# Evaluation of treatment modalities of cesarean scar pregnancy

Syeda Ummay Kulsum[1*], Morshida Begum[2], Sabera Khatun[3], Tanzila Halim[4], Sharmin Zaman Khan[5], Tasnova Elahi Meem[6]

ARTICLE INFO

**Received:** 5 Mar 2026
**Accepted:** 8 Mar 2026
**Published Online:** 17 Mar 2026

DOI: 10.5281/zenodo.19318132

Volume: 9, Number: 1, Page: 156-159

e-ISSN: 2789-5912
ISSN: 2617-0817

*Corresponding author

ABSTRACT

**Background:** Cesarean scar pregnancy (CSP) occurs when a gestational sac implants within the myometrium or fibrous tissue of a previous cesarean section scar. Management of CSP is challenging as there are no specific guidelines and management should be individualized. Aim of the study: This study aimed to evaluate different treatment modalities for diagnosed CSP cases. **Methods & Materials:** This retrospective observational study was done at the Obstetrics & Gynecology Department, Bangladesh Medical University (BMU), and Central Hospital, Dhaka, Bangladesh from June 2023 June 2025. Patients were grouped by gestational age, <7.5 weeks (n=10) and >7.5 weeks (n=7), managed according to unit protocol, and treatment modality was recorded. Serum β-hCG was measured pre-treatment and on day 7 to assess percentage decline, with ultrasound follow-up at 15 days and clinical follow-up up to 6 weeks. **Results**: Among 17 cesarean scar pregnancy cases, 10 were <7.5 weeks and 7 were >7.5 weeks. Mean age, symptoms, number of prior cesarean deliveries, and abortion history were similar between groups, with nearly half asymptomatic and bleeding the commonest symptom, and all comparisons were non-significant (p=0.93). Methotrexate plus folinic acid was used in 47.1% overall, while laparotomy with excision of the gestational sac was the most frequent procedure (35.3%), and other modalities were used in small proportions without significant group differences (p=0.42). Pre-treatment β-hCG was comparable between groups, and it declined by day 7 in both; the mean percentage fall was higher in the <7.5-week group (88.87% vs 82.56%), but remained non-significant (p>0.05). **Conclusion**: Early diagnosis is very important to reducing complication and also in successful management. Medical management may be considered first for hemodynamically stable patients, whereas invasive procedures should be reserved for active bleeding, suspected rupture, high-risk features, or failed conservative therapy.

***Keywords:*** *Cesarean scar pregnancy, Methotrexate, and Previous caesarean scar, β-hCG.*

1. *Associate Professor, Obstetrics & Gynecology Department, Bangladesh Medical University (BMU), Dhaka, Bangladesh (ORCID: 0009-0006-4991-6249)*
2. *Associate Professor, Radiology Department, Bangladesh Medical University (BMU), Dhaka, Bangladesh*
3. *Professor, Founder and Ex-chairman, Gynecology Oncology Department, Bangladesh Medical University (BMU), Dhaka, Bangladesh*
4. *Associate Professor, Obstetrics & Gynecology Department, Bangladesh Medical University (BMU), Dhaka, Bangladesh*
5. *Assistant Professor, Community Medicine Department, Green Life Medical College, Dhaka, Bangladesh*
6. *Intern doctor, Holy family Red Crescent Medical College, Dhaka, Bangladesh*

## INTRODUCTION

Cesarean scar pregnancy (CSP) is a distinct form of ectopic implantation in which the gestational sac embeds within the myometrial defect, or "niche", of a previous lower-segment cesarean incision, most often diagnosed in the first trimester by transvaginal ultrasonography (TVS) with supportive Doppler features [1,2]. Although rare, CSP is being encountered more frequently as cesarean delivery rates rise globally and regionally [1,3]. Contemporary series estimate an overall incidence around 1 in 2,000 pregnancies, and the burden is expected to increase in populations with high cesarean prevalence [1,2]. In South Asia, the rapid expansion of facility births and cesarean delivery, including Bangladesh, enlarges the pool at risk, with population studies showing steep upward trends over recent decades [3,4]. In this context, early recognition and timely, fertility-preserving management are increasingly relevant to routine gynecologic and obstetric practice.

CSP carries disproportionate clinical importance because it can progress while remaining unstable, with risks of major hemorrhage, uterine rupture, need for hysterectomy, and downstream placenta accreta spectrum if a pregnancy continues or is managed late [1,2,5]. Management is therefore usually directed toward early termination and scar site control while minimizing morbidity and preserving future fertility when desired. However, an internationally accepted "best" strategy has not been established, and practice varies by gestational age, viability, myometrial thickness, vascularity, β-human chorionic gonadotropin (β-hCG) level, clinician expertise, and availability of interventional radiology, hysteroscopy, and minimally invasive surgery [2,6]. Ultrasound-based grading and classification systems have been proposed to link implantation depth and vascularity with treatment selection, but cutoff thresholds remain inconsistent across studies [6]. Reported approaches include systemic or local methotrexate (MTX) regimens, suction curettage with adjunct tamponade, hysteroscopic resection, uterine artery embolization (UAE) with or without subsequent evacuation, laparoscopic or transvaginal scar excision and repair, laparotomy, and, in selected unstable cases, hysterectomy [7-10]. Large multicenter series suggest higher primary success with hysteroscopy-assisted evacuation than curettage alone, and limited added value of MTX pre-treatment in selected endogenic CSP, yet most comparative data remain heterogeneous with variable definitions of success and inconsistent reporting of bleeding and re-intervention [7,9,11].

Bangladesh-specific data describing real-world treatment patterns and short-term response metrics for CSP are limited, despite increasing cesarean exposure and resource variability [3]. An observational evaluation within a tertiary referral center can help contextualize the performance, safety signals, and follow-up needs of commonly used modalities under routine care. Therefore, this study aimed to evaluate different treatment modalities for diagnosed CSP cases.

## METHODS & MATERIALS

This retrospective observational study was conducted in the Department of Obstetrics and Gynecology, Bangladesh Medical University (BMU) and Central Hospital,

BDJOURNALS.ORG Copyright © 2026 The Planet. Published by Sher-E-Bangla Medical College, Barishal, Bangladesh. This is an open access article under the CC BY license (http://creativecommons.org/licenses/by/4.0/).

Dhaka, Bangladesh. All consecutive patients diagnosed with cesarean scar pregnancy (CSP) during the study period June 2023 June 2025, were evaluated and treated. Diagnosis was established by transvaginal ultrasonography (TVS) and also β-hCG in patients with a prior lower segment cesarean section, supported by clinical assessment and imaging features consistent with CSP. Gestational age was calculated from last menstrual period and/or early ultrasonography, and participants were stratified into two groups for analysis: Group A (n=10), gestational age <7.5 weeks, and Group B (n=7), gestational age >7.5 weeks. Baseline variables included age, presenting symptoms, number of previous cesarean deliveries, and abortion history. Treatment modality was documented as medical management with methotrexate plus folinic acid rescue, surgical approaches (dilatation and curettage with or without adjunct procedures, hysteroscopic resection, laparotomy with excision of gestational sac, hysterectomy), or conservative management without surgery. Serum β-human chorionic gonadotropin (β-HCG) was measured pre-treatment and post-treatment, with the post-treatment mean β-HCG specifically recorded on day 7; percentage decline was calculated to assess biochemical response. Follow-up included repeat TVS at 15 days to assess resolution, and patients were monitored for up to 6 weeks to document clinical outcome and any further interventions. Data were collected from the hospital records and analyzed using descriptive statistics in SPSS (v-26.0). Group comparisons used chi-square or Fisher's exact test for categorical variables and Student's t-test for continuous variables, with $p<0.05$ considered statistically significant.

## RESULTS

Among 17 cesarean scar pregnancy cases, 10 were in Group A (<7.5 weeks) and 7 in Group B (>7.5 weeks). Mean age was similar between groups, 28.8 years in Group A versus 30.5 years in Group B (overall mean 29.5 years), with no statistically significant difference (p=0.51). Nearly half were asymptomatic (47.1%), while bleeding was the most common symptom (29.4%), followed by pain alone (11.8%), and pain with bleeding (11.8%), with comparable distributions across gestational age groups (p=0.93). Most had one previous lower segment cesarean section (70.6%) overall, and 29.4% had two cesarean sections, again without group difference (p=1.00). Prior abortion history was absent in 52.9%, one abortion occurred in 35.3%, and two abortions in 11.8%, with no significant group association (p=0.28). Medical management with MTX plus folinic acid was used in 47.1% overall, more frequently in Group A (60.0%) than Group B (28.6%), but the difference was not significant (p=0.34) *Table I*.

**Table I**
Baseline demographic, clinical, and obstetric characteristics of cesarean scar pregnancy cases by gestational age group (*n* = 17).

| Variables | Category | Total (n = 17), n (%) | Gestational age | | p-value |
|---|---|---|---|---|---|
| | | | Group-A (<7.5 w), n = 10, n (%) | Group-B (>7.5 w), n = 7, n (%) | |
| Age (year) | Mean ± SD | 29.5 ± 6.1 | 28.8 ± 5.25 | 30.5 ± 4.8 | 0.51 |
| Symptoms | Asymptomatic | 8 (47.1) | 5 (50.0) | 3 (42.9) | 0.93 |
| | Bleeding | 5 (29.4) | 3 (30.0) | 2 (28.6) | |
| | Pain | 2 (11.8) | 1 (10.0) | 1 (14.3) | |
| | Pain with bleeding | 2 (11.8) | 1 (10.0) | 1 (14.3) | |
| Previous LSCS | 1 | 12 (70.6) | 7 (70.0) | 5 (71.4) | 1.00 |
| | 2 | 5 (29.4) | 3 (30.0) | 2 (28.6) | |
| Abortion | 0 | 9 (52.9) | 6 (60.0) | 3 (42.9) | 0.28 |
| | 1 | 6 (35.3) | 4 (40.0) | 2 (28.6) | |
| | 2 | 2 (11.8) | 0 (0.0) | 2 (28.6) | |
| MTX + folinic acid | Yes | 8 (47.1) | 6 (60.0) | 2 (28.6) | 0.34 |
| | No | 9 (52.9) | 4 (40.0) | 5 (71.4) | |

Treatment approaches varied across the 17 patients, with laparotomy plus excision of the gestational sac being the most frequent modality, used in 35.3% on cases, 30.0% in Group A and 42.9% in Group B. Simple D and C was performed in 17.6% overall, and no surgery was also reported in 17.6%, occurring only in Group A (30.0% in Group A, 0.0% in Group B), with overall comparisons remaining non-significant. Hysterectomy was performed in 11.8% overall, while D and C with ligation of the descending cervical artery, D and C followed by hysterectomy, and hysteroscopic resection were each used in 5.9% of cases, each showing small numbers and no statistically significant difference between gestational age groups (p=0.424) *Table II*.

**Table II**
Distribution of treatment modalities for cesarean scar pregnancy by gestational age group.

| Treatment | Total (n = 17), n (%) | Gestational age | | p-value |
|---|---|---|---|---|
| | | Group-A (<7.5 w), n = 10, n (%) | Group-B (>7.5 w), n = 7, n (%) | |
| D and C (simple) | 3 (17.6) | 2 (20.0) | 1 (14.3) | 0.42 |
| D and C and ligation of descending cervical artery | 1 (5.9) | 1 (10.0) | 0 (0.0) | |
| D and C followed by hysterectomy | 1 (5.9) | 0 (0.0) | 1 (14.3) | |
| Laparotomy followed by excision of scar pregnancy | 6 (35.3) | 3 (30.0) | 3 (42.9) | |
| Hysterectomy | 2 (11.8) | 1 (10.0) | 1 (14.3) | |
| Hysteroscopic resection of scar pregnancy | 1 (5.9) | 0 (0.0) | 1 (14.3) | |
| No surgery | 3 (17.6) | 3 (30.0) | 0 (0.0) | |

Mean pre-treatment β-hCG was comparable between groups, 22,130.5 in Group A versus 21,608.78 in Group B (p>0.05). After treatment, mean β-hCG declined to 2,405.05 in Group A and 3,859.56 in Group B. The mean percentage fall in β-hCG was higher in Group A (88.87%) than Group B (82.56%), with no statistically significant difference reported (p>0.05) *Table III*.

**Table III**
Serum β-hCG response before and after treatment in cesarean scar pregnancy by gestational age group.

| Variables | Gestational age | | p-value |
|---|---|---|---|
| | Group-A (<7.5 w), n=10 | Group-B (>7.5 w), n=7 | |
| Pre-treatment β-HCG (Mean) | 21608.78 | 22130.5 | |
| Post-treatment β-HCG (Mean) | 2405.05 | 3859.56 | >0.05 |
| % Fall in β-HCG | 88.87 | 82.56 | |

## DISCUSSION

Cesarean scar pregnancy (CSP) remains an uncommon but potentially catastrophic form of ectopic implantation, and its clinical importance is increasing in parallel with rising cesarean delivery rates. In this study of 17 CSP cases, the age ranging from 23 to 34 years (mean age 29.5 years), aligning with the reproductive age profile reported across contemporary CSP series and reviews [12-14]. Gestational age range was ranged from 4 week 5 days to 14 weeks. Vaginal bleeding is frequently described as the most common presenting symptom in CSP, ranging from light spotting to profuse bleeding with hemodynamic compromise if not treated promptly. In contrast, the most frequent presentation in our series was absence of symptoms, observed in 47.1% of women, suggesting that a substantial proportion were detected through early imaging rather than symptom-driven presentation. This pattern is comparable to prior reports by Maymon et al. and Lorena et al., where 36.5% and 30.4% of cases, respectively, were asymptomatic [12,15,16]. Per-vaginal bleeding was the second most common presentation in our study (29.4%), consistent with Lorena et al., who also highlighted bleeding as a dominant presenting feature in their case series [15]. Clinically, this reinforces two simultaneous realities: CSP should remain high on the differential when bleeding occurs in early pregnancy after cesarean delivery, and equally, a “well” patient may still harbor a high-risk implantation, emphasizing the value of early transvaginal assessment in women with prior cesarean section.

All women in our study had a history of lower-segment cesarean section (LSCS), most commonly one previous cesarean (70.6%), with the remainder having two prior cesareans (29.4%), broadly similar to patterns described by Kaliamoorthi et al. [12]. Importantly, our distribution illustrates that CSP can occur even after a single cesarean delivery, and while prior uterine surgery is the key risk substrate, the “low cesarean count” does not equate to “low CSP risk” in an individual patient. For diagnosis, transvaginal ultrasonography remains the principal, cost-effective modality, with reported sensitivity around 84% [17]. When sonographic criteria are equivocal, MRI can be used as a secondary tool, and diagnostic confidence can be further strengthened by color and power Doppler to characterize peri trophoblastic vascularity and associated indices. In our study, transvaginal ultrasonography confirmed CSP in 16 of 17 cases (94.1%), exceeding the sensitivity reported by Kaliamoorthi et al. and Rotas et al. (85% and 84.6%, respectively) [12,18], a difference that may reflect earlier gestational presentation, operator expertise, and systematic use of transvaginal techniques in a high-suspicion population. Cesarean scar pregnancy is often misdiagnosed either as cervical pregnancy or spontaneous abortion in progress [19,20]. Previous studies of 45 patients with scar pregnancies were reported; 21 were initially wrongly diagnosed as spontaneous abortion or cervicocisthmic pregnancy. In our study, we found 3 out of 17 cases were initially misdiagnosed as an incomplete abortion but finally, they were diagnosed as scar ectopic pregnancy using TVS. Management in our series was intentionally individualized and therefore heterogeneous, with laparotomy plus excision of the scar pregnancy as the most frequent modality overall (35.3%), followed by D&C (17.6%), and hysterectomy required in 4 cases (23.5%) due to uterine rupture and torrential bleeding, with blood transfusion needed in these unstable presentations. This plurality of practice mirrors the wider literature, where systematic reviews consistently demonstrate that no single approach is universally optimal, and treatment selection depends on gestational age, CSP type, vascularity, residual myometrial thickness, hemodynamic status, local expertise, and fertility intent [21-24]. Aggregate evidence suggests high primary success with minimally invasive operative strategies and image-guided uterine evacuation approaches, whereas systemic methotrexate (MTX) alone is associated with lower primary success and more frequent need for additional interventions. In the 2024 meta-analysis by Alameddine et al., successful resolution after primary treatment was reported around 86% with ultrasound-guided suction curettage, 90% with hysteroscopy, 96% with laparoscopy, versus about 72% with systemic MTX [11]. In line with this, contemporary expert recommendations caution against sharp curettage alone, and generally favor ultrasound-guided vacuum aspiration or operative resection when feasible, with intragestational MTX preferred over systemic MTX when medical therapy is selected [25,26].

Gestational age stratification in our study demonstrated clinically meaningful, although statistically non-significant, trends that were directionally consistent with published experience. MTX plus folinic acid was used more often in earlier gestations (<7.5 weeks, 60.0%) than later gestations (28.6%), while more invasive approaches, including laparotomy and hysterectomy, were proportionally higher beyond 7.5 weeks. This aligns with broader datasets indicating that later gestational age at diagnosis increases procedural complexity and hemorrhage risk, and reduces the feasibility of simple evacuation-only pathways [27]. Our β-hCG kinetics also supported this trajectory, with a greater proportional decline in earlier gestations (88.87% vs 82.56%), consistent with the concept that lower trophoblastic burden and earlier intervention shorten biochemical resolution [12,23-25]. Evidence on MTX further underscores the need for careful candidate selection, since systemic MTX performs better at earlier gestations and lower β-hCG thresholds, while higher β-hCG and larger sac dimensions are associated with reduced success and higher rates of adjunctive procedures [28-30].

## LIMITATION

The primary limitation of this study is that vascularity and cesarean scar pregnancy (CSP) subtype were not assessed during the ultrasound examination. Additionally, the small sample size, which reflects the low incidence of CSP, may limit the generalizability of the findings.

## CONCLUSION

Early diagnosis is feasible with transvaginal ultrasonography, ideally complemented by color, or power Doppler to assess implantation site vascularity and guide risk stratification. Although no single treatment is universally established, we

suggest medical management as the initial approach for carefully selected, hemodynamically stable patients, with close clinical and sonographic monitoring. Invasive interventions, including, laparotomy with excision of scar pregnancy, uterine artery embolization, or hysterectomy or ligation of the descending cervical artery, should be reserved for patients with active heavy bleeding, suspected rupture, failed conservative therapy, or high-risk anatomical features. In our experience, β-hCG trends are useful for follow-up but should not be the sole determinant of treatment selection. Standardized diagnostic criteria, coupled with a structured management and follow-up protocol, can improve uterine preservation, reduce hemorrhagic complications, and support safer, timely care for this challenging form of ectopic pregnancy.

## FUNDING

No funding sources

## CONFLICT OF INTEREST

None declared

## REFERENCES


1. Hameed MS, Wright A, Chern BS. Cesarean scar pregnancy: current understanding and treatment including role of minimally invasive surgical techniques. Gynecology and Minimally Invasive Therapy. 2023 Apr 1;12(2):64-71.
2. Lin Y, Xiong C, Dong C, Yu J. Approaches in the treatment of cesarean scar pregnancy and risk factors for intraoperative hemorrhage: a retrospective study. Frontiers in Medicine. 2021 Jun 24;8:682368.
3. Haider MR, Rahman MM, Moinuddin M, Rahman AE, Ahmed S, Khan MM. Ever-increasing Caesarean section and its economic burden in Bangladesh. PloS one. 2018 Dec 10;13(12): e0208623.
4. Rana MS, Mazumder S, Khan MT, Khan MM, Rahman MM. Trends and determinants of caesarean section in South Asian countries: Bangladesh, Nepal, and Pakistan. Plos one. 2024 Dec 5;19(12): e0311082.
5. Valasoulis G, Magaliou I, Koufidis D, Garas A, Daponte A. Caesarean scar pregnancy: a case report and a literature review. Medicina. 2022 May 30;58(6):740.
6. Lin SY, Hsieh CJ, Tu YA, Li YP, Lee CN, Hsu WW, Shih JC. New ultrasound grading system for cesarean scar pregnancy and its implications for management strategies: An observational cohort study. PloS one. 2018 Aug 9;13(8):e0202020.
7. Wang S, Beejadhursing R, Ma X, Li Y. Management of Caesarean scar pregnancy with or without methotrexate before curettage: human chorionic gonadotropin trends and patient outcomes. BMC pregnancy and childbirth. 2018 Jul 4;18(1):289.
8. Xiao Z, Cheng D, Chen J, Yang J, Xu W, Xie Q. The effects of methotrexate and uterine arterial embolization in patients with cesarean scar pregnancy: a retrospective case–control study. Medicine. 2019 Mar 1;98(11):e14913.
9. Qu W, Li H, Zhang T, Zhang Y, Ban Y, Li N, Jiang J, Xie J, Shi W, Hao Y, Li R. Comparison of different treatment strategies in the management of endogenic caesarean scar pregnancy: a multicentre retrospective study. BMC Pregnancy and Childbirth. 2022 May 12;22(1):404.
10. El Sabbagh A, Sayour I, Sleiman Z, Centini G, Lazzeri L, Giorgi M, Zupi E, Habib N. "In Situ" methotrexate injection followed by hysteroscopic resection for caesarean scar pregnancy: a single-center experience. Journal of Clinical Medicine. 2023 Mar 16;12(6):2304.
11. Alameddine S, Lucidi A, Jurkovic D, Timor Tritsch I, Coutinho CM, Ranucci L, Buca D, Khalil A, Jauniaux E, Mappa I, D'Antonio F. Treatments for cesarean scar pregnancy: a systematic review and meta-analysis. The Journal of MaTernal-feTal & neonaTal Medicine. 2024 Jan 2;37(1):2327569.
12. Kaliamoorthi A, Bhat C, Thirunavukkarasu S, Subbarayan LM. Cesarean scar ectopic pregnancy management dilemmas: a 5-year study. Journal of South Asian Federation of Obstetrics and Gynaecology. 2024 Feb 23;16(2):88-92.
13. Miller R, Timor-Tritsch IE, Gyamfi-Bannerman C, Society for Maternal-Fetal Medicine (SMFM. Society for Maternal-Fetal Medicine (SMFM) consult series# 49: cesarean scar pregnancy. American journal of obstetrics and gynecology. 2020 May 1;222(5):B2-14.
14. Nofal AM, Morsi DI. Evaluation of Different Modalities in The Management of Cesarean Scar Ectopic Pregnancy. The Egyptian Journal of Hospital Medicine (April 2025). 2025 Apr 1; 99:1372-5.
15. Morente LS, León AI, Reina MP, Herrero JR, Mesa EG, López JS. Cesarean scar ectopic pregnancy—case series: Treatment decision algorithm and success with medical treatment. Medicina. 2021 Apr 8;57(4):362.
16. Maymon R, Halperin R, Mendlovic S, Schneider D, Vaknin Z, Herman A, Pansky M. Ectopic pregnancies in Caesarean section scars: the 8-year experience of one medical centre. Human Reproduction. 2004 Feb 1;19(2):278-84.
17. Joshi JS, Potdar J, Shanoo A, Patel N, Patel Jr N. Cesarean scar ectopic pregnancy: a rare case. Cureus. 2024 Feb 26;16(2).
18. Rotas MA, Haberman S, Levgur M. Cesarean scar ectopic pregnancies: etiology, diagnosis, and management. Obstetrics & Gynecology. 2006 Jun 1;107(6):1373-81.
19. Seow KM, Huang LW, Lin YH, Yan-Sheng Lin M, Tsai YL, Hwang JL. Cesarean scar pregnancy: issues in management. Ultrasound in Obstetrics and Gynecology: The Official Journal of the International Society of Ultrasound in Obstetrics and Gynecology. 2004 Mar;23(3):247-53.
20. Shen L, Tan A, Zhu H, Guo C, Liu D, Huang W. Bilateral uterine artery chemoembolization with methotrexate for cesarean scar pregnancy. American journal of obstetrics and gynecology. 2012 Nov 1;207(5):386-e1.
21. Petersen KB, Hoffmann E, Larsen CR, Nielsen HS. Cesarean scar pregnancy: a systematic review of treatment studies. Fertility and sterility. 2016 Apr 1;105(4):958-67.
22. Maheux-Lacroix S, Li F, Bujold E, Nesbitt-Hawes E, Deans R, Abbott J. Cesarean scar pregnancies: a systematic review of treatment options. Journal of minimally invasive gynecology. 2017 Sep 1;24(6):915-25.
23. Fu P, Sun H, Zhang L, Liu R. Efficacy and safety of treatment modalities for cesarean scar pregnancy: a systematic review and network meta-analysis. American Journal of Obstetrics & Gynecology MFM. 2024 Aug 1;6(8):101328.
24. Sun H, Wang J, Fu P, Zhou T, Liu R. Systematic evaluation of the efficacy of treatments for cesarean scar pregnancy. Reproductive Biology and Endocrinology. 2024 Jul 18;22(1):84.
25. Miller R, Timor-Tritsch IE, Gyamfi-Bannerman C, Society for Maternal-Fetal Medicine (SMFM. Society for Maternal-Fetal Medicine (SMFM) consult series# 49: cesarean scar pregnancy. American journal of obstetrics and gynecology. 2020 May 1;222(5):B2-14.
26. Miller R, Gyamfi-Bannerman C, Society for Maternal-Fetal Medicine (SMFM, Publications Committee. Society for maternal-fetal medicine consult series# 63: cesarean scar ectopic pregnancy. American Journal of Obstetrics and Gynecology. 2022 Sep 1;227(3):B9-20.
27. Yang X, Zheng W, Wei X, Ma J, Yan J, Poon LC, Yang H. Management of cesarean scar pregnancy: Importance of gestational age at diagnosis and disease type—A single center's 5 years of experience involving 223 cases. Frontiers in Surgery. 2023 Feb 15; 10:1055245.
28. Peng P, Gui T, Liu X, Chen W, Liu Z. Comparative efficacy and safety of local and systemic methotrexate injection in cesarean scar pregnancy. Therapeutics and clinical risk management. 2015 Jan 27:137-42.
29. Bodur S, Özdamar Ö, Kılıç S, Gün I. The efficacy of the systemic methotrexate treatment in caesarean scar ectopic pregnancy: a quantitative review of English literature. Journal of Obstetrics and Gynaecology. 2015 Apr 3;35(3):290-6.
30. Kutuk MS, Uysal G, Dolanbay M, Ozgun MT. Successful medical treatment of cesarean scar ectopic pregnancies with systemic multidose methotrexate: Single-center experience. Journal of Obstetrics and Gynaecology Research. 2014 Jun;40(6):1700-6.