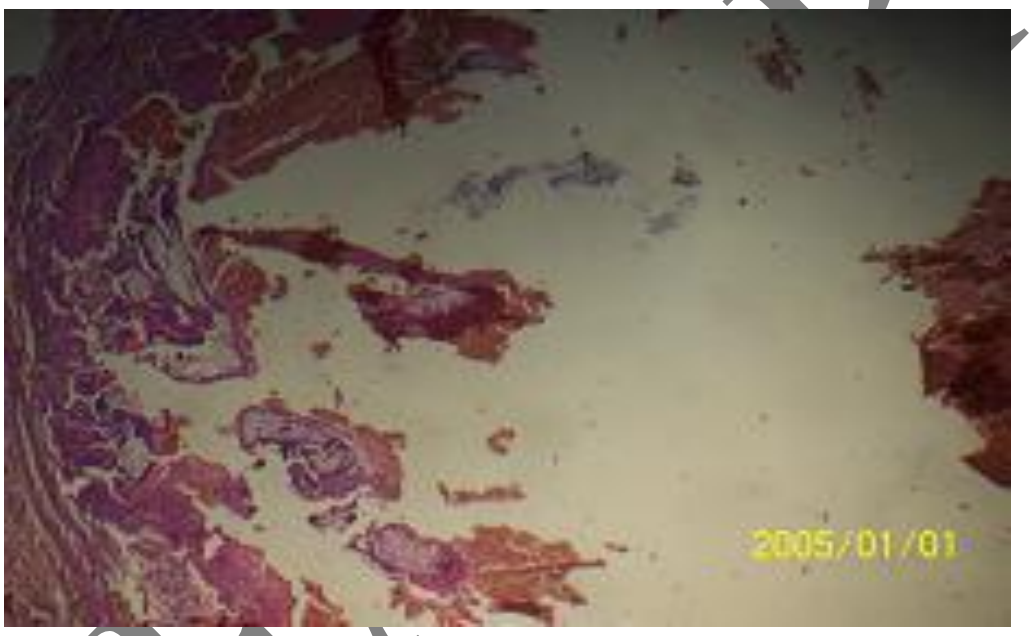
Ultrasound report documented size of uterus 9.6 x 4.6 x 3.4. Endometrial layer was central, 4.5 mm. Right ovary was normal. Left ovary was enlarged (6.9 x 4.4. x 3 cm) and was having a mild hyper echoic area over medial part and almost normal ovarian echo-pattern over lateral part. No significant cystic area was seen. No fluid collection in POD. The ultrasound impression was "enlarged and abnormal looking left ovary". Bed side urinary pregnancy test was faintly positive.

Exploratory laparotomy was done and about 400 cc of haemoperitoneum drained. Uterus, right ovary and both fallopian tubes were normal. The left ovary was enlarged (5 cm x 4 cm) Hemorrhagic area was noted on its medial surface. Near the lower pole on medial surface a ruptured

area was noted. Wedge resection of ovarian tissue along the rupture site was done with preservation of apparently healthy portion of ovary. Patient had an uneventful post operative recovery and was discharged on 5th post operative day.

Histo-pathological report: 'section shows hemorrhagic chorionic villi with adjacent congested ovarian tissue'. Impression "Features consistent with ovarian ectopic pregnancy".

Figure 2: Histology of ovary showing Trophoblastic tissue



CASE 3

Mrs. R. D. a 26year old Gravida 2 Para 1 was admitted on 10.10.09 with a term breech fetus, in labour and a prior uneventful term vaginal delivery.

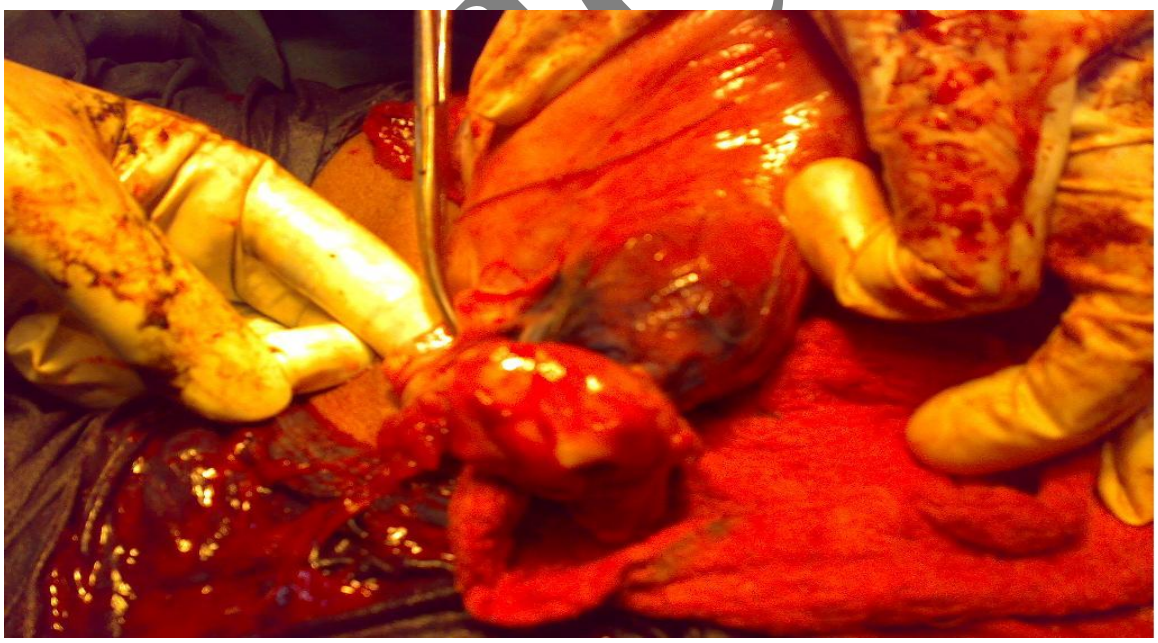
Caesarean section was done considering breech presentation. After exteriorization of uterus, it `was noted to be bicornuate, with well developed left horn. Right horn was rudimentary. Both the horns were attached on serosal surface, over broad area. A mass around 4 x 4 cm was attached to the rudimentary horn and was covered by a layer of visceral peritoneum. On palpation the mass was hard and long bony structure (4cm) could be identified on its surface. Extensive hemorrhagic discoloration was noted underneath right side broad ligament. Right ovary and fallopian tube

were healthy and separate from the mass. The Right round ligament was attached to the well developed left horn while the right fallopian tube was attached to the right rudimentary horn.

The patient revealed a past history of four months amenorrhea about two years back followed by an acute episode of pain abdomen and bleeding per vagina for which she received medication and was relieved. With this past history and operative finding a diagnosis of ruptured ectopic pregnancy in rudimentary horn of bicornuate uterus was made.

Decision was taken to remove the right rudimentary horn along with the ectopic mass and right fallopian tube. No communication of the horn with the well developed uterine cavity from left horn could be identified. Tubal ligation was done on left side. Patient had an uneventful post operative recovery and was discharged on 5th post operative day.

Figure 3: Intra-operative photograph showing the rudimentary horn.



Histopathology report documented section shows bony tissue and patchy hemorrhagic area on muscle layer only. The features are suggestive of fetus papyraceous.

Discussion

In 1911, Rubin[1] established diagnostic criteria for cervical pregnancy. Real-time trans-vaginal ultrasound examination and β-HCG assay allows earlier diagnosis; a review of 120 cases since 1978[2] revealed that the proportion of cases diagnosed preoperatively rose from 35% between 1978 and 1982 to 87.5% between 1991 and 1994.

The etiology of cervical pregnancy remains unclear. Too rapid transport of the fertilized ovum together with a poorly prepared endometrium for its reception has been alluded to by Burg[3]. Endometrial curettage at induced abortions and previous intrauterine instrumentation leading to damage to the endometrial lining appears to make the endometrium unfavourable for nidation of the fertilized ovum. Hysteroscopic evacuation of cervical pregnancy [4,] with intrasac injections of methotrexate and potassium chloride (KCl) in combinations or as primary treatment has been described with 90% success rate. Chemotherapy must only be instituted when a reliable diagnosis of cervical pregnancy has been made in a hemodynamically stable patient of less than 12 weeks gestation. Hysterectomy needs to be considered where the diagnosis is delayed and profuse vaginal bleeding is encountered.

In primary ovarian pregnancy the ovum is fertilized in the peritoneal cavity and then implanted on the ovary. In secondary ovarian pregnancy, there is tubal abortion with secondary implantation of the embryo on the ovarian surface.[5] Intra uterine contraceptive device in situ has been identified as definitive risk factor.6 All Spiegelberg criteria for primary ovarian pregnancy were met in this case. New diagnostic criteria like serum beta HCG level and ultrasound detection of cyst in ovary has been suggested for inclusion to make an early diagnosis.[7]

A unicornuate uterus can present alone or with a rudimentary horn on the opposite side of which 90% are non-communicating. The most dangerous complication of rudimentary non communicating horn is pregnancy from transperitoneal migration of sperm or ovum from the opposite side. According to Holden and Hart, 350 cases have been reported since the

original report by Mauriceau in 1669. Rupture of pregnancy in a rudimentary horn in the second trimester is the usual presentation leading to maternal morbidity and mortality[8]

Our patient was fortunate to survive rupture of rudimentary horn, as most likely the rupture occurred between the two layers of broad ligament which sealed the hemorrhage and the outcome was revealed accidentally during subsequent pregnancy.

Disclosure: No author in this case report has any conflicts of interest or disclosures to make.

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