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Case Report

Successful term pregnancy after uterine artery embolization for caesarean scar ectopic pregnancy: a case report

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ABSTRACT

The incidence of caesarean scar pregnancy range from 1 in 1800 to 1 in 2500 of all pregnancies. It has been estimated that 6.1% of pregnancies in women with at least one previous Caesarean section and a diagnosis of ectopic pregnancy will be Caesarean scar pregnancy (CSP). There is no consensus on the management of CSP. An invasive intervention such as excision of scar ectopic can reduce recurrence but affects patient's fertility. Conservative management like administration of methotrexate and uterine artery embolization (UAE) is specially important for young women who want to keep their fertility. This is a case report of a 29-year-old woman who presented with persistent heavy bleeding following failed MTP at 12 weeks of gestation. Ultrasonogarphy was suggestive of Caesarean scar pregnancy and MRI of chronic left adnexal ectopic. Laparotomy also was suggestive of Caesarean scar ectopic. She was managed conservatively with UAE followed by Methotrexate. The procedure was performed successfully, and the patient's fertility was preserved. Follow up consisted of serial bhCG monitoring which gradually returned to normal levels. She conceived four years after UAE and had an uneventful antenatal period and underwent Elective Cesaraen section at 38 weeks. For those patients with CSP who desire future pregnancy, the comprehensive treatment including UAE can be considered in management.

Keywords: Cesarean scar pregnancy, Magnetic resonance imaging, Methotrexate, Ultrasound, Uterine artery embolization

INTRODUCTION

Ectopic pregnancy is defined as implantation outside the endometrial lining of the uterine cavity. It comprises 1 to 2 percent of all first-trimester pregnancies.[1] CSP is a type of ectopic pregnancy where implantation occurs within the myometrium of a prior cesarean delivery scar. In 1978, the first case of a caesarean scar ectopic pregnancy was reported.[2]

With the increasing rate of caesarean section, there is a substantial increase in this condition. The early and accurate diagnosis with timely management can prevent pregnancy complications such as haemorrhage, uterine rupture and can preserve fertility.[3] Estimates of CSP incidence range from 1/1800 to 1/2500 of all pregnancies. It has been estimated that 6.1% of pregnancies in women with at least one previous CS and a diagnosis of ectopic pregnancy will be CSP. To date, more than 1000 cases have been reported.[4]

TVS is the first-line imaging tool for the diagnosis of CSP with a sensitivity of 86.4%. Doppler velocimetry when combined with TVS, enables early detection and treatment and avoids false positive diagnosis by 30-40%.[5]

Management goals are to prevent the massive haemorrhage, conserve the uterus for further fertility. Conservative medical management includes systemic methotrexate, local embryocides or combination of both.[3]

Surgical approaches with exploratory laparotomy have led to high mortality and the possible need for emergency hysterectomy.

For this reason, other treatment techniques such as use of local MTX, uterine artery embolization, and aspirative curettage have been tried.[6] Use of uterine artery embolization (UAE) has been described in some case reports as being an effective treatment.[7]

We report a case of complex caesarean scar ectopic pregnancy that was treated with UAE in association with systematic MTX injection who desired future pregnancy. We highlight the intervention procedure and patient's evolution to have a successful pregnancy outcome.

CASE REPORT

The patient was a 26-year-old woman in her second pregnancy who presented to the department of obstetrics and gynaecology, Church of South India Hospital with a complaint of genital bleeding that had started three days ago. 25 days ago she had undergone Dilatation and evacuation at 8 weeks of gestation for failed medical termination of pregnancy attempted at 6 weeks of gestation. In the examination at the time of admission, she was found to be hemodynamically stable and speculum examination showed moderate bleeding. Bimanual pelvic examination revealed anteverted normal sized uterus, no forniceal fullness or tenderness.

Transvaginal ultrasonography was performed, which showed an anteverted bulky uterus with endometrial thickness of 6mm. A heterogeneous space occupying lesion of 2.7x3.5x3.3cms with irregular wall with colour flow uptake in anterior wall of the uterus at the junction of uterine body and cervix in the region of uterine scar. Right ovary shows cyst of 6.9x4.6x7.4 cm and normal left ovary with minimal free fluid in pouch of doughlas (Figure 1 and 2).

Figure 1: Uterus, AV, normal in size, anterior wall of the uterus at the junction of uterine body and cervix shows heterogeneous SOL 1.8x2.2x2.3cms with colour flow uptake. Right ovary shows cyst 6.9x4.6x7.4, LO-normal, Minimal free fluid in POD.

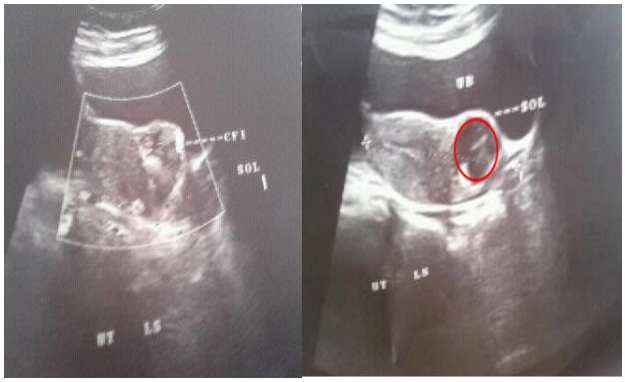

Figure 2: Anterior wall at the junction of uterine body and cervix shows heterogeneous SOL 2.7x3.5x3.3cms with irregular wall with colour flow uptake, increased in size since last scan. Right ovary shows cyst 6.9x4.6x7.4, LO- normal. Minimal free fluid present in POD.

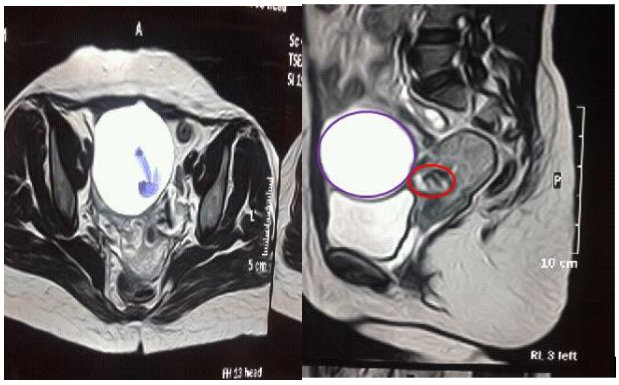

Figure 3: Ill defined heterogeneous mass in left adnexa was seen adherent to uterus m/s 3.2x2.8cms suggestive of chronic ectopic gestation. Large thin walled cyst seen in pelvis superior to bladder m/s 7x6cms.

Figure 4: Laparotomy showing an anteverted normal sized uterus, with mass on anterior surface m/s 4x4cms at junction of body of uterus and cervix.

Magnetic resonance imaging showed no uterine lesion and an empty cervix. Ill defined heterogeneous mass in left adnexa was seen adherent to uterus m/s 3.2x2.8cms

suggestive of chronic ectopic gestation. Large thin walled cyst seen in pelvis superior to bladder m/s 7x6cms. Left ovary normal, right ovary not seen (Figure 3).

Laparotomy was performed suspecting chronic left adnexal ectopic. Laparotomy revealed anteverted normal sized uterus, with mass on anterior surface m/s 4x4cms at junction of body of uterus and cervix. Prominent vessels seen over the surface. Right ovarian clear cyst m/s 8 x 8cms in size seen. Left fallopian tube and ovary and right tube appears normal. Diagnosis of cesarean scar ectopic was made.

Because of the patient's declared desire to preserve her reproductive capacity, it was decided to perform UAE followed by systemic MTX.

The procedure was performed successfully. She received 2 doses of systemic MTX and was accompanied by a gradual decline in the bhCGassay over the subsequent days. Follow up consisted of serial bhCG monitoring which gradually returned to normal levels within 3 weeks.

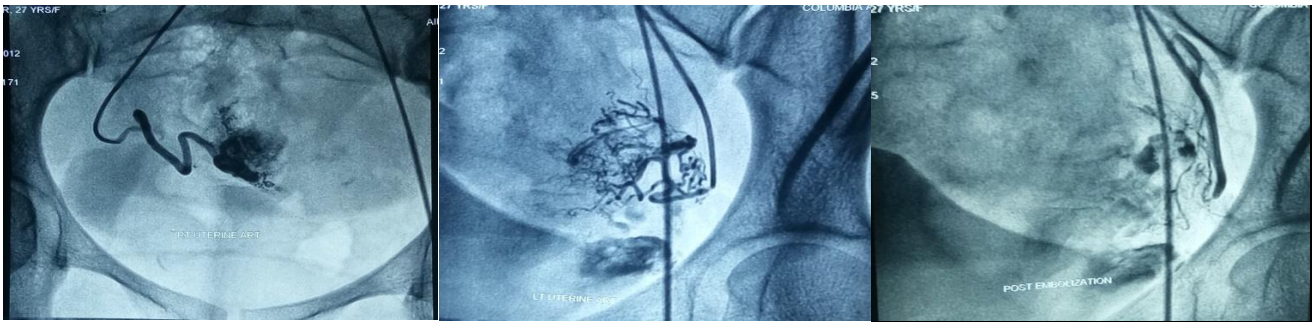

Figure 5: Uterine artery embolization done using poly vinyl alcohol particles.

She conceived four years after UAE spontaneously. She was under strict antenatal surveillance to detect pregnancy complications like fetal growth restriction, prematurity and impending rupture. She had an uneventful antenatal pregnancy and underwent elective cesarean section at 38 weeks.

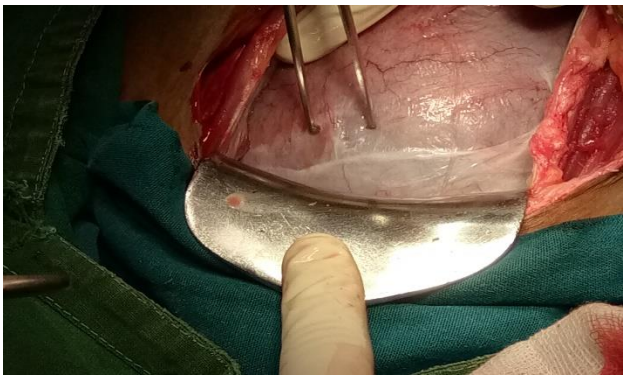

Figure 6: Cesarean section showing a well healed scar.

DISCUSSION

Cesarean scar pregnancy is an extremely rare presentation of ectopic pregnancy. The aim of the management is to prevent the massive haemorrhage and conserve the uterus for further fertility and health and quality of life of woman. So far, various interventions have been proposed, but there is no consensus on the optimal therapeutic protocol for scar ectopic pregnancy. The treatment approach depends on various factors like gestational age, haemodynamic stability, availability of endoscopic expertise, further fertility and feasibility of serial follow-up by serology and imaging.

The possibilities of complications and treatment failure become increasingly significant with diagnoses that are made at a late stage. Use of systemic MTX continues to be of great value in cases of stable patients who wish to preserve their reproductive capacity.[7] Many authors have described use of multiple dose protocols, local resection of the mass, uterine artery embolization and aspirative curettage as possible treatments that can be chosen.[5] However, the literature seems to be pointing towards use of UAE allied with local MTX infusion as a viable alternative for dealing with ectopic pregnancy.[8]

In clinical practice, bilateral uterine arterial chemoembolization has been tried out for scar ectopic pregnancy. Methotrexate is administrated directly into the gestational foci through bilateral uterine arteries followed by injection of occlusive agent which will block the feeding vessel. This causes chemotherapy as well as tissue ischaemia resulting in higher and higher concentration of methotrexate to the gestational foci; hence, more effective embryocide and less systemic toxic effects compared to embolization alone are observed

It has been estimated that once the blood vessel has been embolized, it reopens its course after around two to three weeks, which is advantageous for the ideal of future reproduction.[9] It is important to remember that contraception should be used for at least three months after use of MTX, and patients should be adequately informed about the associated risks, during and after the treatment.[10] Though desired future pregnancy remains a relative contraindication to UAE, successful pregnancy outcomes after UAE have been reported. But all pregnancies after UAE require close monitoring for complications. Obstetric risks after UAE include prematurity, intrauterine growth restriction, abnormal placentation, and increased likelihood of cesarean delivery.[11]

CONCLUSION

In conclusion, although it has been indicated in the literature that UAE with local/ systemic MTX infusion is a promising form of treatment, randomized controlled studies are still required in order to assess the real advantage of the procedure and to better evaluate the associated complications.

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REFERENCES

1. Larsen JV, Solomon MH. Pregnancy in a uterine scar sacculus: an unusual cause of postabortal haemorrhage. S Afr Med J. 1978;53:142-3.
2. Patel MA. Scar ectopic pregnancy. J Obstet Gynecol India. 2015;65(6):372-5.
3. Elson CJ, Salim R, Potdar N, Chetty M, Ross JA, Kirk EJ. Diagnosis and management of ectopic pregnancy. BJOG. 2016;123:15-55.
4. Maymon R, Halperin R, Mendlovic S, Schneider D, Vaknin Z, Herman A, et al. Ectopic pregnancies in Caesarean section scars: the 8 year experience of one medical centre. Hum Reprod. 2004;19:278-84.
5. Rotas MA, Haberman S, Levgur M. Cesarean scar ectopic pregnancies: etiology, diagnosis, and management. Obstet Gynecol. 2006;107:1373-81.
6. Sugawara J, Senoo M, Chisaka H, Yaegashi N, Okamura K. Successful conservative treatment of a cesarean scar pregnancy with uterine artery embolization. Tohoku J Exp Med. 2005;206:261-5.
7. Ash A, Smith A, Maxwell D. Caesarean scar pregnancy. BJOG. 2007;114:253-63.
8. Shufaro Y, Nadjari M. Implantation of a gestational sac in a cesarean section scar. Fertil Steril. 2001;75:1217.
9. Chua GC, Wilsher M, Young MP, Manyonda I, Morgan R, Belli AM. Comparison of particle penetration with nonspherical polyvinyl alcohol versus trisacryl gelatin microspheres in women undergoing premyomectomy uterine artery embolization. Clin Radiol. 2005;60:116-22.
10. Chou MM, Hwang JI, Tseng JJ, Huang YF, Ho ES. Cesarean scar pregnancy: quantitative assessment of uterineneovascularization with 3-dimensional color power Doppler imaging and successful treatment with uterine artery embolization. Am J Obstet Gynecol. 2004;190:866-8.
11. Singh SS, Bordman R, Leyland N. Pregnancy after uterine artery embolization for fibroids. Canadian Fam Physic. 2007 Feb;53(2):293-5.

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