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Case Analysis of Cesarean Scar Pregnancy (CSP) in G3P2A0H2 Gravid at 16-17 Weeks with A History of Two Previous Cesarean Sections

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ABSTRACT

Cesarean Scar Pregnancy (CSP) is a rare but serious form of ectopic pregnancy with an increasing incidence corresponding to rising cesarean delivery rates. It carries significant risks of massive hemorrhage and uterine rupture. This case report presents a 33-year-old woman (G3P2A0H2) at 16–17 weeks of gestation with two prior cesarean sections, who presented with vaginal spotting. Transvaginal ultrasound revealed a 6.08 × 6.03 cm complex mass in the lower uterine segment consistent with CSP. Initial management with a single-dose methotrexate (50 mg/BSA) regimen was unsuccessful, as bleeding persisted and the mass enlarged to 6.9 × 5.9 cm on follow-up ultrasound. Surgical intervention via CSP resection laparotomy with hysterorrhaphy and Pomeroy bilateral tubectomy was subsequently performed, with an estimated blood loss of approximately 800 cc. The patient recovered well postoperatively, and histopathological examination confirmed the presence of trophoblastic tissue. This case underscores the diagnostic challenges and management complexities associated with advanced CSP. Medical therapy with methotrexate may be ineffective in later gestational stages, necessitating timely surgical intervention to prevent life-threatening complications. Counseling on permanent contraception is essential due to the high recurrence risk. This report highlights the importance of early clinical suspicion, accurate imaging, and multidisciplinary management to optimize outcomes for CSP, particularly in patients with multiple prior cesarean deliveries.

INTRODUCTION

Cesarean Scar Pregnancy (CSP) is defined as the implantation of conception results in a myometrium defect at the site of a previous cesarean section scar (World Health Organization, 2024). It is the rarest form of ectopic pregnancy, but its incidence continues to increase significantly as cesarean section births increase worldwide (Sarma et al., 2025). It is estimated that the incidence of CSP ranges from 1:2,000 to 1:2,216 of all pregnancies, and can be as high as 0.05% of all pregnancies (Pinto et al., 2014). In women with a history of cesarean section, the proportion of CSP incidence is even reported to be as high as 2% of subsequent pregnancies, accounting for up to 4% of all cases of ectopic pregnancies (Valenzuela-Fernández et al., 2022).

Pathophysiologically, CSP occurs due to a defect in the healing of the uterine incision (known as a niche or isthmocele) that creates a gap for the blastocyst to implant abnormally in the scar tissue (UNAIDS, 2023). Implantation in poorly vascularized scar tissue increases the risk of abnormal placenta such as placenta accreta spectrum (PAS) and other severe complications, including massive bleeding, uterine rupture, and hysterectomy (Kementerian Kesehatan RI, 2023). Therefore, although CSP is low-incidence, it has high clinical relevance because it has the potential to cause fatal obstetric complications if not recognized and treated in a timely manner (Dinas Kesehatan Provinsi Riau, 2023).

Transvaginal ultrasound with color Doppler is the gold standard for detecting CSP early (Masduki, 2021). Misdiagnosis can lead to curettage measures that are not as indicated, triggering severe bleeding and other major complications (Khawcharoenporn et al., 2020).

Management options vary from conservative approaches (e.g., Methotrexate), minimally invasive interventions (e.g., vacuum aspiration, hysteroscopy), to definitive surgery (e.g., laparotomy, laparoscopy, hysterectomy) (Djumadil et al., 2021).

The prognosis of patients with Cesarean Scar Pregnancy (CSP) is highly dependent on the speed of diagnosis and the accuracy of management. Early detection and adequate intervention can reduce mortality and morbidity; however, delayed diagnosis or suboptimal treatment can result in catastrophic complications. This case discusses the clinical journey of a patient with CSP at an advanced gestational age, highlighting the diagnostic challenges, management decisions taken, and their implications for clinical practice (Alkafaji & Al-Yasari, 2025).

This case analysis aims to contribute to the existing medical literature by presenting a complex CSP case at an advanced gestational age (16–17 weeks) in a patient with two previous cesarean sections—a scenario that poses significant diagnostic and therapeutic dilemmas. By detailing the clinical presentation, diagnostic pathway, failure of initial medical therapy, and subsequent successful surgical intervention, this report provides several practical insights. Firstly, it serves as an educational tool to enhance clinical awareness and diagnostic accuracy among healthcare providers, particularly in resource-limited settings where advanced imaging may not be readily available. Secondly, it offers evidence-based insights into the limitations of methotrexate therapy in advanced CSP and underscores the critical role of timely surgical intervention in preventing life-threatening complications. Lastly, the discussion on long-term counseling and permanent contraception options provides a framework for patient-centered care and reproductive planning post-CSP, which is essential for improving maternal health outcomes.

METHODS

This research method uses a case report compiled based on a review of the medical records of a patient diagnosed with Cesarean Scar Pregnancy (CSP) at Dumai Hospital in September 2025. The clinical data collected included anamnesis, physical examination, results of supporting examinations (transvaginal ultrasound and laboratory), administrative records (medical and surgical), and postoperative outcomes. Patient information was anonymized to maintain confidentiality. A comprehensive literature review was conducted to discuss epidemiology, pathophysiology, diagnostic challenges, and CSP management options, focusing on the latest obstetrics and gynecology literature from leading journals. The writing of this case report received ethical approval from the relevant research ethics committee, and informed consent for publication was obtained.

A woman, Mrs. EEP, 33 years old, presented to Dumai Hospital in September 2025 with complaints of reddish-brown vaginal spotting for approximately ±14 days before admission. The amount of blood was small, not accompanied by clots or tissue, and not associated with lower abdominal pain. The bleeding was intermittent and did not increase in amount. The patient did not report abdominal pain, nausea, vomiting, dizziness, fever, or shortness of breath. She had a history of G3P2A0H2, with two previous cesarean sections (in 2018 and 2020) for

breech indications and a short interpregnancy interval (<18 months). The patient's HPHT was May 2025, corresponding to a gestational age of 16–17 weeks.

General physical examination showed a compos mentis patient with blood pressure of 119/87 mmHg, pulse rate of 98/minute, respiration rate of 21/minute, and temperature of 36.4°C. The patient's Body Mass Index (BMI) was 26.21 kg/m² (overweight). Specific physical examination revealed no significant abnormalities, with non-anemic palpebra conjunctiva (-/-) and non-icteric sclera (-/-). On obstetric examination, the abdomen appeared flat with a surgical scar (+). Genital examination showed blood spotting (+) on the vulva and flux (+). Transvaginal ultrasound examination (September 10, 2025) was key to the diagnosis. The ultrasound revealed an anteflexed (AF) uterus, larger than normal (11×7×8 cm), and a complex mass in the lower uterine segment (SBR) extending to the right anterolateral uterine wall (6.08×6.03 cm), with color Doppler score 3, consistent with Cesarean Scar Pregnancy (CSP). The right and left ovaries were difficult to assess, and no free fluid was detected.

Laboratory examination (September 11, 2025) showed results within normal limits for hematology (Hb 11.8 g/dL, leukocytes 7,040/uL, platelets 188,000/mm³, hematocrit 36.7%), clinical chemistry (ALT 15 U/L, AST 8 U/L, sodium 143 mEq/L, potassium 3.6 mEq/L, chloride 104 mmol/L, albumin 4.2 g/dL, GDS 106 mg/dL, urea 13.6 mg/dL, creatinine 0.46 mg/dL). Immunoserological results for HBsAg and HIV were non-reactive. The β-HCG level was 294 ng/dL. Based on these findings, the working diagnosis was established as G3P2A0H2 gravid 16–17 weeks, BSC 2× + CSP. The initial management included hospitalization and administration of a single dose of methotrexate (MTX) 50 mg/BSA. The prognosis for both mother and fetus at that time was dubia ad bonam.

On follow-up (September 12, 2025), the patient reported mild lower abdominal pain (+), but no vaginal spotting (-). The general condition remained stable. On September 17, 2025, the patient was re-evaluated due to recurrent vaginal bleeding following MTX injection. Ultrasound examination showed that the complex mass in the SBR extended to the right anterolateral uterus, measuring 6.9×5.9 cm with color Doppler score 3, still consistent with CSP. The mass appeared slightly larger than in the previous examination. Considering the progression of the ectopic pregnancy and the gestational age, which had reached the second trimester, surgical intervention was indicated. The patient was scheduled for a laparotomy with CSP resection followed by hysterectomy on September 22, 2025.

The surgical report on September 22, 2025, at 08:55 WIB noted that, after abdominal wall incision, conceptual tissue was found invading approximately 4 cm above the SBR, spreading to the cervix and penetrating the serosa, measuring about 6×4 cm. Resection of the conceptual tissue was performed approximately 0.5 cm above the superior limit and extended to the level of the ostium uteri internum (OUI) inferiorly. The lateral margins of the resection reached the parametrium. The resected tissue was sent for histopathological examination. After hysterorrhaphy to close the post-resection defect, a bilateral tubectomy was performed using the Pomeroy method. The total blood loss during surgery was approximately ±800 cc. The operation concluded at 10:30 WIB. The postoperative diagnosis was P2A1L2 post-laparotomy resection hysterorrhaphy due to CSP + post-bilateral Pomeroy tubectomy. The patient received standard postoperative care and recovered well.

RESULTS AND DISCUSSION

This case describes the diagnosis and management of Cesarean Scar Pregnancy (CSP) in a woman, G3P2A0H2, at 16–17 weeks of gestation with a history of two cesarean sections. The initial diagnosis was established based on clinical suspicion (history of cesarean section and vaginal spotting) and confirmed through transvaginal ultrasound examination, which revealed a complex mass in the lower uterine segment at the site of the cesarean scar. Although single-dose methotrexate (MTX) therapy was administered, the ectopic pregnancy showed progression, characterized by an increase in mass size on ultrasound evaluation and continued vaginal bleeding. This indicates the failure of medical therapy in this case.

Surgical intervention in the form of CSP resection via laparotomy with hysterorrhaphy and bilateral tubectomy was successfully performed. Intraoperative findings confirmed extensive invasion of the conceptual tissue into the cesarean scar, consistent with the diagnosis of CSP. Significant blood loss (approximately 800 cc) during surgery highlights the potential for massive hemorrhagic complications in CSP, particularly at later gestational ages. The decision to perform a bilateral tubectomy was also made in consideration of the risk of CSP recurrence and the patient's desire for permanent contraception. The patient demonstrated good postoperative recovery, confirming the success of the surgical procedure in this case. Histopathological examination of the resected tissue is expected to provide definitive confirmation of the presence of trophoblastic tissue at the site of the cesarean scar.

Cesarean Scar Pregnancy (CSP) has become an increasingly recognized clinical entity in modern obstetrics, reflecting the global increase in cesarean section (SC) deliveries (World Health Organization, 2024). The incidence of global SC has nearly doubled since 2000, which is directly correlated with the increase in CSP cases (Sarma et al., 2025). Although it is still considered a rare form of ectopic pregnancy, with an estimated incidence of about 1:2,000 to 1:2,216 of all pregnancies, CSP now accounts for up to 6.1% of all ectopic pregnancies (Pinto et al., 2014; Valenzuela-Fernández et al., 2022).

The pathophysiology of CSP centers on the implantation of abnormal blastocysts within myometrial defects in previous SC scars, often referred to as niches or isthmoceles (UNAIDS, 2023). This defect is a thin area of the myometrium or even dehisens, formed as a result of incomplete healing of the uterine incision post-SC (Kementerian Kesehatan RI, 2023). Several perioperative factors have been associated with the formation of CSD (Cesarean Scar Defect), including the rate of uterine incision, indications of SC, duration of labor and cervical dilatation prior to SC, closure techniques, adhesions, and retroverted uterine (Dinas Kesehatan Provinsi Riau, 2023). Studies show that the thickness of the isthmus myometrium decreases progressively with an increase in the number of SCs; for example, women after one, two, and three or more SCs had a myometrium thickness of the isthmus of 8.3 mm, 6.7 mm, and 4.7 mm, respectively, compared to 11.6 mm in women who gave birth vaginally (Masduki, 2021). Scar defects are seen in 61%, 81%, and 100% of women after one, two, or three or more SCs (Khawcharoenporn et al., 2020). Residual myometrium (RMT) thickness of less than 3 mm is associated with an increased risk of dehygence and uterine rupture (Djumadil et al., 2021).

Implantation in poorly vascularized scar tissue has serious clinical implications. In contrast to tubal ectopic pregnancy, CSP has the potential to develop and even achieve viability, but with a significant risk of maternal morbidity. This condition is often considered part of the placenta accreta spectrum disorder (PASD), in which trophoblasts invade the

myometrium or even penetrate the serosa, which can lead to massive bleeding, uterine rupture, and the need for a hysterectomy. The case of Mrs. EEP, with its intraoperative findings of conceptual tissue invasion that extends to the cervix and penetrates the serosa, clearly demonstrates the characteristics of PASD associated with CSP. Blood loss of approximately 800 cc during surgery in this patient underscores the potential for serious bleeding complications, which are one of the main causes of maternal morbidity in CSP.

The diagnostic challenges of CSP are complex, mainly due to often non-specific clinical symptoms, such as mild vaginal bleeding or lower abdominal pain, which can be mistaken for incomplete abortion or cervical pregnancy (Yapıcı & Çağlar, 2024). Transvaginal ultrasound (TVUS) with color Doppler has become the gold standard for early detection of CSP (Chautrakarn et al., 2023). Sonography criteria for the diagnosis of CSP include: (1) gestational sacs located anterior to the uterine isthmus or within SC scars, (2) trophoblasts surrounding the gestational sac, (3) thin or absent myometrium between the gestational sac and bladder, (4) rich trophoplast-rich bloodstream in color Doppler, and (5) empty gestational sacs in the uterine cavity and cervical canal (Nabunya et al., 2020).

The challenge in this case is to distinguish CSP from low-location intrauterine pregnancies or cervical pregnancies, which often require the expertise of experienced sonographers (Handoko et al., 2025). Delays in diagnosis until the second trimester, as in this case, significantly increase the risk of complications and limit conservative management options (Ningrum et al., 2025).

Various classification systems have been proposed, but the most common are based on the direction of pregnancy growth and residual myometrium thickness (RMT) (Santhya & Jejeebhoy, 2015). One system divides CSPs into Type I (endogenic) and Type II/III (exogenic) (Oktavianis et al., 2022). In contrast, Type II or III CSPs implant deep within highly vascular CSDs with RMT <3 mm and grow toward the abdominal cavity, more likely to cause premature uterine rupture or PASD (Ratnawati et al., 2024).

To date, there has been no global consensus on the best management method (Della Valle et al., 2025). Therapy options vary from conservative approaches (e.g., systemic or local methotrexate), minimally invasive interventions (e.g., transvaginal vacuum aspiration, hysteroscopy, laparoscopy), to definitive surgery (e.g., resectional laparotomy) (Hameed et al., 2023). The main goal of therapy is the termination of ectopic pregnancy as early as possible to prevent complications, while maintaining uterine reproductive function as much as possible (Brennan et al., 2025).

In the case of Mrs. EEP, initial therapy with Methextrasat (MTX) a single dose of 50mg/BSA was given. MTX is a chemotherapy agent that acts as a folate antagonist, inhibiting the synthesis of DNA and RNA, thereby stopping the growth of trophobles. Systemic MTX therapy is often the first choice for CSP diagnosed at very early gestational age (<8 weeks) and stable hemodynamics, especially in patients who want to maintain fertility. However, the success rate of MTX varies, and factors such as advanced gestational age, high β-HCG levels, large gestational sac size, and the presence of fetal cardiac activity may predict MTX therapy failure. In these cases, gestational age of 16–17 weeks and mass progressivity after administration of MTX indicate that medical therapy is ineffective, which is in line with the literature suggesting surgical intervention in cases with further gestational age or MTX failure.

The failure of MTX therapy in this case can be explained by several factors. First, gestational age that has reached the second trimester (16-17 weeks) makes the trophoblast mass larger and more vascular, making it less responsive to MTX. Second, the β-HCG level in this patient was recorded at 294 ng/dL, which although not too high, at the gestational age may have indicated a more resistant mass of trophoblasts. Third, the findings of an ultrasound evaluation that showed an increase in complex mass size after MTX confirmed the progressivity of ectopic pregnancy. Therefore, the decision to switch to surgical management is the right step and in accordance with clinical guidelines for CSP cases that fail with medical therapy or are at high risk of complications.

Surgical interventions, particularly CSP resection laparotomy, are a safer and more effective option in cases with advanced gestational age or failure of medical therapy. The advantages of surgical resection include complete removal of trophoblast tissue, improvement of myometrial defects, and improved bleeding control. In the case of Mrs. EEP, a resectional laparotomy allows the removal of the invasive conceptual tissue extensively and the repair of the uterine wall through hysterophy. Although blood loss of about 800 cc is a significant complication, it can be well managed, suggesting that a well-planned surgical intervention can save the patient's life.

Complications of CSP, especially massive bleeding and uterine rupture, are a major concern. The 800 cc blood loss in this case, although controlled, highlights the inherent risk of CSP, especially when the pregnancy continues into the second trimester. Fetal implantation in the scarred lower segment of the uterus tends to trigger massive vaginal bleeding during evacuation attempts, as the scar area is less able to contract to close the blood vessels. In addition, the risk of PASD, in which the placenta attaches to or even penetrates the uterine wall, is particularly high in untreated CSP, and can lead to an emergency hysterectomy.

Ethical and counseling aspects also play an important role in CSP management. Given the risk of recurrence of CSP in subsequent pregnancies, counseling regarding permanent contraceptive options or careful pregnancy planning is necessary. In the case of Mrs. EEP, the decision to perform a bilateral tubectomy of the Pomeroy method was a wise move, not only as a permanent contraceptive method but also to prevent the risk of recurrent CSP that can be life-threatening. Comprehensive pre-pregnancy counseling for CSP survivors should include in-depth discussions about risks, management options, and future reproductive outcomes.

Overall, Mrs. EEP's case provides valuable lessons about CSP management at advanced gestational age. Early diagnosis through a thorough transvaginal ultrasound in patients with a history of SC is essential. Although medical therapies such as MTX may be considered in early cases, surgical intervention is often a safer and more effective option in cases with pregnancy progressivity or failure of medical therapy. Awareness of the complications of massive bleeding and the risk of PASD should always be a priority. A multidisciplinary approach and comprehensive counseling are key to optimizing clinical outcomes for patients with CSP. Further research is needed to develop more standardized, evidence-based management guidelines for CSP, especially in challenging cases such as this one reported.

The comparison between medical and surgical management for CSP has been the subject of intense debate in the obstetric literature [40]. Medical therapy, especially with Methotrexate (MTX), is often the initial choice for CSP diagnosed in the first trimester, especially in patients who desire fertility preservation. MTX can be administered systemically, locally

(intragestationally or intramyometrial), or in combination. The advantages of MTX therapy are its non-invasive nature and the potential to avoid more aggressive surgical interventions. However, as seen in the case of Mrs. EEP, MTX therapy is not always successful, especially at later gestational age, large gestational sac sizes, or high levels of β-HCG. The success rate of systemic MTX for CSP has been reported to vary between 50% to 90%, with higher failure rates in cases with thinner RMT or rich trophophoblast vascularization.

The failure of MTX therapy in this case underscores the importance of strict monitoring and proper patient selection criteria for medical therapy. Predictive factors for MTX failure include gestational age >8 weeks, gestational sac size >2 cm, β-HCG levels >5,000 mIU/mL), and fetal cardiac activity. In the case of Mrs. EEP, the gestational age of 16-17 weeks was well beyond the optimal limit for MTX therapy, which explains why this therapy is not effective. The decision to switch to surgical management after MTX failure is the right step to prevent further complications and in accordance with clinical guideline recommendations.

Surgical interventions, particularly CSP resection laparotomy, are a safer and more effective option in cases with advanced gestational age or failure of medical therapy (Verberkt, 2022). The advantages of surgical resection include complete removal of trophoblast tissue, improvement of myometrial defects, and improved bleeding control (Yung, 2024). Although blood loss of about 800 cc is a significant complication, it can be well managed, suggesting that a well-planned surgical intervention can save the patient's life (Kennedy, 2024).

The case of Mrs. EEP, with CSP at 16-17 weeks gestation and invasion of conceptual tissue that extends to penetrate the serosa, clearly requires more aggressive surgical intervention. CSP resection laparotomy allows direct visualization of the implantation area, complete removal of trophoblast tissue, and optimal repair of myometrial defects. Although laparotomy is more invasive than laparoscopy, in complex cases with active bleeding or extensive invasion, laparotomy can provide better control and reduce the risk of complications. The blood loss of about 800 cc in this case, although significant, can be well managed thanks to a quick and planned surgical intervention. This suggests that in challenging cases of CSP, laparotomy remains a valid and life-saving option.

One of the most serious complications of CSP is the risk of Placenta Accreta Spectrum Disorder (PASD) in subsequent pregnancies. CSP is considered an independent risk factor for PASD, with reported incidence rates reaching 50% to 80% in pregnancies that continue after CSP. The pathophysiology of PASD in CSP involves the invasion of abnormal trophoblasts into the thin or defective myometrium in SC scars, causing the placenta to attach, penetrate, or even pass through the uterine wall. In the case of Mrs. EEP, the findings of intraoperative invasion of conceptual tissue that penetrated the serous indicated the presence of PASD. Therefore, counseling regarding the risk of PASD in subsequent pregnancies is very important, and the option of permanent contraception such as bilateral tubectomy performed on these patients is a wise step to prevent future complications.

Long-term management and pre-pregnancy counseling for women who have experienced CSP is crucial. Women who successfully undergo CSP management and want to become pregnant again should undergo a comprehensive pre-pregnancy evaluation, including a CSD assessment via transvaginal ultrasound. If CSD is still significant, repair of the defect (e.g., via hysteroscopy or laparoscopy) may be considered before subsequent pregnancy to reduce the risk of recurrence of CSP or PASD. In addition, counseling regarding the risk of recurrence of

CSP (which is reported to be around 5-10%) and potential complications in subsequent pregnancies should be provided clearly.

This case also highlights the importance of a multidisciplinary approach in CSP management. A team of obstetricians, radiologists, surgeons, and anesthesiologists is essential to ensure accurate diagnosis, optimal management planning, and effective management of complications. Good communication between the medical team and the patient is also crucial to ensure patients understand the condition, management options, and its long-term implications. In Mrs. EEP's case, the decision to perform a resection laparotomy and bilateral tubectomy was the result of a comprehensive evaluation and discussion involving the medical team.

Overall, cases of CSP in advanced gestational age as reported are a significant clinical challenge. Although medical therapy may be an option in early cases, therapy failure and the progression of ectopic pregnancy require more aggressive surgical intervention. Awareness of the complications of massive bleeding and the risk of PASD should always be a priority. A multidisciplinary approach, early diagnosis, appropriate management, and long-term counseling are key to optimizing outcomes for patients with CSP. Further research is needed to develop more standardized, evidence-based management guidelines, as well as to better understand the pathophysiology and risk factors of CSP. This will help clinicians in providing the best care for women with this increasingly common condition.

Furthermore, the choice of surgical techniques for CSP is highly variable and should be tailored to the characteristics of the case. In Mrs. EEP's case, laparotomy was chosen as the primary approach. This decision can be justified considering several factors: the advanced gestational age (16-17 weeks), the large mass size (about 6x4 cm), and the intraoperative finding of invasion to penetrate the cerosa. In these situations, laparotomy provides several significant advantages over minimally invasive approaches such as laparoscopy. First, laparotomy allows for wider access and better visualization of the surgical area, which is especially important when dealing with large masses and massive. Second, bleeding control can be performed more effectively through laparotomy, including the possibility of performing uterine or hypogastric artery ligation if necessary. Third, the repair of myometrium defects (hysterorafi) can be performed more precisely and robustly through layered sutures, which could theoretically improve the integrity of the uterus for future pregnancies, although in these cases the patient chooses to undergo a tubectomy.

In comparison, laparoscopy is also a valid option for CSP surgical management, especially in cases diagnosed earlier and with smaller mass sizes. Laparoscopic advantages include lower morbidity, faster recovery, and better cosmesis. However, laparoscopy has limitations in terms of massive bleeding control and difficulties in performing resection and defect repair in complex cases. A meta-analysis comparing laparoscopy and laparotomy for CSP found that laparoscopy was associated with less blood loss and shorter hospitalization time, but there was no significant difference in success rates or major complications. Therefore, the choice between laparotomy and laparoscopy should be based on a careful clinical assessment of each case, taking into account the patient's hemodynamic stability, the size and location of the CSP, and the expertise of the operator.

In addition to resection, other surgical modalities such as hysteroscopy have also been used for the management of CSP, especially for Type I (endogenic) in which a gestational mass

protrudes into the uterine cavity. Hysteroscopy allows removal of trophoblast tissue directly under visualization, with minimal risk of injury to surrounding organs. However, hysteroscopy is not suitable for outwardly (exogenic) CSP Type II or III, as in the case of Mrs. EEP, because the risk of uterine perforation and uncontrolled bleeding is very high.

Reproductive outcomes after CSP management are an important aspect to consider, especially in patients who still want to get pregnant. Pregnancy rates after CSP administration are reported to vary, depending on the method of administration used and the integrity of the uterus post-procedure. Studies show that the rate of pregnancy after surgical management (especially resection with defect repair) tends to be higher than after medical therapy with MTX alone. This may be due to the fact that surgical resection not only removes the ectopic pregnancy but also corrects myometrium defects, thus creating a better environment for implantation in subsequent pregnancies.

However, pregnancy after CSP remains a high-risk pregnancy. The risk of CSP recurrence is reported to be around 5–10%. In addition, there is an increased risk of other complications such as uterine rupture, placenta previa, and PASD in subsequent pregnancies. Therefore, comprehensive pre-pregnancy counseling is essential for women who have experienced CSP. Evaluation of CSD via transvaginal ultrasound or hysterosonography before trying to conceive again is highly recommended. If significant defects are still present, hysteroscopy or laparoscopic repair of the defect may be considered to reduce the risk of future complications. In the case of Mrs. EEP, the decision to perform a bilateral tubectomy was the definitive and appropriate choice, given the patient's obstetric history (G3P2A0H2) and the high risk associated with subsequent pregnancies after CSP at advanced gestational age.

CONCLUSION

In conclusion, this case highlights the complexity of Cesarean Scar Pregnancy (CSP) management in the second trimester. The failure of methotrexate (MTX) therapy in this case is consistent with the literature indicating its limited effectiveness in advanced gestational ages. The decision to perform a resection laparotomy was an appropriate and life-saving measure, allowing for complete removal of the ectopic mass and effective control of bleeding. This case also underscores the importance of early diagnosis, accurate classification, and individualized management selection tailored to each patient. Multidisciplinary approaches and long-term counseling regarding reproductive outcomes and contraceptive options are integral components of CSP patient care. As the number of sectio caesarea (SC) procedures increases, clinicians should remain vigilant for the possibility of CSP in any woman with a history of SC who presents with complaints of bleeding or pain in early pregnancy.

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