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Case Report

Obstetrics and Gynaecology Section

Successful Management of Live Cervical Ectopic Pregnancy: A Case Report

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ABSTRACT

Cervical pregnancy is a rare form of ectopic pregnancy with potential grave consequences occurring in approximately 1:9,000 deliveries. It is life-threatening as the pregnancy is implanted in the endocervical canal and the trophoblast can penetrate through the cervical wall and into the uterine blood supply resulting in catastrophic haemorrhage. Historically, the treatment had been hysterectomy because of the considerable risk of life-threatening haemorrhage, but in the recent past various conservative management modalities have been applied to preserve fertility. Here, we report a case of successful (both medical and surgical) management of cervical ectopic pregnancy in a young woman. A 29-year-old, gravid 2, para1 and living 1 with previous caesarean section had presented with mild bleeding per vagina for 5 days following 7 weeks of amenorrhoea. Past menstrual, medical, surgical and family history were unremarkable except the previous caesarean section. On examination vital signs were normal but pelvic examination revealed a distended cervix with bulky uterus, without anyadnexal mass or tenderness and no cervical motion tenderness. Further transvaginal sonography showed a live cervical gestation of 7 weeks and 4 days and serum beta-HCG value of 1,03,113mIU/ml. Patient received conservative approach with combination of intraamniotic potassium chloride and methotrexate and suction curettage. Due to conservative approach emergency hysterectomy and blood transfusion was avoided.

Keywords: Cervical pregnancy, Curettage, Methotrexate

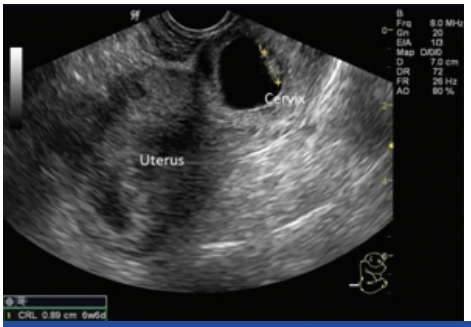
CASE REPORT

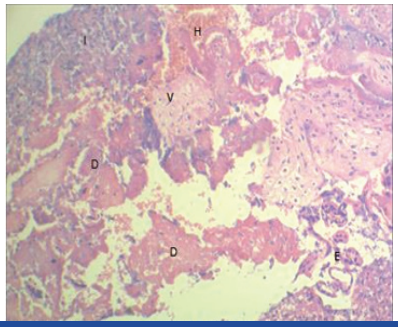
A 29-year-old, gravida 2, para1 and living 1 with history of previous caesarean section presented to the emergency department with mild painless vaginal bleeding following 7 weeks of amenorrhoea. Her previous menstrual cycles were regular and there was no history of any contraceptive usage. On general examination she was haemodynamically stable with haemoglobin of 11.7 g/dl. Abdomen was soft and non-tender on palpation. Vaginal examination revealed a closed external os with ballooned up cervix, normal size uterus without any adnexal mass or tenderness. Trans-vaginal sonography revealed a gestational sac with a fetal pole corresponding to 6 weeks and 6 days of gestation in the cervical canal distal to the closed internal os with empty endometrial cavity [Table/Fig-1]. Bilateral tubes and ovaries were normal. Colour Doppler images showed an extensive blood supply to the sac. A diagnosis of live cervical pregnancy was made. Her initial beta humanchorionic gonadotropin (β-hCG) level was1,01,353 mIU/ml. In an attempt to preserve fertility, conservative management was planned after explaining the pros and cons to the patient. Multiple dose regimen of methotrexate (1mg/kg body wt) alternating with leucovirin (0.1mg/kg body wt) was started. Simultaneously trans-vaginal sonographically guided intra-amniotic installation of KCl was performed. Fetal cardiac activity was absent on repeat ultrasound one hour after the injection. On day 4 β-hCG level was87,958mIU/ml and transvaginal sonography revealed a 4.2×3.4×3.4 cm echogenic mass in the cervical canal.

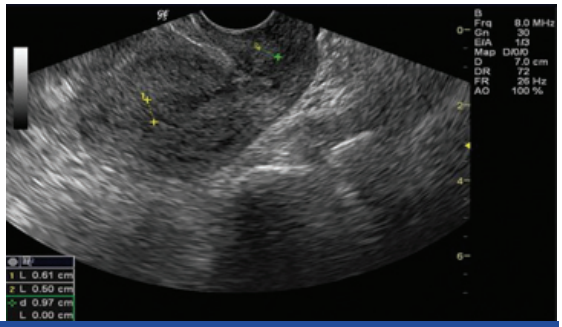
At the end of 4 doses of methotrexate and 4 doses of leucovirin, though her β-hCG level was 42,955 mIU/ml, sonographic image was the same. We discharged the patient with the advice of weekly sonographic examinations and quantitative β-hCG measurements. Two weeks after the methotrexate regimen the β-hCG level was 1267 mIU/ml and she had one episode of mild vaginal bleeding and trans-vaginal sonography revealed the similar image as before. So simultaneously patient had undergone an uneventful evacuation and curettage of cervical canal. Histopathlogy showed scanty viable & degenerative chorionic villi, necrosed decidual tissue with adjacent endocervical tissue which was consistent with the diagnosis of cervical pregnancy [Table/Fig-2]. Four weeks after the procedure, the serum β hCG was less than 2mIU/ml, and there was no evidence of any collection on trans-vaginal sonography [Table/Fig-3].

DISCUSSION

Cervical pregnancy is of rare occurrence and can be life threatening. The incidence is approximately 1 in 9000 deliveries [1]. So, early and timely diagnosis is critical for successful treatment and to avoid complications. It accounts for less than 1% of all ectopic pregnancies and has adverse outcome on future fertility [2]. Though







[Table/Fig-1]: Transvaginal sonography showing live cervical pregnancy **[Table/Fig-2]:** Histopathlogy showing Foci of villi with degenerative changes [V], Sheets of deciduas [D], and few fragmented endocervical glands [E] with foci of haemorrhage and inflammatory cell infiltrates [I] **[Table/Fig-3]:** Transvaginal sonography 4 weeks after the curettage

aetiology of cervical pregnancy is unknown, it is likely to result from a combination of factors, such as previous dilatation and curettage, Asherman's Syndrome, previous caesarean section, previous cervical or uterine surgery and in vitro fertilization–embryo transfer [3]. Parente et al., Reviewed 31 cases of cervical pregnancy and found that 25 of 31 patients had previous curettage [4]. Present patient had risk factor of previous caesarean section. Patient usually presents with painless vaginal bleeding as in the present case but there may be associated abdominal pain and urinary problems, particularly in more advanced cervical pregnancies. The criteria for histological diagnosis was described by Rubin which are of limited value as very few patients undergo hysterectomy as a primary or secondary treatment of cervical pregnancy in modern settings [5]. Palman and McElin proposed some useful clinical criteria for the diagnosis: 1) Uterine bleeding without cramping pain following a period of amenorrhoea; 2) A soft, enlarged cervix equal to or larger than the fundus (hour glass appearance of uterus); 3) Products of conception entirely located within and firmly attached to the endocervical canal; 4) A closed internal os; 5) A partially opened external os [6].

Trans-vaginal ultrasound improves visualization in cases of early cervical pregnancy. It allows assessment of the gestational sac as well as the endometrium and adnexa. Following diagnosis, conservative medical or surgical management can be undertaken in an attempt to avoid hysterectomy and preserve fertility. In a retrospective study Kirk et al., showed successful medical management of seven cervical pregnancies by using methotrexate and potassium chloride [7]. Over the last decade, therapeutic regimes like chaemotherapy, foley catheter tamponade, curettage and local prostaglandin injection and arterial embolization has been the current line of management and thus avoiding the need of hysterectomy. Among medical management, the most common is systemic or local administration of methotrexate which can be administered through various routes like intramuscular, intravenous, intracervical and intra-amniotic [8]. Though the presence of a viable fetus or advanced gestational age have been associated with higher rates failed treatment [9], the present case was managed successfully through a combination of systemic methotrexate, intraamniotic KCL and curettage. Intra-amniotic potassium chloride is recommended in addition to systemic methotrexate if the gestation is greater than 9 weeks or less than 9 weeks with evidence of cardiac activity [8]. Even after the completion of methotrexate regimen, the persistant echogenic mass in cervical canal prompted us for an evacuation. Likewise Leeman and Wendland, noted the persistence of a sac despite negative β hCG in a review of cervical ectopic pregnancies treated by methotrexate [8]. Brown et al., also revealed that persistent sonographic findings were common [10]. Following treatment with methotrexate these patients are advised to avoid pregnancy for 3 months due to the risk of teratogenicity. In a retrospective study examining the overall efficacy of methotrexate chaemotherapy in cervical pregnancy, the authors concluded that there was no evidence to suggest that the reproductive performance of these patients was affected [11].

CONCLUSION

Even though cervical ectopic pregnancy is 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. In addition it improves the possibility of on-going fertility in affected patients.

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