Case Report
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Cesarean scar pregnancy misdiagnosed as gestation in bicornuate uterus

Fatemeh Davari-Tanha, MD.[1], Saghar Samimi-Sede, MD.[2], Zohre Khalilpour, MD.[3], Fatemeh KhanMohamadi, MD.[4], Jalle Mohamadpour, MD.[5]

Department of Obstetrics and Gynecology, Mirza Kochak Khan Hospital, Tehran University of Medical Sciences, Tehran, Iran.

Abstract

A 32 year-old multigravid patient with 10 weeks of pregnancy was referred to the emergency ward with massive vaginal bleeding and preshock state. Suction curettage, laparotomy, uterine artery ligation, Macdonald cerclage, and hysterectomy was done, in that order. After hysterectomy and massive transfusion she recovered. When a diagnosis of cesarean scar pregnancy is made in the emergency state and especially in the presence of underlying disease, morbidity is high and fertility lost.

Key words: Cesarean scar pregnancy, bicornuate uterus, molar pregnancy.

Introduction

Ectopic pregnancy sited in dehiscent cesarean section scars has a high risk of rupture and bleeding. Attempts at operative therapy frequently end in loss of fertility. We present a case of CSP that was misdiagnosed as pregnancy in a bicornuate uterus and led to emergency hysterectomy.

Case report

A 32-year-old woman, gravida 3, para 2 (2 term pregnancies) was referred to the emergency room with massive vaginal bleeding, in preshock state. A viable pregnancy in a bicornuate uterus in the right cornu and partial mole with viable fetus in the anterior abdominal wall of the uterine isthmus was reported in two different transabdominal sonographic examinations.

The gestational age was 10 weeks and vaginal bleeding had started two hours before admission. β-HCG level was 45000 mIU/ml. She had two previous C/S with a lower segment incision. The last one was done 8 years ago. Also she had a previous history of open heart surgery for subaortic valve stenosis.

Suction curettage was done due to diagnosis of partial mole, but the uterus was completely empty. In the lower segment there was a prominence but no molar tissue or villi in the specimen was obtained by suction curettage. Profuse hemorrhage continued & with the impression of perforation or invasive mole laparotomy was done. The lower segment was bulged and dark blue red in color (Fig.1,2). An incision in the lower segment showed an empty uterus and in the very thin isthmus a residue of the placenta was present.

For control of hemorrhage bilateral uterine

1. **Corresponding author**, Assistant Professor of Obstetrics and Gynecology, Mirza Kochak Khan Hospital, Tehran University of Medical Sciences, Tehran, Iran. Address: North Ostad Nejatollahi Avenue, Karim Khan Zand St, Tehran, Iran. Tel:+98218897761-3, email: fatedavari@ yahoo.com.
2. Assistant Professor of Anesthesiology and Reanimation, Tehran University of Medical Sciences, Tehran, Iran.
3. Cardiologist, Tehran University of Medical Sciences, Tehran, Iran.

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artery ligation, oversewing the cesarean scar and placental implantation site, Macdonald cerclage for tamponade effect and a foley catheter with 30 ml balloon was inserted in the cervical canal. But bleeding was severe & ultimately hysterectomy was done. In pathologic exam villi were found to be implanted in the myometrium of the isthmus & fibrous tissue surrounded it.

94 units of packed RBCs, whole blood and other blood products were infused. Six hours after surgery, respiratory distress was present (RR=60, PO_2=67%). She was sent to the ICU for 48 hours and pulmonary embolism was diagnosed but after 10 days she was discharged in good health.

Fig.1. Implantation site of pregnancy in anterior wall of uterine isthmus.

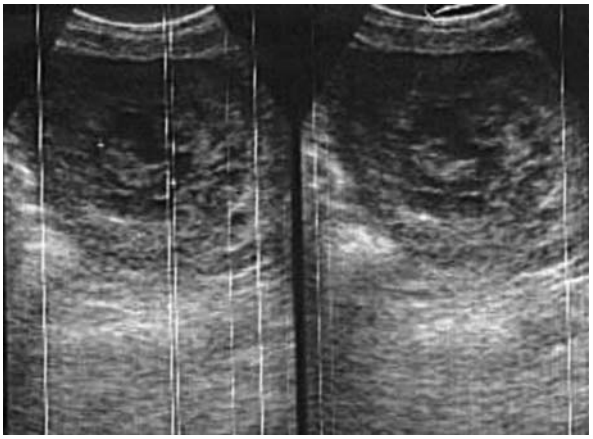

Fig.2. Transabdominal sonographic view, reported as pregnancy in bicornuate uterus.

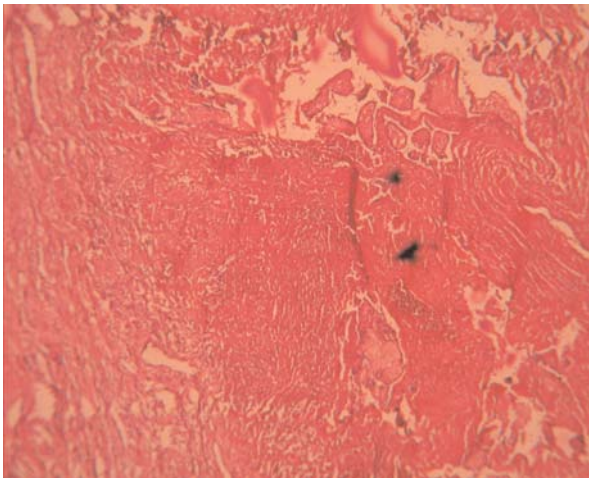

Fig.3. Pathologic exam shows placental villi penetrating the myometrium.

Discussion

Despite the frequent performance of cesarean delivery, implantation of a pregnancy within the cesarean scar is rare, yet very dangerous, especially in emergency states. A high index of suspicion and early diagnosis, like other ectopic pregnancies outside the uterine tube is necessary. This abnormal implantation can lead to uterine rupture that limits treatment options & produces significant morbidity with loss of future fertility.

It is known that cesarean section presents one of the risk factors for ectopic pregnancies and placental pathologies (placenta previa, accreta) in following pregnancies [1].

In 1997 Godin put forward 4 diagnostic criteria for CSP: 1. No evidence of pregnancy in the uterine cavity, 2. No evidence of pregnancy in the cervical canal, 3. A gestational sac growing and developing in the anterior wall, and 4. A defect in the myometrial tissue between the gestational sac and bladder wall. 54% of these patients have previously undergone multiple ($\geq$2) cesarean sections [2].

Catastrophic hemorrhage may occur when surgical evacuation is attempted, because the defective myometrium & uterine cervix are naturally less capable of fibromuscular contraction

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to control the bleeding.

Diagnosis of CSP is very difficult until symptoms and further developments permit differentiation from a cervical pregnancy. It may be delayed until the myometrium overlying the gestational sac ruptures and the patient develops hemoperitoneum and experiences hypovolemic shock as seen in this case. Diagnosis should be based on sonographic findings as well as clinical manifestations: An enlargement of the pervious C/S scar in the lower segment; a gestational sac or mixed mass attached to the cicatrix, between the gestational sac and bladder wall, with an empty uterine cavity and a very thin myometrium in a state of pre-rupture. In this case bicornuate uterus was reported, however she had a history of two term pregnancies and the misdiagnosis led authors to the diagnosis of CSP [3].

MRI scan, if the gestational sac is embedded in the anterior of the cervix, is diagnostic, but only when it is located in the outer surface of the cervical canal. Hysteroscopy can show gestational tissue in the lower uterine segment.

Blind uterine curettage is contraindicated, because the majority of villi are implanted in the myometrium of the lower uterine segment & it is difficult to expel the gestational sac by curettage without perforating the myometrium, an accident that causes massive bleeding and requires immediate laparotomy, as in this case.

Methotrexate and Tricosanthine both systemically and locally have successfully been used and reported in the management of CSP [4].

Laparoscopic excision of the mass of the CSP follows the principle of laparotomy. Bilateral uterine or hypogastric artery ligation or embolization can be performed at the beginning of the procedure to prevent massive operative blood loss [2].

But all of these options are effective in elective states in which the diagnosis of CSP is clear. In emergency states especially in the presence of underlying disease morbidity is high, and a high index of suspicion is the most important thing for diagnosis. A history of previous C/S and careful sonographic examination are helpful. CSP is to be differentiated from cervical pregnancy, molar pregnancy and pregnancy in bicornuate uterus in patients that have a history of term pregnancy and C/S.

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