Methotrexate therapy for placenta accreta - A rare case report

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Abstract

A case of placenta accreta following full-term vaginal delivery with an unscarred uterus where surgical management of delivering the placenta failed is presented. Although she was posted for hysterectomy, she was desirous of retaining her fertility. She was successfully managed medically with injection methotrexate.

Key words: Placenta accreta, Injection methotrexate
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Introduction

Placenta accreta is described as an abnormality in placentation when the anchoring placental villi directly contact the myometrium resulting in firm attachment of placenta to the uterine wall leading to its incomplete separation at the time of delivery. It is mostly diagnosed after delivery when manual removal of the retained placenta fails. The ensuing complications may include severe post-partum haemorrhage with its resultant coagulopathy, postpartum curettage, uterine perforation, shock, infection, loss of fertility and even death. The conventional treatment is hysterectomy.

Case report

A patient aged 32years, parity two with one alive female baby, reported at Maharishi Markendeshwar Institute of Medical Sciences and Research (M.M.I.M.S.R.), 18days following vaginal delivery of a full term stillborn male baby at home, followed by retained placenta with post-partum haemorrhage.

Thereafter, taken to a private hospital, she under went three unsuccessful attempts of manual removal with surgical curettages. Meanwhile, the patient had been ex-periencing repeated episodes of excessive bleeding per vaginally and had history of five units of blood transfusion. Failing to manage by this surgical approach, hysterectomy was planned, albeit the patient was desirous of retaining her uterus for future fertility . Her first vaginal delivery was uneventful.

On admission at M.M.I.M.S.R., she was conscious, cooperative, weighing 52 kilograms, with moderate pallor, regular pulse rate of 100 beats per minute, blood pressure recording of 110/70 mm of mercury, afebrile, no cyanosis with clear chest and nothing abnormal on circulatory sys-tem examination, except for tachycardia corresponding to the extent of anaemia. On abdominal examination, uterus was 20 weeks size, well contracted with pelvic examination showing moderate amount of bleeding per vaginum and patulous but closed cervical os of 20-22 week sized uterus.

Her investigations read haemoglobin 7.5gm/dl, blood group B Rh positive, total and differential counts within normal limits, with normal readings of routine urine analysis, platelet count, coagulation profile, hepatic and renal function tests. Vaginal swab was sent for culture which later reported sterile. Trans-abdominal and vaginal sonography revealed uterus to be of post partum size with endometrial cavity showing an echogenic mass of dimensions 8.1cm x 5.8cm, suggestive of placenta, with vascularity on colour doppler confirming it to be adherent to the uterine wall (placenta accreta), but with no definite invasion (Fig.1).

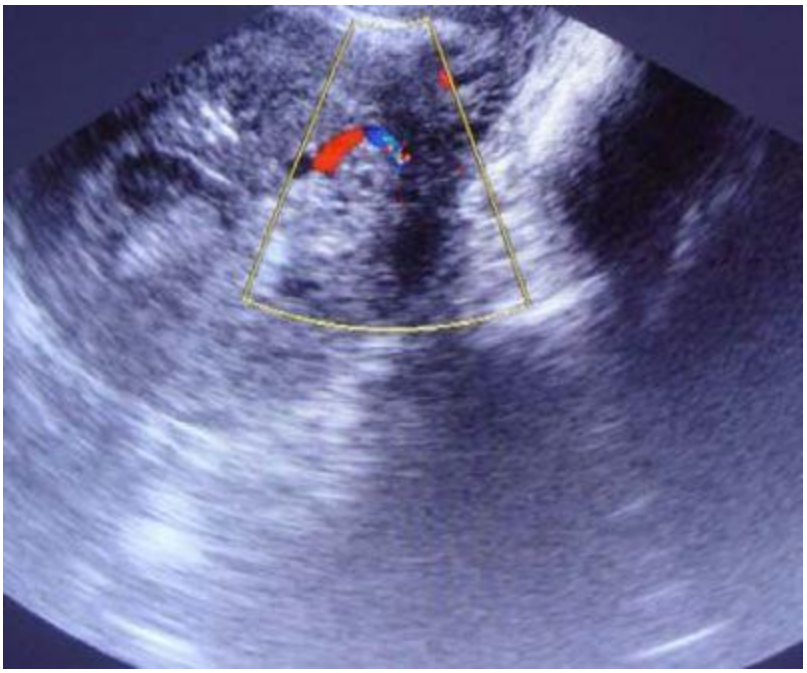

Figure 1: Placenta accreta

Supportive measures, like blood transfusion and broad-spectrum antibiotics, initiated. Considering the desire of the patient for retaining her uterus, conservative management was planned. Modality adopted was: placenta left in-situ and injection methotrexate given intramuscularly in the schedule of 1miligram per kilogram body weight, with repetition at 72-96 hourly intervals for three doses based on continuous monitoring of the dimensions and vascularity of the mass (representing adherent placenta) with serial sonographic and colour Doppler studies which regularly showed the reducing trend. Leucocyte counts were routinely done on daily basis which remained within limits. Size of the uterus decreased remarkably and was not palpable abdominally after 9 days. With this conservative strategy, vaginal bleeding never became alarming and vaginal discharge never purulent.

Patient was discharged in a satisfactory condition, fulfill-ing her initial desire of conserving the uterus, after 11 days of hospitalisation. On subsequent three follow-ups, every 5 days, patient remained afebrile with no history or evidence of infection, and near normal sonographic and colour doppler findings after a fortnight.

Discussion

One of the potentially catastrophic obstetric complications, placenta accreta is alarmingly on the rise in the developed as well as developing world given the current trend towards elective repeat caesarean sections [1]. The incidence of placenta accreta is considered between 1 in 7000 to as high as 1 in 540 pregnancies [2]]. It is a life threatening condition associated with high maternal mor-bidity and mortality rate being as high as 7% [3]. The risk factors for placenta accreta are previous uterine surgery (like caesarean sections, myomectomy), previous D&E, placenta praevia, advanced maternal age, multiparity, Asherman's Syndrome and presence of fibroids [4]. It is important to make an early and accurate diagnosis for appropriate management and reduction of associated morbidity, thereof, and prenatal diagnosis may be established by Ultrasound, Colour Doppler and MRI [3]. Though traditional management of this entity has centered upon hysterectomy but there has been a gradual shift towards its management which involves uterine conservation and leaving the adherent placenta in-situ with either a) adjuvant treatment with Methotrexate [5] in some cases or b) by simply awaiting its spontaneous resorption [4].

Tong, Tay, Kwek [6] pioneered the conservative method by administering systemic Methotrexate. The outcome varies widely ranging from expulsion at seven days to progressive resorption in roughly six months [7]. Courbiere, Bretelle, Porcu, Gamerre, Blanc [8] conducted a study on conservative management in which placenta accreta was always left in situ with one of these associated treatments like – bilateral hypogastric artery ligation, medical treatment with

methotrexate or uterine artery embolisation : placental resorption happened in majority of their cases with no report of maternal mortality.

Conclusion

Conservative management appears to be a safe alternative to the extirpative management and is a logical option in well selected haemodynamically stable patients of adher-ent placenta. Antepartum diagnosis should be improved among patients with a high risk profile for placenta accreta in order to optimize conservative strategy.

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