



ORIGINAL RESEARCH PAPER

Obstetrics & Gynaecology

CESAREAN SCAR PREGNANCY AND DIFFERENT MODES OF MANAGEMENT: A CASE SERIES AT TERTIARY HOSPITAL

KEY WORDS: Cesarian scar pregnancy, Ectopic pregnancy, B-hcg, Methotrexate

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ABSTRACT

With the rise of cesarian surgery there is also a rise of cesarian scar pregnancy and subsequently its complications. Given the risk of life-threatening complications cesarian scar pregnancy which continues to be a menace, it is necessary to detect early which is possible with the help transvaginal ultrasonography at 7.5+/- 2.5 weeks intrauterine. This followed by early medical intervention or surgical intervention can reduce the risk of complications.

INTRODUCTION:

Cesarean scar pregnancy (CSP) is an ectopic pregnancy implanted in the myometrium at the site of a previous cesarean section scar[1].

National Family Health Survey 2014 to 2015 reveals that rate of cesarean surgery has doubled over the last decade from 8.5% in 2005 to 17.2% in 2015. Thus, the complications like CSP have also been on the rise. Incidence of CSP has been reported to be 1 in 1,800 to 1 in 2,200 pregnancies. With the advent of transvaginal ultrasonography, early detection is possible, mean gestational age at diagnosis being 7.5+/- 2.5 weeks with interval between last cesarean section and CSP being 6 months to 12 years[2]. Ectopic pregnancy itself complicates approximately 2% of all pregnancies [3].

Given the risk of life-threatening complications, management of caesarean scar pregnancy is another challenge for gynaecologists. Early treatment has benefits to prevent maternal complications, as caesarean scar pregnancy is a precursor of abnormally adherent placentae in the second and third trimesters of pregnancy.

Medical treatment including systemic or local methotrexate (MTX) with or without uterine curettage (D and C), and surgical treatment including uterine artery embolization (UAE) or hysteroscopy in conjunction with or without laparoscopy or other different combinations are commonly used in clinical practices worldwide. However, to date there is no agreement on the most optimal management of caesarean scar pregnancy, due to the limited number of clinical studies (including clinical trials) with a large sample size. The effectiveness of medical vs. surgical treatments on caesarean scar pregnancy is controversial.[4]

We present a case series of 18 cases with different methods of management of CSP.

METHODOLOGY

A Retrospective records review of the cesarean scar pregnancy admitted in the Jawaharlal Nehru Institute of Medical Sciences, Department of Obstetrics and Gynecology from July 2020 to June 2022.

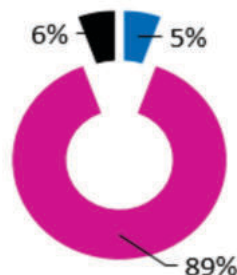
RESULTS AND OBSERVATIONS

This is a retrospective case series of 18 patients with CSP who reported to the department of Obstetrics and Gynecology between July 2020 to June 2022. Patients underwent both medical and surgical treatment.

Frequency distribution of scar pregnancy cases according to age.

Serial	Age of CSP	No. of cases	%
1	20-29	1	5.55%
2	30-39	16	88.88%
3	40-49	1	5.55%
Total		18	100%

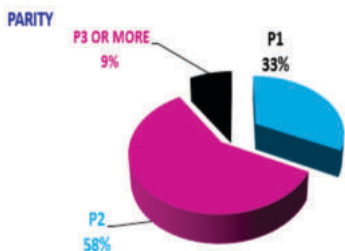
■ 20-29 ■ 30-39 ■ 40-49



The maternal age was between 29-40 years, of which 16 (88.8%) patients were in the age group of 30-39 as shown in table 1.

Frequency distribution of scar pregnancy cases according to parity.

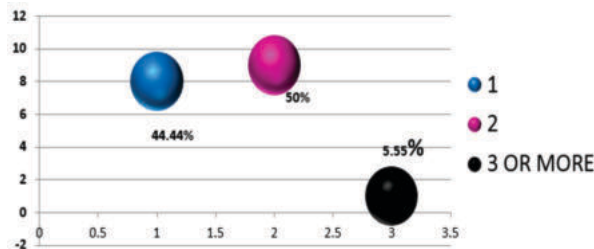
Serial no.	Parity among CSP	No. of cases	%
1	1 parity	5	27.77%
2	2 parity	9	50.00%
3	3 and more	4	22.22%
Total		18	100%



9 patients were para 2 (50%), 5 patients were para 1 (27.77%), and 4 patients were para 3 or more (22.22%).

Frequency distribution of scar pregnancy cases according to number of previous cesarean section.

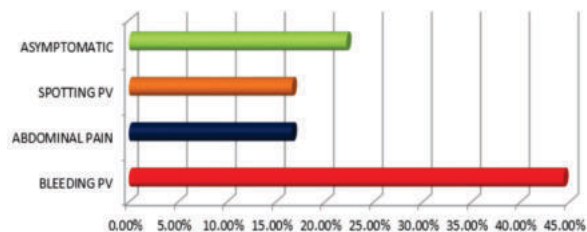
Serial	No. of previous CS	No. of cases	%
1	Once CS	8	44.44%
2	Twice CS	9	50%
3	3 and more	1	5.55%
Total		18	100%



9 patients (50%) had two previous cesarean section, 8 patients had one previous cesarean section (44.44%), and one patient had three previous cesarean section (5.55%).

Frequency distribution of scar pregnancy cases according to presenting signs and symptoms.

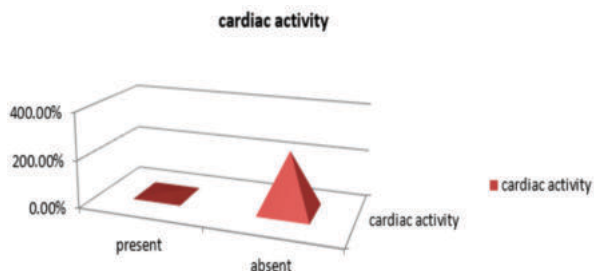
Serial	Presenting signs and symptoms	No. of cases	%
1	Bleeding PV	8	44.44%
2	Abdominal pain	3	16.66%
3	Spotting PV	3	16.66%
4	Asymptomatic	4	22.22%
Total		18	100%



The most common presenting complaint was bleeding PV seen in 8 patients (44.44%), 3 (16.66%) patients presented with abdominal pain, 3 (16.66%) patients presented with spotting PV and 4 (22.22%) patients were asymptomatic.

Frequency distribution of scar pregnancy cases according to Cardiac activity:

Serial	Cardiac activity	No. of cases	%
1.	present	1	6.6%
2.	absent	17	94.4%



Gestational age by with LMP was between 5-13 weeks and gestational age estimated by USG was between 5-9 weeks. Cardiac activity was absent in all except in one patient.

Frequency distribution of scar pregnancy cases according to diagnosis at the time of admission:

Serial	Diagnosis at the time of admission	No. of cases	%
1.	Intrauterine pregnancy	4	22.22%
2.	Incomplete abortion	4	22.22%
3.	Cesarean scar pregnancy	10	55.55%



Out of 18 patients 4 (22.22%) patients were misdiagnosed as incomplete abortion and were referred to our hospital. 4 (22.22%) patients were diagnosed as intrauterine pregnancy. Rest 10 (55.55%) cases were diagnosed as CSP at admission.

History at the time of examination:

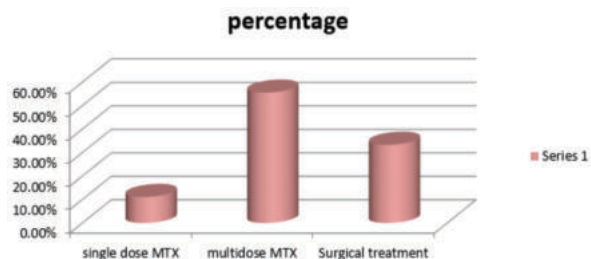
5 (27.77%) patients had history of MTP intake and 2 (11.11%) patients had history of DnE before coming to our hospital.

Pre treatment B-hcg levels:

The highest pre treatment B-hcg was 1,07,000 mIU/ml while the lowest was 49.1 mIU/ml.

Frequency distribution of scar pregnancy cases according to diagnosis at the time of admission:

Serial	Type of treatment given	No. of cases	%
1.	Single dose methotrexate	2	11.11%
2.	Multidose methotrexate	10	55.55%
3.	Surgical management	6	33.33%



Single dose of systemic methotrexate as a initial management was given for 2 patients which was followed by secondary management with tab misoprost 200 MCG twice daily for 7 days due to USG showing RPOC. Multidose Rescue regimen of systemic methotrexate was given for 10 patients. 8 doses of systemic methotrexate was given to 1 patient which was the maximum doses given in our study. This patient landed up in Hysterectomy because patient developed heavy bleeding PV.

In 12 patients we had used tab misoprost 200 MCG twice daily sub lingually for 7 days as secondary management after systemic methotrexate as their USG showing either RPOC, increase vascularity or increase in POG. Among these 12 patients tab mifepristone 400 mg was used prior to intake of tab. Misoprost.

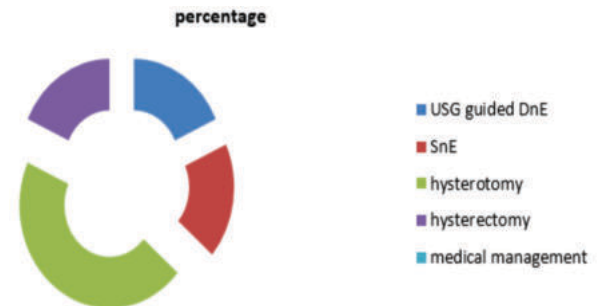
Frequency distribution of scar pregnancy cases according to surgical management:

Serial	Type of surgical treatment given	No. of cases	%
1.	USG guided DnE	1	6.66%
2.	SnE	1	6.66%
3.	hysterotomy	3	16.66%
4.	Hysterectomy	1	6.66%

USG guided DnE was done for 1 patient (6.66%) as her USG showed increased vascularity around G sac even after 7 doses of systemic methotrexate and multiple doses of misoprost ingestion.

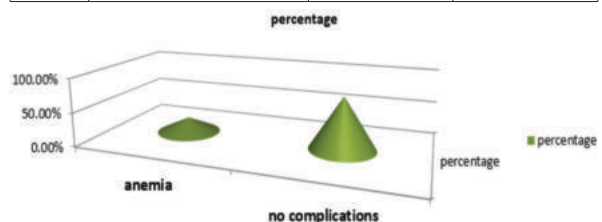
Only for 1 patient (6.66%) we had directly done SnE without prior systemic methotrexate because patient came with

heavy bleeding PV and had history of MTP intake. For 3 patients (16.66%) hysterotomy was done after systemic methotrexate. Hysterectomy was done only for one case (6.66%) because patient developed heavy bleeding PV.



Frequency distribution of scar pregnancy cases according to type of complications:

Serial	Type of complication	No. of cases	%
1.	anemia	4	22.22%
2.	No complication	14	77.77%



4 patients (22.22%) developed anemia as a complication due to bleeding PV which was treated by PRBC transfusion. None of the patients in our study had serious complications needing ICU admission or leading to maternal mortality.

Time of resolution of B-hcg was between 17 to 70 days. 14 (77.77%) patients in our study were discharged after systemic methotrexate and were followed up weekly with USG and B-hcg reports till resolution. All the patients were advised for family planning during discharge.

DISCUSSION

Our study showed that the main presenting feature is the bleeding PV in the first trimester, yet there are considerable number of the cases who can present asymptotically and can only be discovered by routine examination, that emphasize a fact that scar pregnancy needs to be diagnosed on sold based criteria with high sensitivity and specificity tool, such finding is in parallel with other studies like that conducted by Isaac B et al⁵.

In our current study, we did not see any severe complications after treatments. Only one patients had hysterectomy, four patients (22.22%) needed a blood transfusion as they developed anemia.. The median time for the menstrual cycle to re-establish was 35days (ranged from 28to 75 days), which is normal. The levels of β-hCG quickly declined to normal levels ranging from 17 to 70 days which are significant with the study done by Shen F et al⁴.

In the hemodynamically stable patient, medical or surgical options for management may be considered. The primary objective is to eliminate the gestational sac and preserve the patient's fertility (6).

Currently, expectant, medical and surgical treatment is recommended by RCOG/AEPU Green-top Guideline for selective abortion (7). Non-surgical management is a more common option in western countries such as the United States of America (8, 9). In addition, a recent study reported that the necessity of UAE is low (10), suggesting that the UAE may be overestimated in clinical practice.

Our case series highlights the importance of multi disciplinary management and the need for guidelines based on the best available literature to manage a rare, potentially life-threatening condition that presents a diagnostic challenge to clinicians in maternity clinics. It also emphasized the importance of entertaining a high index of suspicion when faced with atypical presentations in complications during the first trimester of pregnancy. Due to the risk of late complications, such as AVM formation and recurrent PV bleeding, in patients treated for CSPs, close vigilance must be maintained and emphasis on compliance strictly enforced long after the initial postoperative period in these patients.

Therefore, in our hospital, the medical management is the first option of treatment for caesarean scar pregnancy. There is no specific guideline for treatment of CSP.

Each patient is unique and treatment should be done according to the presentation and clinical condition of the patient.

CONCLUSION:

CSP is a rare potentially life threatening ectopic pregnancy. The diagnosis of CSP can be challenging, and awareness of the condition is needed, particularly as the incidence is increasing. Treatment of CSP is very individualized, either by surgical or medical approach. High degree of suspicion, correct interpretation, early diagnosis and adequate treatment can save the mother from life threatening complications and also preserve the future fertility. Post treatment surveillance should include serial clinical examinations, serum beta hcg measurements repeat ultrasound examinations as indicated.

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