CASE REPORT ON PREFERENTIAL USE OF SURGICAL MANAGEMENT FOR TREATING CESAREAN SCAR PREGNANCY

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CASE REPORT

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ABSTRACT

Cesarean scar pregnancy (CSP) also known as cesarean scar ectopic pregnancy although rare (1 in 1800- 2500 pregnancies) is continually on the rise due to rising cesarean section rate. It contributes to maternal morbidity and mortality due to placenta accreta and uterine rupture. This issue is addressed by early diagnosis and definitive management to enhance quality of life. CSP case of woman with previous two cesarean sections and no alive issue is presented where various management options have been tried leading to ultimate recovery with surgical management.

Author's contributions
Mehwish Ayyaz: Conceptualization, case collection, literature search, drafting
Abida Sajid: Write up and case management
Saba Irshad: Literature and write up

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INTRODUCTION

CSP is a rare phenomenon of implantation of trophoblast into isthmocele / niche (myometrial defect) of previous cesarean scar. CSP can be either type1/endogenous where implantation occurs at scar site and gestational sac grows towards uterine cavity or exogenous/type 2 where gestational sac grows towards bladder. Endogenous variety is associated with high risk of hemorrhage whereas exogenous leads to uterine rupture. The incidence of cesarean scar niche is between 56-84% following an initial cesarean section. 72% of cases occur in women who had 2 or more than two cesarean sections.[1] Risk factors for cesarean niche formation include, incision through cervical tissue, cesarean section at advanced cervical dilatation and wound ischemia- inadequate wound healing, single layer myometrial closure and retroflexed position of uterus. It can be asymptomatic, incidental finding on scan, painless vaginal bleeding, abdominal pain or rarely present as hemodynamic instability due to profuse bleeding or uterine rupture.[2]

The current case report aims to provide the treatment to reduce maternal morbidity, prevent recurrence and preserve fertility. The report's main value lies in demonstrating stepwise management, failure of conservative approaches, justification for surgical intervention, favorable recovery and fertility preservation.

Case Presentation

This case report, prepared with the patient's informed consent, highlights a successful and educational approach to managing a cesarean scar pregnancy. A 24-year-old female (P2A0) with a history of two previous cesarean deliveries presented at 8 weeks of gestation with mild vaginal spotting. Both previous pregnancies ended in intrauterine fetal demise at 8 months due to preeclampsia and placental abruption. Clinical examination was unremarkable, with a healed Pfannenstiel scar.

Diagnostic assessments

Transvaginal sonography revealed a cystic area measuring 2.2 × 2.2 cm in the lower uterine segment, absence of sliding sign with marked blood flow, suggestive of cesarean scar pregnancy. The sac was implanted at the scar site, with a thin myometrial layer separating it from the bladder. The baseline serum β-HCG was 2019.61 IU/L.

Figure 1: Products of conception removed at hysterotomy

Therapeutic intervention

Initial management included dilation and curettage, yielding scanty curetting's. Follow-up β-HCG after 48 hours was 946 IU/L. Methotrexate 50 mg/m² IM was administered, followed by folinic acid. However, the gestational sac persisted on ultrasound and β-HCG declined only minimally to 928 IU/L. Due to treatment failure, exploratory laparotomy was performed. Dense adhesions were noted at the scar site. The gestational sac was deeply embedded and removed via hysterotomy (Figure 1) Postoperative

recovery was uneventful. Final TVS showed no residual products, and β-HCG declined to 4 IU/L after one week.

Table -1: Serial β-hCG Levels and Ultrasound Findings During the Management of Cesarean Scar Pregnancy

Date	Intervention	Serum BHCG	Ultrasound
03-06-24	At presentation	2019.61 IU/L	2.2x2.2 cm gestational sac in lower uterine cavity with marked blood flow and absent sliding sign
04-06-24	Dilatation and Curettage(D+C)	-	-
06-06-24	Injection Methotrexate	946 IU/L	-
08-06-24	48 hours after injection Methotrexate	928 IU/L	Same scan findings
10-06-24	1 week after Injection Methotrexate	553 IU/L	Same scan findings
11-06-24	Exploratory laparotomy	-	-
18-06-24	1 week after exploratory laparotomy	4 IU/L	No gestational sac in endometrial cavity

DISCUSSION

Cesarean scar pregnancy is mainly diagnosed by transvaginal ultrasound. Main criteria for diagnosing csp are following: Empty uterine cavity or cervical canal, placenta or gestational sac embedded in the cesarean scar, a triangular,round or oval gestational sac filling the niche of caesarean scar, thin or absent myometrial layer between gestational sac and urinary bladder, absence of sliding sign that shows obliteration of pouch of douglas) and marked peritrophoblastic Color Doppler flow around gestational sac.[3] MRI is the second line of investigation. B-HCG is done to establish a baseline value before starting treatment. The differential diagnosis include miscarriage, trophoblastic tumors, ectopic pregnancy, low implanted intrauterine pregnancy and early placenta previa and accreta. The complications of CSP include placenta previa/accreta, uterine rupture, massive haemorrage and increased maternal morbidity and mortality.[4]

Various factors influence management choices: Patient factors (symptoms,fertility wish,compliance with follow up,response to initial treatment) Cesarean scar pregnancy factors (size and type of csp, myometrial thickness) and facilities (interventional radiology, surgical facilities,monitoring facilities).[5] The medical management includes injection methotrexate 50mg/m^2 as intramuscular injection, can be given locally into gestational sac under ultrasound guidance. This is more effective method. Side effects are stomatitis,

GIT upset, nephrotoxic, hepatotoxic, alopecia, pancytopenia and bone marrow suppression. The management options are either surgical or local. Surgical options include dilatation and surgical evacuation, hysteroscopic resection, vaginal excision of sac, open or laparoscopic excision and hysterotomy. Local options include injection of methotrexate into gestational sac and uterine artery embolisation.[6]

In this case both methotrexate and dilatation and curettage were not successful because gestational sac was deeply embedded and B-HCG also showed little decline,so decision to definitive management via hysterotomy and removal of pregnancy tissue was undertaken which at once led to complete recovery. This surgical option should be used preferentially in management of CSP.[7,8] The risk of recurrence of CSP is 18% in subsequent pregnancy while 82% will have a normal intrauterine pregnancy next time. Primary prevention is to reduce the rate of primary cesarean sections.[7]

CONCLUSION

Cesarean scar pregnancies are underdiagnosed and underreported,hospitals should have clear protocol for early diagnosis and management to improve patient satisfaction. Early recourse to surgical management is preferable.

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