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RESEARCH ARTICLE

A CASE REPORT ON CONSERVATIVE MANAGEMENT OF PLACENTA ACCRETA SPECTRUM IN A PRIMIGRAVIDA BY METHOTREXATE

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ABSTRACT

A 31 year old primigravida with previous history of myomectomy, had a scan done at 28 weeks period of gestation showing vascular lakes and lacunae in the placenta. During elective lower segment cesarean section, placenta was found to be adherent. It was left in-situ and was managed conservatively by methotrexate and suction and evacuation.

INTRODUCTION

Placenta accreta is defined as abnormal trophoblast invasion of part or all of the placenta into the uterine myometrium. Depending on the profundity of invasion three levels of abnormal placental attachments are classified- Placenta accreta, Placenta increta, Placenta percreta. Placenta accreta – The uterine decidua is not present and chorionic villi are attached to myometrium directly Placenta increta- The chorionic villi invades the myometrium. Placenta percreta- The chorionic villi invades myometrium and may permeate to near by organs. Placenta accreta incidence has been rising recently and this appears to be correlating with the increasing caesarean sections. Maternal morbidity and mortality can occur due to severe and many times life threatening blood loss which often requires blood transfusions. A well known risk factor for placenta accreta is previous caesarean section deliveries complicated by low lying placenta that is placenta previa. We report a case of placenta accreta in primigravida who previously underwent open myomectomy. We present the relevant details of this case and discuss it's management.

CASE REPORT

A 31 years old primigravida came to our hospital at 7 weeks period of amenorrhea.

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This was a spontaneous conception. Two years back, she underwent open myomectomy and a8 cm fibroid was removed by a vertical incision in the anterior wall of uterus. Uterine cavity was not entered. In her present pregnancy, ultrasound done at 28 weeks showed, multiple placental lacunae but no loss of retroplacental sonolucent zone and it was regular.(Fig.1) At 35 weeks scan done showed placenta with dilated venous lakes and lacunae and calcifications with regular retroplacental sonolucent area.. AFI was at lower limit of normal (8.8cms) and growth parameters were showing downward trend.Findings were suggestive of fetal growth restriction.Scan at 36 weeks showed similar dilated venous lakes and lacunae, AFI-9 cm and fetal dopplers were normal.

An elective lower segment caesarean section (LSCS) was done at 37weeks 4 days period of gestation in view of IUGR and previous myomectomy scar. Intraoperatively, after delivering the baby, placenta was found adherent to anterior uterine wall. Inj. Oxytocin was injected in the umbilical cord and waited for expulsion of placenta for 30 minutes. Placenta could not be delivered, hence placenta was left in situ and uterus closed. Injection Methotrexate (1mg/kg =100mg) was given intramuscularly with prior blood counts, liver function tests (LFT) and renal function tests (RFT)next morning. 2 units of PRBCs were given Intraoperatively and postoperatively her hemoglobin and platelets were monitored every four hours. Her blood counts before 1st dose of Methotrexate were- Platelets- 1.38 lakhs/cu mm, WBCs-17090/cu mm, Hb-11.3g/dl, Liver function tests and renal function tests- normal

and after methotrexate were- Platelets- 74000/cu mm, WBCs-16710/cu mm, Hb-10g/dl, Liver and renal function tests were normal. 1-unit PRBCs and 2 FFPs were given. Patient's hemoglobin and platelets dropped though there was no significant bleeding per vaginum. Hematology opinion taken for the same. Ultrasound was done on the day following LSCS which showed retained placenta of 10x7.3x14.2cm (551cc). Patient was covered with IV antibiotics. Bleeding was controlled and she was discharged on post operative day 5 in stable condition. Patient received total 2 doses of methotrexate 100mg intramuscularly 2 weeks apart. Blood counts before 2nd dose of methotrexate were- Platelets- 3.43lakhs/cu mm, WBCs- 7040/cu mm, Hb- 10.3g/dl, , Liver and renal function tests were normal and after methotrexate were- Platelets-1.67 lakhs/cu mm, WBCs-6010/cu mm, Hb-9.4g/dl, SGOT and SGPT were raised, Gastroenterology and hematology was taken opinion was taken and LFT was monitored serially till normal. Ultrasound done 2 weeks after last dose showed 12.4x 4.2x 6.9cm (191.4cc) retained placental tissue (Fig.2). Ultrasound guided suction and evacuation of placenta (Fig.3) was done 20 days after last dose of Methotrexate as patient had recurrent fever spikes, history of passing mass per vagina, CRP was elevated and vaginal swab showed heavy growth of E.coli. Ultrasound done 20 days after suction and evacuation showed 2.6x1.4x1.8 cms retained placental tissue. Patient was on regular follow up thereafter and was symptoms free after 6-7 days of suction and evacuation of placenta.

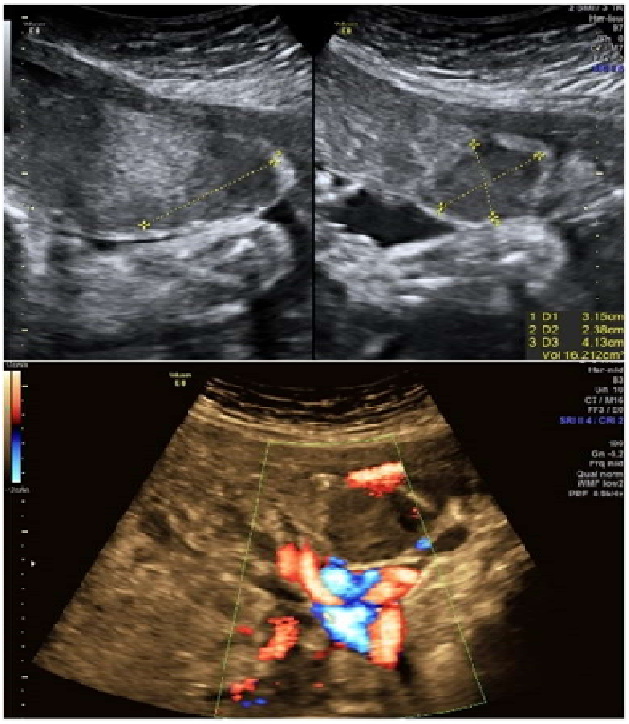

Fig.1. Vascular lakes and lacunae as seen on ultrasound and color doppler images

DISCUSSION

There has been an increase in rate of caesarean delivery worldwide. According to one study, incidence of placenta previain scarred uterus was 2.75% and unscarred uterus was1.4%.(1) Placentaaccreta spectrum is associated with less hemorrhagic morbidity of diagnosed prenatally. (2) It allows appropriate management of delivery and counseling.

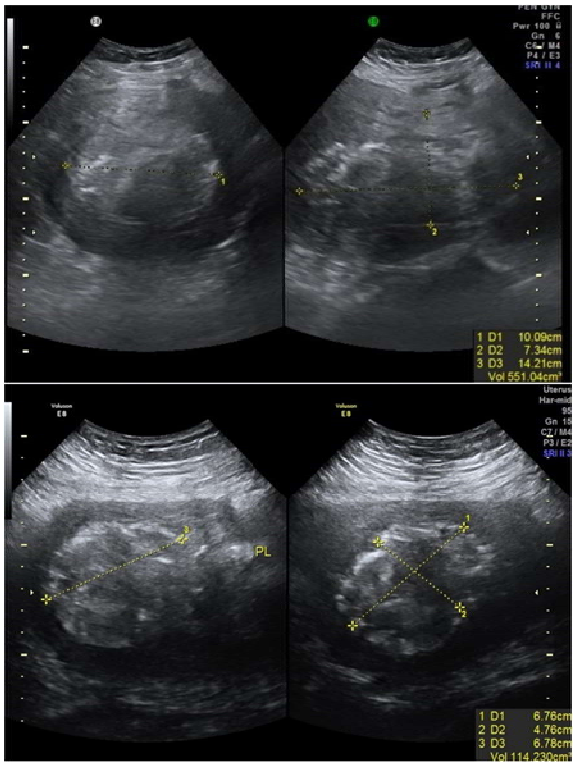

Fig.2. Retained placental volume before (top) and after (bottom) methotrexate

Fig.3. Retained placenta removed piecemeal by Suction and Evacuation

Ultrasound and dopplers are sufficient for diagnosing placenta accreta, increta and percreta in most cases. According to a recent modified Delphi consensus study, i)loss of the 'clear zone'ii) myometrial thinning, iii)bladder-wall interruption, iv) placental bulge, v) uterovesical hypervascularity, vi)Placental lacunae and vii)bridging vessels should be included in the examination of high-risk patients and the routine mid-gestation scan report.(3)In our case, ultrasound from 28 weeks period of gestation showed multiple placental lacunae. Obstetric hysterectomy has been the mainstay but conservative methods and fertility sparing can be done, these methods include placenta left in situ, cervical inversion technique and triple-P procedure.

Placenta left in situ and methotrexate use can have risks, such as late postpartum hemorrhage, infection, and pulmonary embolism. Conservative management of placenta accreta spectrum by administration of methotrexate systemically has shown spontaneous expulsion in 33.3% after treatment and 45.5% after additional dilation and curettage. Frequent complications were persistent vaginal bleeding (25.0%) and infection (25.0%) (4). In our case, 100mg methotrexate 2 doses were given intramuscularly2 weeks apart. There was a considerable decrease in volume of placental tissue (551cc to 191.4cc) in about a month's time as noted on ultrasound. But as the patient developed symptoms that were suggestive of infection, patient was planned for ultrasound guided suction and evacuation, post which she was symptomatically better.

CONCLUSION

Our case emphasizes that, it is very important to critically evaluate placental- myometrial interface antenatally in patients with uterine scars related to procedures other than caesarean section. Methotrexate is used in different modes of administration and dosages, but data currently is limited.

Declaration

Conflict of interest: The manuscript has been read approved by all the authors and there is no conflict of interest.

Ethical statement: An informed consent has been taken from the patient for publication.

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