

Case Reports

Placenta accreta following laparoscopic adenomyomectomy: a case report

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Summary

Background: The influence of adenomyomectomy on subsequent pregnancy is unknown. Placenta accreta is most often associated with placenta previa in women with multiple previous cesarean sections. **Case:** A 41-year-old woman became pregnant six years after a laparoscopic uterine posterior adenomyomectomy. She was diagnosed with complete placenta previa and considered at a low risk for placenta accreta by ultrasonography. Cesarean section and subsequent hysterectomy were required, and histopathological analysis revealed a posterior placenta accreta. **Discussion:** The authors discuss the association of adenomyomectomy and placenta accreta on subsequent pregnancy and conclude that previous adenomyomectomy may increase the risk of abnormal placentation. Therefore, careful treatment is required during the pregnancies of patients with previous adenomyomectomy.

Key words: Adenomyomectomy; Subsequent pregnancy; Placenta accreta; Placenta previa.

Introduction

Placenta previa is an obstetric complication where the placenta is inserted into the lower uterine segment, adjoining or covering the cervical os. Placenta accreta, which involves abnormal adherence of the placenta to the myometrium, is a serious complication of placenta previa [1, 2]. A well-known risk factor for placenta accreta is previous cesarean delivery complicated by placenta previa. In addition, no reports have specifically detailed an increased risk of placenta accreta in pregnant women with a history of adenomyomectomy.

The present authors report a case of placenta accreta in a woman who had previously undergone laparoscopic adenomyomectomy. Consequently, delivery was by cesarean section and hysterectomy. They also present the relevant details of the case and discuss the implications for the management of pregnancy following laparoscopic adenomyomectomy.

Case Report

A 41-year-old female (gravida 5, para 0, spontaneous abortion 3, dilation and curettage 1) was referred to the present hospital at 31 weeks of gestation with complete placenta previa. She had presented with vaginal bleeding at 30 weeks of gestation, at which point she had been admitted to another hospital. Six years earlier, she had undergone ovarian cystectomy and laparoscopic

adenomyomectomy of the posterior uterine wall for endometriosis and dysmenorrhea. The entire posterior uterine wall had been resected and repaired by laparoscopic suture, and no myometrial defects were noted at the conclusion of the procedure.

In the current pregnancy, the placenta was located anterior-to-posterior deep in the uterine wall, with suspected complete placenta previa. Ultrasonography revealed only two small lacunae, suggesting a low risk of placenta accreta (Figure 1A). Fetal growth was appropriate for the gestational age. The patient was considered at low risk for placenta accreta and high risk for complications due to the total placenta previa. To address the small possibility of placenta accreta, a multidisciplinary team (obstetrics, perinatology, gynecology, urology, and interventional radiology) was assembled, and cross-matched blood was available at all times during her hospitalization.

At 34 weeks and four days of gestation, the patient experienced a sudden onset of vaginal bleeding. Because the bleeding continued, with a total blood loss of approximately 500 ml, the authors performed an emergency cesarean section under general anesthesia. A laparotomy showed that the placenta and multiple small blood vessels were located in the lower uterine segment. They also performed a vertical uterine incision to prevent an incision through the placenta and successfully delivered a healthy male infant weighing 2,542 grams, with Apgar scores of 8 and 9 at one and five minutes, respectively. However, the placenta was not spontaneously delivered. Because of the abnormal uterine adherence and continued bleeding from the placental site, the authors performed a conventional supracervical hysterectomy with the placenta *in situ*. The procedure was unremarkable except for injury to the bladder, which was repaired by a urologist. Total blood loss was approximately 3,000 ml, with the patient receiving a 2,240 ml transfusion of

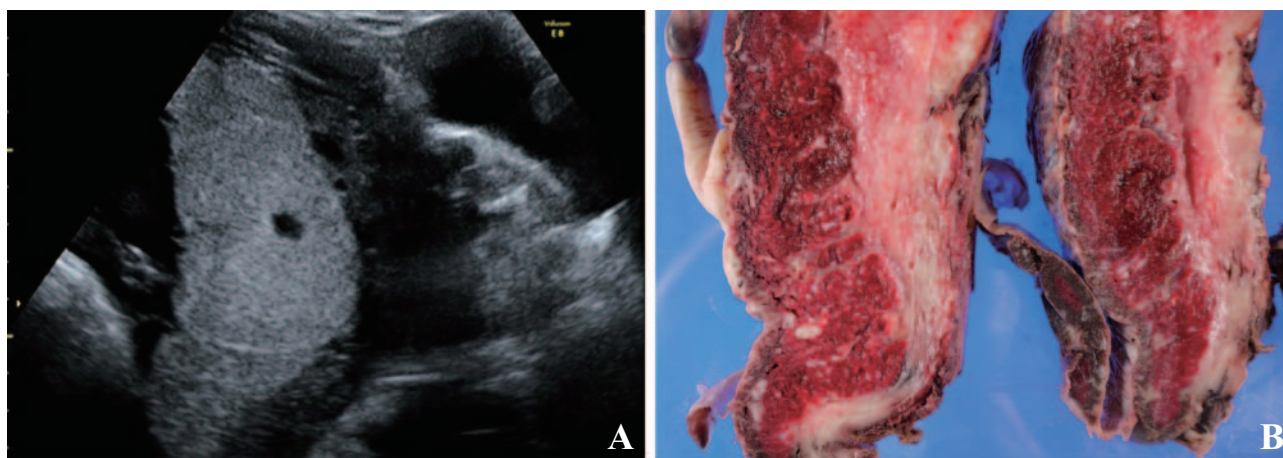


Figure 1. — (A) Ultrasound showing a low risk of placenta accreta of the uterine wall. (B) Macroscopic and histopathological analysis of the placenta indicate placenta accreta of the posterior uterine wall.

red blood cells and 480 ml of fresh frozen plasma.

Postoperatively, the patient's blood pressure was 120/70 mmHg, and her pulse rate was 80 beats/minute. A complete blood count indicated a hematocrit level of 37.2% and a hemoglobin level of 12.7 g/dl. The patient had an uncomplicated postoperative course and was discharged 14 days later in good health. The neonate was treated with oxygen at the time of delivery and was breathing room air by the second day of life. He had no complications related to feeding and had gained appropriate weight by the time of his discharge with the mother.

The excised placental specimens are shown in Figure 1B. Macroscopically, there was no evidence of abnormal attachment to the anterior uterine wall; however, there was a clear evidence of abnormal attachment to the posterior uterine wall. Histopathological analysis confirmed the diagnosis of placenta accreta of the posterior uterine wall.

Discussion

The influence of adenomyomectomy on subsequent pregnancies is largely unknown. Although a review of the literature identified three case reports of spontaneous uterine rupture after adenomyomectomy [3-5], no reports of severe obstetric complications following adenomyomectomy could be found. A PubMed search using the key words "adenomyomectomy" and "placenta" or "accreta" or "previa" in English yielded no results. To the present authors' knowledge, this is therefore the first report of a case of placenta previa and placenta accreta following laparoscopic adenomyomectomy.

Most cases of placenta accreta are associated with a history of one or more cesarean sections, while the current case presents an instance of placenta accreta that occurred in a patient with no history of previous cesarean section. A previous study suggested no association of prior myomectomy with higher risks of uterine rupture or placenta accreta [6]. Gyamfi-Bannerman *et al.* analyzed the subsequent pregnancies of 176 women who underwent my-

omectomy and identified no cases of uterine rupture or placenta accreta [6]. Because adenomyomectomy does not involve the uterine cavity, obstetricians may not consider it a risk factor for placenta accreta. However, the present authors believe that this report suggests otherwise: that the patient's previous adenomyomectomy of the posterior uterine wall may have caused subsequent posterior placenta accreta formation during pregnancy. If adenomyomectomy is indeed a contributing factor to the development of placenta accreta, they propose that any patient with previous adenomyomectomy should be considered high risk for placenta accreta, even if she does not develop placenta previa.

Some reports have shown that a predelivery diagnosis of placenta accreta is associated with decreased maternal hemorrhagic morbidity [7, 8]. Therefore, it is important to diagnose placenta accreta accurately before delivery whenever possible. In the present case, ultrasonography suggested a low risk for placenta accreta, but the macroscopic and histopathological examination of the placenta after delivery indicated clear placenta accreta in the posterior wall, with abnormal attachment. Ultrasonography reportedly has a lower degree of accuracy when diagnosing posterior placenta accreta compared with anterior placenta accreta [9]. Therefore, although the ultrasonography findings did not show posterior placenta accreta, it is possible that additional magnetic resonance imaging studies of the posterior uterine wall would have increased the chances of successfully diagnosing placenta accreta before delivery.

The present authors believe that their findings suggest that previous adenomyomectomy of the posterior uterine wall may have caused the subsequent posterior placenta accreta. In this case, they were fortunate that the possibility of placenta accreta had been considered and man-

aged accordingly because of the diagnosis of placenta previa. However, if adenomyomectomy is indeed a contributing factor to the development of placenta accreta, the authors propose that there is a need for any patient with a previous adenomyomectomy to be considered at high risk for placenta accreta, even if she does not develop placenta previa.

Conclusion

The current authors presented a case of placenta accreta of the posterior uterine wall in a patient who had previously undergone laparoscopic adenomyomectomy. It is possible that the placenta accreta in this case was causally related to the adenomyomectomy and perhaps to the history of adenomyosis itself. More research is needed to confirm this finding. However, it is important that obstetricians are aware of the possible connection between adenomyomectomy and abnormal placentation. Such awareness will help raise the suspicion for placenta accreta in pregnant patients with a history of adenomyomectomy, prompting thorough diagnostic efforts to identify and prepare for the condition before delivery.

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