Short report

Cervical pregnancy: report of two cases successfully treated with manual vacuum aspiration and balloon tamponade

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Abstract

Two cases of cervical pregnancy, a rare form of ectopic gestation are presented. Both had previous history of instrumentation which might have contributed to the ectopic implantation. Both were successfully treated with manual evacuation and haemostasis was ensured with balloon catheter tamponade. Modalities of treatment of this rare condition are discussed. A high index of suspicion and increasing recourse to early ultrasonography in pregnancy will detect more cases and prevent complication from haemorrhage.

Keywords: Cervical Pregnancy, Vacuum Aspiration, Balloon Tamponade.

Resume

Deux cas de grossesse cervicale, une rare forme de gestation ectopique sont étudiés. Tous les deux avaient une histoire antérieure d'emploi d'instruments chirurgicaux qui auraient pu contribuer à l'implantation ectopique. Tous les deux cas ont été traités avec succès par évacuation manuelle et l'hémostatise était assurée avec le tamponnement de cathéter de ballon.

Les modalités du traitement de cette rare condition sont analysées.

Une haute indication de soupeon et un recours croissant à une prompte ultrasonographie permettra de découvrir plus de cas et empêchera une complication issue de l'hémorragie.

Case I

O.R., a 30year Gravida 5 para 1+3 (none alive) legal practitioner was attending the infertility clinic. She had a missed abortion at 16 weeks in her first pregnancy. In the next pregnancy, she had emergency cerclage at 20 weeks, but ruptured membranes at 24 weeks. The stitch was removed followed by spontaneous expulsion. She had manual removal of the retained placenta. In her third pregnancy, she had cervical cerclage, but ruptured her membranes again at 31 weeks. She was subsequently delivered by emergency lower segment caesarian section. The female infant died in the early neonatal period.

She had blighted ovum at 12 weeks in her last pregnancy which was managed with suction evacuation. Hysterosalpingogram revealed features of synechiae in the isthmic part of the uterus. The rest of the uterine cavity, cervical canal and fallopian tubes were however normal. She was commenced on ovulation induction.

Following a missed period, a pelvic ultrasound (fig.1) revealed a bulky uterus with thickened endometrial line and a gestational sac in the upper cervix, and 22mm from the external os. The gestational sac measured 27.7mm equivalent to 7 weeks gestation. Fetal echoes with fetal heart pulsation were seen. There was a small fibroid in the posterior wall of the uterus measuring 25x33mm and a small sonolucent area within it (? Degeneration). There was no other adnexal mass. An assessment of cervical pregnancy was made. She was admitted into the ward.

The ultrasound was repeated two days later (fig2). the gestational sac was still within the cervical canal measuring 30mm (equivalent to 7 weeks and 3 days). However, there was no definite fetal echo or cardiac pulsation any more suggestive of cervical pregnancy with missed abortion. She was managed with manual vacuum aspiration. This provoked torrential bleeding which was controlled with Foley's catheter balloon tamponade (inflated with 40ml of sterile water) of the cervix.

The products within the cervical canal and endometrial biopsy were subjected to histol-
ogy. The catheter was removed after 48 hours. There was no bleeding per vaginam. She was discharged home on the 4th day post evacuation. The histology report confirmed products and trophoblastic tissue within the cervix. There was no evidence of pregnancy changes within the endometrium. At the follow up visit after six weeks, she was in satisfactory condition. She had had a normal menstrual flow. She was counselled to report immediately if she missed a period.

Case 2

O.T., a 30 year old Gravida 3 para 1+1 (I alive) administrator was referred from a private clinic at 12 weeks of gestation with 12 hour history of intermittent colicky lower abdominal pain. An accompanying ultrasound report suggested cervical pregnancy. There was no bleeding per vaginam prior to presentation.

Her first pregnancy was terminated at 8 weeks. Her child was delivered by an emergency lower segment caesarean section. She had tenderness in the suprapubic region, there was no rebound tenderness. Pelvic examination revealed a bulky cervix with blood trickling from the pin hole os. The uterus was bulky. There was no adnexal mass. The initial assessment was? threatened abortion? cervical pregnancy?

She was admitted. A repeat pelvic ultrasound (fig. 3) revealed a bulky uterus with thickened endometrium. There was a gestational sac extending from its inferior aspect into the cervical canal. The sac contained fetal echo but no fetal heart pulsation was seen within it. The sac measured 47mm equivalent to 9 weeks 6 days pregnancy. There was no adnexal mass. A diagnosis of cervical pregnancy with missed abortion was made.

She was managed with manual vacuum aspiration. A foley’s catheter was introduced into the cervical canal and the balloon inflated with 40ml of sterile water to prevent haemorrhage. Endometrial biopsy was obtained and with the products were subjected to histology. The catheter was removed on the third day post evacuation. There was no bleeding per vaginam. At the follow up clinic, she had experience a normal menstrual flow 6 weeks after the evacuation. Histology confirmed products in the cervical canal. There was no trophoblastic tissue within the endometrium.

She was counselled to present immediately following any missed period.

Discussion

Nidation in the cervix uteri is a rare form ectopic gestation. Its prevalence has been variously reported as: 1 in 2400 deliveries, and between 1 in 1000 to 1 in 95000 pregnancies. It represents between 1.0% and 1.5% all ectopic pregnancies. However, its true incidence is unknown; many obstetricians may never see one case of cervical pregnancy.

Sonographic criteria for the diagnosis of cervical pregnancy include endocervical localization of the gestational sac and trophoblastic invasion. Histology confirmed these two cases as true cervical pregnancies. The aetiology is unknown, but there is evidence of its association with cervical uterine instrumentation. Both cases presented had past history of instrumentation. History of cervical procedures is almost universal in these women.

With increasing rates of induced abortion, the prospects of rising incidence of cervical pregnancy appears real. The maternal mortality rate has decreased considerably within the past five decades largely due to early diagnosis with ultrasonography. Prior to 1978, accurate pre-operative diagnosis was unusual. The picture has since changed with the introduction of transvaginal sonography in particular, which allows early diagnosis, and improves the prospect of conservative treatment. Cervical pregnancy may be difficult to distinguish from the cervical phase of an incomplete abortion, a bleeding cervical fibroid and endometriosis. The management of cervical pregnancy has changed in the past two decades. Hitherto, almost all cases were managed with hysterectomy. The majority of women with this condition are of low parity as depicted by these two women, hence the current trend is to preserve reproductive function.

A number of conservative modalities have evolved. Suction evacuation and balloon catheter tamponade as successfully employed in these patients is documented. Successful
treatment with systemic and or intra amniotic methotrexate is widely reported\textsuperscript{11,12}. Chemotherapy with methotrexate combined with adjuvant methods have been described: arterial embolization\textsuperscript{13}, arterial embolization and dilation and curettage\textsuperscript{14}; arterial embolization and potassium chloride injection\textsuperscript{15}. Curettage and local prostaglandin administration have also been successfully utilized\textsuperscript{16}.

Overall balloon catheter tamponade is reported to ensure reliable haemostasis in 92.3% of cases where it is employed and chemotherapy is associated with 81.3% success rate\textsuperscript{17}. Treatment is monitored with serial beta human chorionic gonadotrophin and ultrasound. Life threatening haemorrhage is the major complication of conservative management. Haemorrhage has been reported some weeks after the initial treatment\textsuperscript{18}. Close monitoring following conservative management is thus mandatory. Hysterectomy is currently employed for uncontrollable haemorrhage.

Ensuing pregnancy following cervical pregnancy had been thought to be rare, recent reports however indicate favourable reproductive outcome in the majority of the women managed conservatively\textsuperscript{19}.

Despite the advances in the diagnosis and management of this condition, the majority of cases in the developing world will probably go undetected with attendant high mortality. It is expected that with a high index of suspicion and increasing recourse to early ultrasound, clinicians in the developing countries will be able to identify more cases.

References


Figure 1: Longitudinal Scan showing gestational sac in the cervix and thickened endometrium.

Figure 2: Longitudinal Scan showing thickened endometrium and the gestational sac being extruded.

Figure 3: Longitudinal Scan showing a 47mm gestational sac in the cervical canal.