

## CASE REPORTS

# Cervical Ectopic Pregnancy: Case Report

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### Summary:

*A thirty year old lady para 3+0 presented with complaints of amenorrhoea for eight weeks and slight per vaginal bleeding for 28 days with frequent bouts of profuse bleeding. Total abdominal hysterectomy was done. Naked eye examination of the specimen was suggestive of*

*cervical ectopic pregnancy(CEP). Histopathology report confirmed cervical implantation of placenta.CEP is an extremely rare life threatening form of ectopic pregnancy.*

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### Introduction:

Cervical Ectopic Pregnancy (CEP) is an extremely rare variety of ectopic pregnancy. The incidence of the disease is reported to be between 1 in 10,000 to 1 in 16,000 deliveries.<sup>1</sup> Number of CEP cases are increasing due to invitro fertilization and embryo transfer technique. It is characterized by implantation and growth of fertilized ovum in cervical canal. Due to rarity of the condition retrospective analysis of the cases cannot be done to find out the risk factors. Usually it presents with uncontrolled per vaginal haemorrhage during the first trimester of pregnancy. Rarely CEP cases are found in the second trimester of pregnancy. Clinically it is often mistaken for inevitable or missed abortion.<sup>2</sup> Until recently, hysterectomy was often the only choice available because of excessive haemorrhage during curettage for presumed incomplete or missed abortion<sup>3</sup>. In a 1945 review of world literature at that time 6 of 28 women with CEP died.<sup>4</sup> In recent years many authors have succeeded in treating CEP cases by conservative

medical and surgical measures, thus preservation of uterus is made possible.<sup>5,6</sup> Early diagnosis is important for conservative management before bleeding starts. Ultrasonography preferably trans vaginal Sonography (TVS) and  $\beta$ hCG estimation are two important diagnostic tools for early and accurate diagnosis.<sup>6</sup> The atypical presentation of this reported case misleads the diagnosis until before surgery. The patient could be saved from severe haemorrhage by emergency hysterectomy.

### Case history:

A thirty year old woman, para 3+0 (normal term delivery at home) was admitted in a peri-urban hospital with profuse per vaginal bleeding following eight weeks amenorrhea. Bleeding was mild for 28 days with frequent bouts of profuse bleeding. She was admitted in a state of hypovolemic shock and was resuscitated with five units of fresh blood. Bimanual pelvic examination revealed a 10 weeks size uterus with a soft irregular cervix. Slightest attempt at per vaginal (p/v) examination initiated profuse bleeding. During her hospital stay, the patient had a peculiar bleeding pattern. Bleeding used to become less at rest and heavy by minor stress like coming from toilet. She experienced two episodes of severe p/v bleeding after admission. Her haematological and biochemical investigations (complete blood count, coagulation profile, electrolytes, urea and liver function tests) were normal. Haemoglobin count was 6gm/dl. Her pregnancy test was positive and ultrasound scan confirmed the presence of a growth/ mole in the lower part of uterus. The patient was poor and the hospital could not provide  $\beta$ hCG report. Initial clinical diagnosis was molar pregnancy/choriocarcinoma.

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After 10 days of conservative treatment, chemotherapy was decided. Methotrexate folinic acid rescue therapy continued for two days. She started profuse per vaginal bleeding on the third day of chemotherapy and consequently was taken to the operation theatre. A gentle per speculum and vaginal examination was done under general anaesthesia taking all preparation for hysterectomy. Cervix was almost double in size, ballooned and there was profuse bleeding through the external os. Emergency total abdominal hysterectomy with preservation of both ovaries was done to save the life of the patient. After hysterectomy specimen was cut longitudinally. Uterine cavity was empty. Surprisingly placental tissue was found densely adherent with the wall of endocervix (fig 1). Naked eye examination of the specimen was suggestive of cervical ectopic pregnancy (CEP). Histopathology confirmed cervical implantation of placenta. Patient was discharged after three weeks of hospital stay.

#### Discussion:

Cervical ectopic pregnancy (CEP) is extremely rare. It was first described in 1817 and it was so named in 1860. In 1911, Rubin in his case report established diagnostic criteria for CEP<sup>7</sup>; close attachment of placenta to cervix, cervical glands present opposite the implantation site, placental location below uterine vessel insertion and no fetal elements in the uterine corpus. Ultrasonography preferably trans vaginal sonography (TVS) and  $\beta$ hCG estimation permits early and accurate diagnosis of CEP.<sup>8,9,10, 11</sup> Ultrasound criteria for CEP are 1) Echo free uterine cavity 2) Decidual transformation of the endometrium with dense echo structure. 3) Hour glass uterine shape. 4) Ballooned cervical canal. 5) Gestational sac in the endocervix. 6) Placental tissue in the cervical canal. 7) Closed internal os. The serum  $\beta$ hCG concentration doubles up in 48 hours in normal pregnancy. In abnormal pregnancy including ectopic pregnancy, the  $\beta$ hCG level do not increase at this rate. If the percentage increase in  $\beta$ hCG during 48 hours is less than 66 percentage, the chance of ectopic pregnancy is high. CEP cases are often wrongly diagnosed as inevitable abortion due to open external os and product in cervical canal. During curettage for removal of product of conception (POC) profuse bleeding ensues from the placental site.<sup>12</sup> As cervix is

non retractile it is difficult to stop hemorrhage. Tight packing of cervix is a very effective method of stopping hemorrhage. Newer surgical techniques are anterior cervicotomy and under running the bleeding vessels with 0 chromic catgut, electro coagulation, cervical cerclage by Mac Donald's technique to constrict the blood vessels.<sup>13</sup> Now a days several other techniques are also practiced. Dilatation and curettage after uterine artery embolization, ultrasound guided potassium chloride injection into amniotic sac allow safe termination of CEP with preservation of uterus<sup>14</sup>. Hysteroscopic resection of cervical ectopic pregnancy is a new surgical approach. It permits direct visualization and allows complete resection and thus avoid prolonged follow up<sup>15,16</sup>. Success of conservative management of CEP depends on early diagnosis. Farrabow et al. was the first to report the use of Methotrexate (MTX) in CEP cases.<sup>17</sup> Both high (>150 mg) and low dose (<150mg) protocols have been reported.

MTX is administered systemically (Intravenous/ Intramuscular) or as local intra amniotic injections. Single low dose MTX injections (20 to 50 mg) combined with 3 doses of prostaglandin infusion (Nalador sherine pharma) 500 $\mu$ gm have been reported successful.<sup>18</sup> Hung et al. described some prognostic factors affecting outcome of conservative MTX management.<sup>19</sup> MTX is less successful when  $\beta$ hCG concentration is more than 10,000 IU/L, gestational age is more than nine weeks and when fetal heart beat is present. Methotrexate is commonly practiced either alone or in combination with folinic acid. Creming and Feldstein<sup>20</sup> reported successful conservative management with selective right hypogastric and left uterine artery embolization followed by suction evacuation. Subsequent successful pregnancies have been documented after cervical curettage and lower uterine cerclage operation. Successful tamponade technique was described by Van and Meersche et al.<sup>21</sup> When all these conservative measures fail ultimate treatment to save maternal life is emergency hysterectomy.<sup>22</sup>

#### Conclusion:

Diagnosis of CEP is very difficult. Increased clinical awareness, use of a good Trans Vaginal ultrasound and  $\beta$ hCG -estimation in the first trimester in

suspected cases help early and accurate diagnosis of CEP cases. The newer medical and surgical procedures allow preservation of fertility after CEP. Bleeding in the first trimester with cramping pain in lower abdomen needs special attention. CEP should be one of the differential diagnosis of bleeding in the first trimester of pregnancy.

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