

## Cervical Pregnancy

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**C**ervical pregnancy is a rare form of ectopic pregnancy in which the pregnancy implants in the lining of the endocervical canal. It is hazardous because the trophoblast can penetrate through the cervical wall and into the uterine blood supply. Increased awareness of the condition has resulted in a number of recent reports. Incidence is 1:9000 deliveries. It accounts for less than 1% of ectopic pregnancies. The cause is unknown. Here we present one such case of cervical pregnancy which was managed successfully in Buraimi Hospital.

A 22 year old unmarried girl was brought to the accident and emergency department of Buraimi Hospital with complaints of secondary amenorrhoea of 2 months duration. She gave history of heavy vaginal bleeding for the past 11 days and presented with giddiness. General physical examination revealed a very pale patient with tachycardia. There was a tender, centrally placed, suprapubic mass on palpation of the abdomen. It was up to 14 weeks in size. There was dark blood with an offensive smell on the pad. Since the patient was unmarried an abdominal ultrasound was done. It revealed an enlarged uterus 173 x 72.3 x 94.4 mm. The fundus was seen at the level of the aortic bifurcation and measured 56.8 x 75.6 mm in cross section. The endometrium was thin and mildly separated at the fundal level. The cervix and lower body of uterus appear as a heteroechoic single mass measuring 117 x 72.3 x 94.4 mm. The bright echoes in the periphery of the mass were suggestive of fresh blood. No fetal parts were seen within the uterus. Both ovaries were not visualized. There was no evidence of free fluid in the abdomen or pelvis.

### Laboratory Investigations

Haemoglobin: 2.1 G/DL ;

Serum Beta HCG (Human Chorionic Gonadotrophin): 3030 IU / L.

Blood Group: B Positive; Coagulation profile was within normal limits.

Packed cell transfusion was started.

It was decided to examine under anaesthesia, for dilatation and evacuation and for exploratory laparotomy, after obtaining informed consent.

Intraoperative findings: Uterus was soft and bulky with a bulge at the isthmus - typical hour glass uterus. Both ovaries and

fallopian tubes appeared healthy. There was no haemoperitoneum. Cervix was very high with a large placenta which was necrotic, foul smelling and firmly attached to the cervix. The cervix was accessed by pushing down the uterus from above and the products of conception were removed by dilatation and curettage. The ragged, eroded and friable area of the cervix started bleeding profusely and was controlled by injection syntocinon, syntometrine and tamponade. Postoperatively, she was on broad spectrum injectable antibiotics. She received 5 units of blood and 2 units of fresh frozen plasma.

Repeat haemoglobin was 10.3 G/DL. High vaginal swab culture & sensitivity grew *Escherichia Coli* sensitive to gentamycin, which the patient was already on. Postoperative period was uneventful & she was discharged on the sixth postoperative day in good condition.

Histopathology report showed products of conception.

Cervical pregnancy is rare. Early and timely diagnosis is critical for successful treatment and to avoid complications. Clinical manifestations include a period of amenorrhoea followed by profuse and often painless vaginal bleeding. Abdominal pain or cramps may occur in less than one third of patients. Aetiology is unknown. Local pathology related to previous cervical or uterine surgery (dilatation and curettage and caesarean sections) seem to be a predisposing factor for cervical pregnancy. It is common in pregnancies achieved through assisted reproduction. Another theory is rapid transport of the fertilized ovum into the endocervical canal before it is capable of nidation or because of an unreceptive endometrium.

Criteria for the diagnosis of cervical pregnancy (Rubin 1911)

- 1) Cervical glands must be opposite the placental attachment.
- 2) Placental attachment to the cervix must be situated below the entrance of the uterine vessels or below the peritoneal reflection of the anterior and posterior surfaces of the uterus.
- 3) Fetal elements must be absent from the corpus uteri.

Because strict anatomical and histological criteria necessitate a hysterectomy for a complete study of the entire uterus, Palman and McElin proposed 5 more clinically practical criteria for the diagnosis of this condition.

- 1) Uterine bleeding without cramping pain following a period of amenorrhoea.
- 2) A soft, enlarged cervix equal to or larger than the fundus (the hour glass uterus).
- 3) Products of conception entirely confined within and firmly attached to the endocervix.
- 4) A closed internal cervical os.
- 5) A partially opened external os.

Sonographic demonstration of an intrauterine pregnancy represents extremely valuable evidence against the possibility of an extrauterine pregnancy. It should be understood that heterotopic pregnancies do occur and their incidence is increasing. Patients undergoing ovulation induction are at a higher risk. Endovaginal transducers greatly enhance visualization of early pregnancies. In ectopic pregnancies one may visualize a pseudogestational sac in which there will be only a single echogenic layer (instead of the two concentric echogenic rings of a true gestational sac) surrounding an intraendometrial fluid collection. Colour Doppler (especially transvaginal) will demonstrate focal "peritrophoblastic" flow that demonstrates a low resistance pattern on pulsed Doppler waveform analysis. It tends to show a focal area of arterial flow adjacent to the sac that is more intense than other colour flashes in the uterus. Because of low diastolic resistance, this area of colour flow will appear continuous or nearly continuous during real time examination. As with intrauterine pregnancies, extrauterine pregnancies will also show focally recognizable intense areas of colour flow. But they may demonstrate a high resistance pattern. Sonography is a pivotal examination in assessing ectopic pregnancy. In majority of cases, this diagnosis can be promptly made. A sonographic impression of cervical pregnancy is correct in 87.5% of cases. MRI maybe helpful in unusual or complicated cases.

*Differential Diagnosis:* Cervical abortion (An aborting intrauterine pregnancy that is trapped in the endocervical canal because of resistance from the external cervical os).

*Treatment:* The most effective treatment of cervical pregnancy is unclear. Medical Treatment - single or multidose intramuscular methotrexate is effective in 80-90% of cases of early cervical pregnancy. No complications except for the usual side effects of methotrexate. Criteria for the use of methotrexate.

- a) Patient should be haemodynamically stable.
- b) No fetal cardiac activity.

## Surgical Treatment

- 1) Dilatation & Evacuation. The main complication is a high incidence of severe haemorrhage which can be reduced by preoperative measures like transvaginal ligation of cervical branches of the uterine arteries, cervical encircage, angiographic uterine artery embolization, intracervical vasopressin injection, balloon catheter tamponade of the implantation site after evacuation.
- 2) Hysterectomy is the last resort. It is desirable to avoid hysterectomy to enable future child bearing.

Even though cervical ectopic pregnancy is very rare, there should be increased awareness of the condition. Timely and prompt diagnosis is essential for successful treatment and also to avoid interventions which could lead to severe haemorrhage necessitating hysterectomy.

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