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Case Report

Management of Cervical Ectopic Pregnancy: A report of two cases

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ABSTRACT

Cervical pregnancy is a rare and life-threating form of ectopic pregnancy. Early diagnosis and treatment can prevent undesired fatal consequences. We present two cases of cervical ectopic pregnancy managed with different medical modalities with a literature review and highlights on different management modalities.

KEYWORDS

Cervical Ectopic Pregnancy, Intra-Gestational Methotrexate

BACKGROUND

Cervical pregnancy is a rare and life-threatening form of ectopic pregnancy, which accounts for < 1% of all ectopic pregnancies. [1] Historically known cervical pregnancy is associated with life-threating haemorrhage and has been treated presumptively with hysterectomy. [2] Improved radiological skills have led to early detection and development of fertility conservative management options. Different management options include: expectant, medical (systemic / intra-gestational sac methotrexate injections) and surgical. Up to date, literature has not documented yet a superior management option. Here, we are presenting two case reports managed differently. Data were collected from the electronic data system.

CASE PRESENTATIONS

CASE ONE

A case of 38 years old, G 6 P 3 + 2, previous two cesarean sections and one ectopic pregnancy managed medically. Moreover, her last pregnancy was complicated by post-partum haemorrhage and scar dehiscence. She is a known type 2 diabetic on oral hypoglycaemic agents and has a surgical history of hysteroscopy and adhesiolysis for Asherman's syndrome. She was referred from private facility as a case of pregnancy of unknown location at 7 weeks. The current pregnancy was reproductive assisted with 3 embryos transferred. She was asymptomatic and vitally stable. The patient was investigated in our facility and BHCG was 4032 IU/ml. An ultrasound scan (Figure 1) revealed a cervical pregnancy with no fetal heartbeat which was further confirmed by MRI. Management options discussed in MDT: Multi Disciplinary Team meeting and agreed upon medical management with intramuscular methotrexate. The patient received one dose of methotrexate calculated according to her weight, despite being advised for two doses. The patient was then discharged home with follow up appointments in early pregnancy unit. BHCG level was measured weekly, initially it significantly dropped to 259 IU/ml; however, it increased again to 666 IU/ml. Option of intra-gestational sac methotrexate injection was discussed with the patient who declined and opted to continue on conservative management. Further BHCG dropped to 483 on day 20. The patient is still under the follow up of our early pregnancy unit.

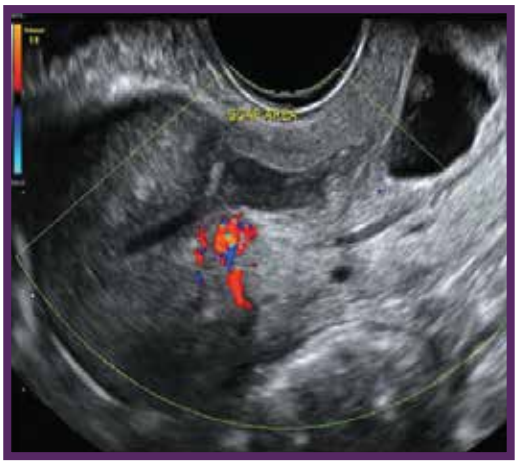

Figure 1: Transvaginal ultrasound scan showing a gestational sac in the cervical canal, away from the scar area.

CASE TWO

A case of 36 years old lady, known type 2 diabetic on oral hypoglycaemic medications, G5 P 3 + 1 with previous three cesarean sections and one D&C for miscarriage. She presented to the emergency department at 7 weeks of pregnancy with one-day history of vaginal bleeding. She was vitally stable and had no other symptoms. Laboratory investigations showed an Hgb 11.8 g/dL, BHCG of 11,655 IU/ml and a viable cervical ectopic pregnancy by transvaginal ultrasound scan. MRI was done to confirm diagnosis (Figure. 2) and exclude scar ectopic pregnancy in view of previous three cesarean sections. After the confirmation of viable cervical ectopic pregnancy, MDT meeting was conducted to agree on intra-gestational sac injection of methotrexate. The management plan was discussed with the patient and her husband who agreed. The patient had an uneventful Intra-gestational sac injection of methotrexate under ultrasound guidance. She was discharged home on the second day with no further episodes of bleeding with follow up plan in early pregnancy unit on day 3 and day 5 of methotrexate administration. BHCG was measured on each visit, levels dropped to 8224 IU/ml, 6288 IU/ml and 4545 IU/ml on day 1, day 3 and day 5. Thereafter, she was seen in early pregnancy unit every 10-14 days with BHCG levels. BHCG dropped significantly to 0.3 IU/ml on day 56. On the last visit she reported a normal menstrual period. She was discharged from the clinic with advice to avoid pregnancy for six months and use a reliable method of contraception.

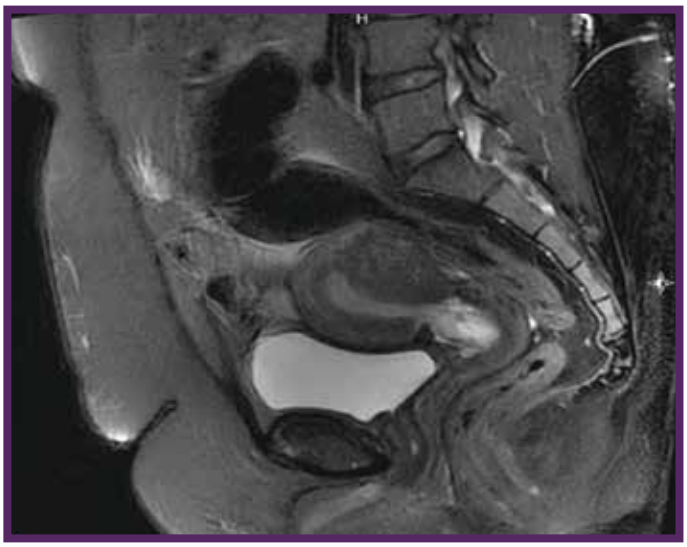

Figure 2: MRI image showing a single Gestational sac is seen in the cervical canal, not attached to and distal to the level of previous C-section scar at the lower anterior uterine segment, almost protruding through the external os.

DISCUSSION

Cervical pregnancy results from the implantation of the blastocyst in the endocervical canal below the level of the internal os. The incidence of cervical pregnancy is around 1 in 9000 pregnancies. [3] The exact pathogenesis behind cervical pregnancy remains unknown. However, multiple risk factors have been linked to it including previous cesarean sections, dilatation and curettage, Asherman's syndrome and in vitro fertilization. [4] Our patients both had a combination of the above-mentioned risk factors.

Management options of cervical pregnancy can be divided into medical, surgical or a combination of both.

MEDICAL

Unlike tubal ectopic pregnancy and due to its rare entity, no criteria are yet established for medical management of cervical pregnancy. [5] Nevertheless, methotrexate remains the first-line therapy for a hemodynamically stable patient. Various methods have been documented (single or multi-systemic doses of methotrexate, local intra-amniotic injection of methotrexate or potassium chloride, or a combination of all methods). Success rates of 80-90% have been documented in the reported cases.

If pregnancy has not advanced beyond 9 weeks of gestation and in the absence of fetal cardiac activity documented by ultrasound scan, single-dose systemic methotrexate can be used. In more advanced pregnancies and in the presence of fetal cardiac activity, treatment is usually with a combination of multi-dose systemic methotrexate and intra-amniotic potassium chloride injection.[6,7] Intra-gestational sac injection of methotrexate has been also documented. It is usually associated with vaginal bleeding and hence done in the operating room under ultrasound guidance. [8] Moreover methotrexate has been also used in combination with other surgical methods.

SURGICAL

A number of surgical methods have been described in the literature. Usually such methods are undertaken with a combination of medical therapy, persistent bleeding or failure of medical therapy alone. [2] Those include:

1) Dilatation and curettage with or without tamponade, usually using Foleys catheter and cervical cerclage.

2) Intracervical/intra-gestational sac injection of methotrexate or potassium chloride (if the fetal cardiac activity is documented) under ultrasound guidance.

3) Reduction of blood supply via cervical cerclage, vaginal ligation of cervical, uterine or internal iliac arteries, or uterine artery embolization. This is usually done in combination with dilatation and curettage or systemic chemotherapy with methotrexate.

4) Hysterectomy, which has been classically

described over the years, is preserved for life-threating haemorrhage when other modalities fail, in advanced pregnancies or as an option when fertility preservation is no longer required.

Despite our advances in early detection of cervical pregnancy via different modified radiological techniques, our too limited experience in this area leaves the optimal management option unclear. Retrospective studies have been prevented by its rare entity. As mentioned in the updated guideline of the royal college of obstetrics and gynaecology, methotrexate has been associated with success rate of 91% according to a retrospective review of 62 cases of cervical pregnancy. [9] Moreover surgical methods are associated with high failure rates and should be preserved for life-threating haemorrhage. In conclusion, early detection and correct diagnosis of cervical pregnancy remain the key to fertility-preserving management. Medical therapy (with its different modalities) remains the best available option when compared to surgical methods.

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