

Rare Case of Scar Ectopic Pregnancy with No Cardiac Activity

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DOI: <https://doi.org/10.52403/ijhsr.20241016>

ABSTRACT

This report is about case of CSP diagnosed at Government General Hospital Nizamabad. A woman of age 32 yrs with obstetric formula G3P2L2 with previous two cesarean section with 6 weeks and 2 days of amenorrhea and UPT positive came with complaints of bleeding per vagina and abdominal pain. On trans abdominal sonography CSP was confirmed. There was no cardiac activity seen and uterus was found to be retroverted. Initially serum HcG levels were <10,000mIU/ ml therefore it was managed medically using systemic Methotrexate followed by uterine evacuation and products of conception were sent to histopathological examination.

Keywords: cesarean scar pregnancy, no cardiac activity, 3rd gravida, retroverted uterus

INTRODUCTION

A cesarean scar pregnancy (CSP) is a rare form of ectopic pregnancy having incidence of 1 in 1800 to 1 in 2214 pregnancies⁽ⁱ⁾. It is implantation of blastocyst stage of embryo into myometrial scar site due to previous cesarean section⁽ⁱⁱ⁾. This provides less stable environment for embryo to grow which can cause maternal morbidity and mortality and loss of foetus⁽ⁱⁱⁱ⁾. It is asymptomatic at initial stage later develops symptoms like bleeding per vagina and abdominal pain. Regular radiological diagnosis during 1st trimester helps to prevent mortality and morbidity caused due to hemorrhage and rupture uterus which can be life threatening^(iv). CSP can be managed by expectant management, medical management using alternate day methotrexate or surgically by laparoscopy, hysteroscopic resection or scar resection^(v). If single layer suturing used to close incision in cesarean section the risk of scar defects is more than compared to double layer closure. This causes increased risk of

scar ectopic pregnancy in subsequent pregnancy following single layer suturing.^(vi)

CASE PRESENTATION

A 32yr old female with G3P2L2 with previous two cesarean sections presented to obstetric and gynecology department at our hospital with complaints of bleeding per vagina and abdominal pain. Previous cesarean section was done due to no progression even after induction of labor. Inter pregnancy interval between 1st and 2nd child was 1 yr and present pregnancy was after 6yrs without any use of contraception. On trans abdominal sonography no significant vascularity made out at the scar site but single intrauterine gestational sac of 12mm * 5.4mm * 9.2mm along with yolk sac and fetal pole but no cardiac activity was seen. CRL was found to be 3mm in lower uterine segment. Uterus was found to be retroverted. The serum Beta HcG was 7775 mIU/ ml. Her CBP, LFT, RFT, RBS, PT, APTT, Serum electrolytes

were normal. Since her Beta HcG was <10000mIU / ml she was managed medically by alternate day systemic Methotrexate. After obtaining informed consent she was administered Tab. Mifepristone 400mg, 12 hr later she was started with alternate day Inj. Methotrexate 50mcg intramuscularly. Inj. Folic acid 50mg intravenously was administered to prevent side effects due to Methotrexate followed administration of Tab. Misoprostol per vaginally and Suction and Evacuation and Scar Excision was done. Prior informed consent was taken to perform tubectomy after counselling her about the risk of scar ectopic in future pregnancies (vii). The products of conception were sent to histopathological examination. After surgery she kept on NBM and intravenous antibiotics were administered and regular follow up of Beta HcG levels was done.

DISCUSSION

Since the rate of cesarean section is increasing, the rate of scar ectopic pregnancy is also increasing. Percentage of Cesarean section in India during 2005-2006 was 8.5% which increased to 23.29% in 2021-2022 with highest % of cesarean section from Telangana state accounting for 54.09%. Most common site of ectopic pregnancy is ampulla region of fallopian tubes (viii). In the above case report increased maternal age and previous two cesarean section are in favour of CSP (ix). The only confirmatory diagnosis is by trans abdominal sonography or trans vaginal sonography. MRI can also be used to confirm diagnosis (x). Exact pathogenesis of CSP is not known however it is believed that implantation of blastocyst onto defective myometrial wall could cause CSP. Scar site generally has decreased blood supply. Since blastocyst is implanted near scar tissue, it might be the reason for no significant vascularity in our case. Due to which there is poor development of embryo and no cardiac activity even at 6weeks and 2days of gestational age.

Ultrasonography criteria for diagnosis of CSP (xi): -

- An empty uterus with a clearly visible endometrium
- An empty cervical canal without a gestational sac
- A gestational sac that shows a double ring with or without cardiac activity in anterior part of uterine isthmus
- Absence or thinning of myometrium at the level of bladder
- Peritrophoblastic or periplacental flow surrounding CSP on Doppler flow

Management of CSP:

- **Hemodynamically stable (xii)**
 - Do serum HcG
 - >10000mIU/ ml - surgical management using hysteroscopic resection or scar resection
 - <10000mIU/ml - administration of Methotrexate systemically or intra amniotically under ultrasonography guidance
- **Hemodynamically unstable (xiii)**

Initial resuscitation is done followed by laparoscopic scar resection or uterine artery embolization.

Diagnosis is confirmed after pelvic examination, serum Beta HcG, transvaginal sonography, trans abdominal sonography. MRI can also be used for diagnosis as it can provide better soft tissue imaging. It can be managed medically using Methotrexate. Mechanism of action Methotrexate is by inhibiting dihydrofolate reductase enzyme which converts DHF to THF, this inhibits DNA synthesis and thereby cell replication. Since folic acid is necessary for division of normal cells it's supplement is given in form of folic acid to prevent the action of Methotrexate on other normal cells. On follow up Beta HcG levels were 7223mIU/ ml after 2 doses of alternate day Methotrexate. Suction and evacuation were done as it is most common procedure used to abort 1st trimester pregnancy and then scar excision was done to prevent further complications. The woman was

tubectomised to prevent further risk of scar ectopic pregnancies after obtaining informed consent.

CONCLUSION

Increasing rate of cesarean section is increasing rate of scar ectopic pregnancy according to the know literature. This can be followed by other complications like placenta accreta^(xiv) due to growth of embryo into myometrial wall, rupture of uterus due to expansion of uterine wall at scar site which is already thinned out, this can lead to massive haemorrhage and death due to hypovolemic shock. This can be prevented by regular radiological examination during 1st trimester and counselling the pregnant women to go for normal vaginal delivery when cesarean section is not indicated. ^(xv)

Declaration by Authors

Acknowledgement: None

Source of Funding: None

Conflict of Interest: The authors declare no conflict of interest.

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How to cite this article: Jahanavi Karne. Rare case of scar ectopic pregnancy with no cardiac activity. *Int J Health Sci Res*. 2024; 14(10):163-166. DOI: [10.52403/ijhsr.20241016](https://doi.org/10.52403/ijhsr.20241016)
