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CLINICAL VIGNETTE

Uterus-preserving treatment of placenta accreta spectrum in the first pregnancy

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INTRODUCTION

Placenta accreta spectrum (PAS) is one of the most serious obstetric complications. Surgery is associated with a high risk of hemorrhage, morbidity and mortality.

There are many risk factors for placenta accreta spectrum; the most common are previous cesarean section or myomectomy, placenta previa, advanced maternal age, Asherman's syndrome, endometriosis, pelvic inflammatory disease or septic miscarriage in history.

In practice, this disorder is most often associated with a history of cesarean sections (CS) in previous pregnancies or a history of surgery in the uterine cavity. The rate of PAS increased from 0.3% in women with a history of one previous CS to 6.74% in women with five or more previous CS. Another significant risk factor is placenta previa. PAS occurs in about 3% of cases of placenta praevia without a history of previous CS. In turn, in women after CS, the risk increases dramatically to 11%, 40%, 61% and 67% for the second, third, fourth, fifth and more CS, respectively [1, 2].

CASE PRESENTATION

A 35-year-old primiparous patient in the 32nd week of pregnancy was admitted to the Department of Obstetrics and Perinatology, University Hospital in Cracow, Poland, which is a center of excellence of placenta previa with a suspicion of PAS. In history, the patient had a state after bilateral removal of endometrial ovarian cysts and hysteroscopic polypectomy. In the ultrasound examination loss of clear zone, myometrial thinning, uterovesical hypervascularity and bridging vessels were found (Fig. 1). The suspicion of PAS was confirmed. During the hospitalization, in 33+6 weeks of pregnancy heavy vaginal bleeding occurred. It was decided to perform an emergency CS. During the operation, the PAS was confirmed. There was after removing, with difficulty, the placenta, massive bleeding occurred. Both uterine arteries were ligated, and the focal resection of the anterior uterine wall was performed (Fig. 2). Endometriosis on the posterior uterine wall was visible. In the perioperative period, the patient received 1 g of fibrinogen, 800 mg of misoprostol per rectum and 2 units of red blood cell concentrates. On the second day after surgery, intestinal obstruction occurred and was treated conservatively. The patient was discharged in good general condition on the 8th day after surgery. No abnormalities were found in the control ultrasound performed 4 weeks after the procedure (Fig. 3). Histopathological examination of the placenta and a fragment of the uterine wall revealed PAS grade 2 placenta accreta. The patient and child remain in good general condition the year after surgery. After one year of follow-up in the transvaginal US, a normal uterine wall without a niche was observed (Fig. 4).

DISCUSSION

In the last decade, the incidence of PAS has increased from 0.8/1000 to 3/1000 births. This rise is related to the increase in the number of CS and other procedures on the uterus. PAS diagnosis is based mainly on ultrasound examination. Typical ultrasound findings that were considered suggestive of PAS included loss of the "clear zone", abnormal placental lacunae, bladder wall interruption, myometrial thinning, placental bulge, focal exophytic mass, uterovesical hypervascularity, subplacental hypervascularity, bridging vessel and placenta lacunae feeder vessels. The additional imaging technique is MRI [1].

Due to the lack of randomized clinical trials, the optimal treatment of PAS spectrum disorders is currently indefinite and depends on the medical center's diagnostic and healing possibilities. Healthcare should be conducted in a specialized center with a multidisciplinary team with experience managing and treating patients with PAS [2].

Radical treatment — hysterectomy may prove to be a challenge for the operator due to the possibility of the presence of numerous adhesions in the abdominal cavity after previous cesarean sections, a thin lower part of the uterus, the possibility of villi invasion of the bladder wall or surrounding tissues, as well as reach vascularization of the pelvic organs. The main complication related to this procedure is massive perinatal hemorrhage, which can lead to secondary complications such as coagulopathy, multiple organ dysfunction syndrome and a high mortality rate.

The second option is to use conservative treatment. These methods include focal resection, leaving the placenta in situ. Intraoperative criteria for focal resection are the possibility of separating the bladder from the uterus, at least 2 cm of healthy myometrium above the cervix (caudal to the area of abnormal placental migration) and a size of the affected myometrium of less than 50% of the axial circumference of the uterus [3]. The next option uses compression sutures (*e.g.* B-Lynch, Hayman, Cho, Nausicaa) and intrauterine balloons.

Those treatments may be preceded by ligation or temporary embolization of the main arteries (iliac, uterine, or even aorta) [4, 5].

The presented case highlights the critical importance of obstetricians being vigilant for signs of PAS disorders during ultrasound examinations. Recognizing these signs early can significantly influence management strategies, particularly in emergency situations. This case demonstrates that conservative management of PAS may still be viable during an emergency CS, potentially leading to favorable outcomes for both the mother and the neonate. Uterus-preserving treatment strategies such as focal resection appear to be safe alternatives to peripartum hysterectomy. This underscores the value of preparedness and the ability to adapt to complex clinical scenarios to optimize patient care.

Article information and declarations

Ethics statement

Not required.

Author contributions

Daniel Lipka 50% — corresponding author, research concept and design, collection of data, writing the article; Gabriela Wilczynska-Postek 20% — collection of data, data analysis and interpretation; Magdalena Kolak 20% — data analysis and interpretation, writing the article Andrzej Jaworowski 5% — critical revision of the article; Hubert Huras 5% — critical revision of the article, final approval of article.

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Not required.

Conflict of interest

All authors declare no conflict of interest.

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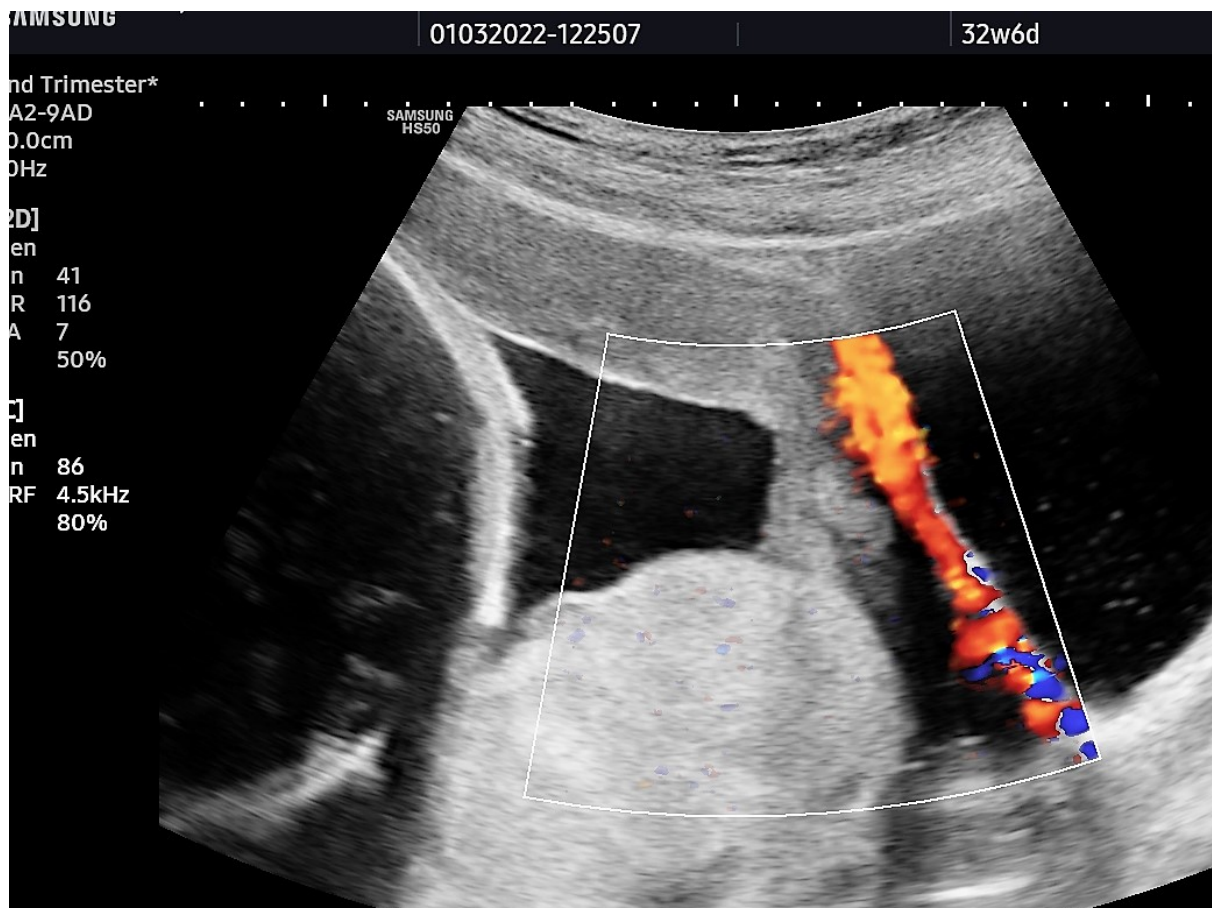


Figure 1. Ultrasound examination at admission: loss of clear zone, myometrial thinning, uterovascular hypervascularity and bridging vessels

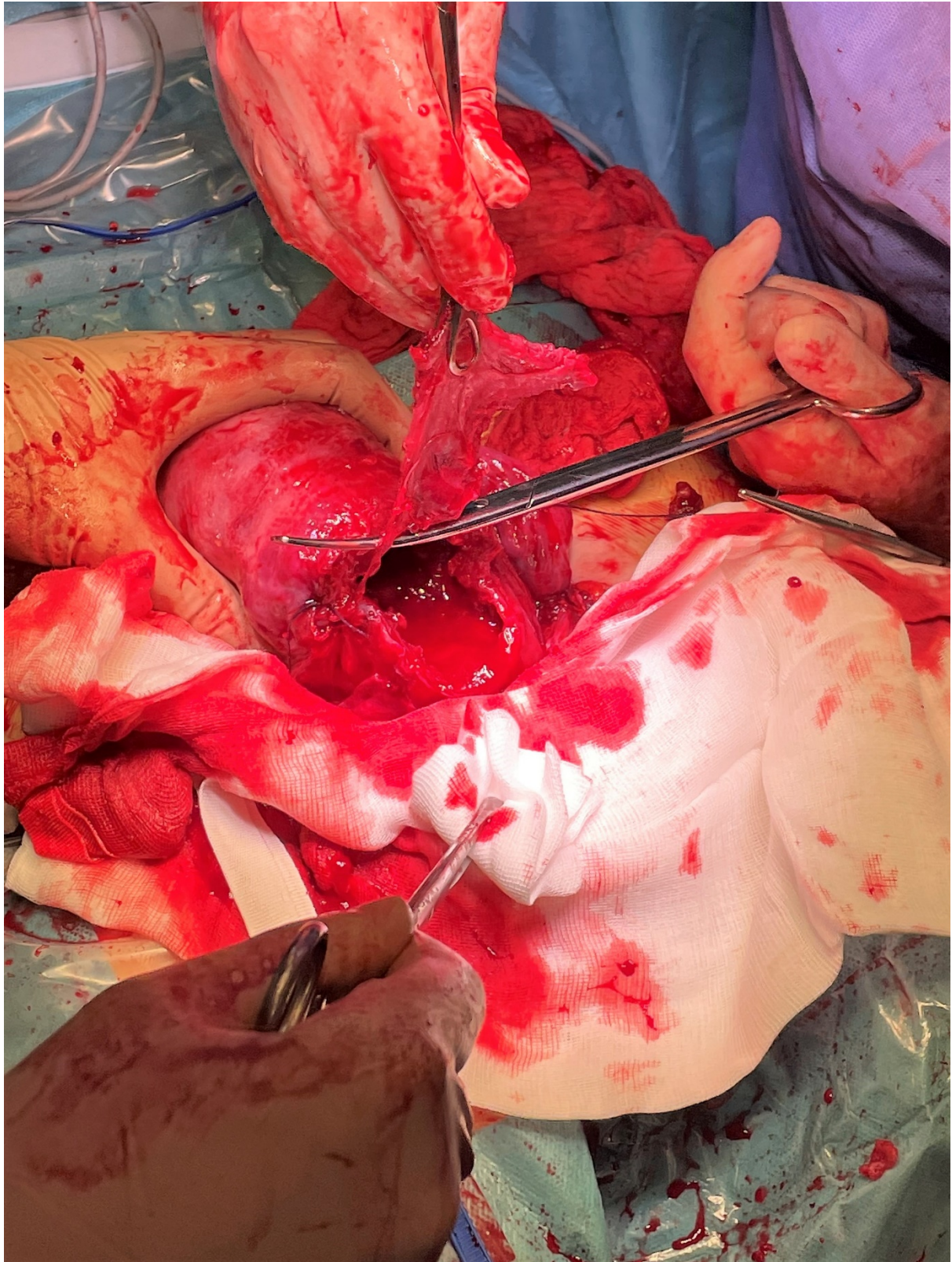


Figure 2. Focal resection of the anterior uterine wall

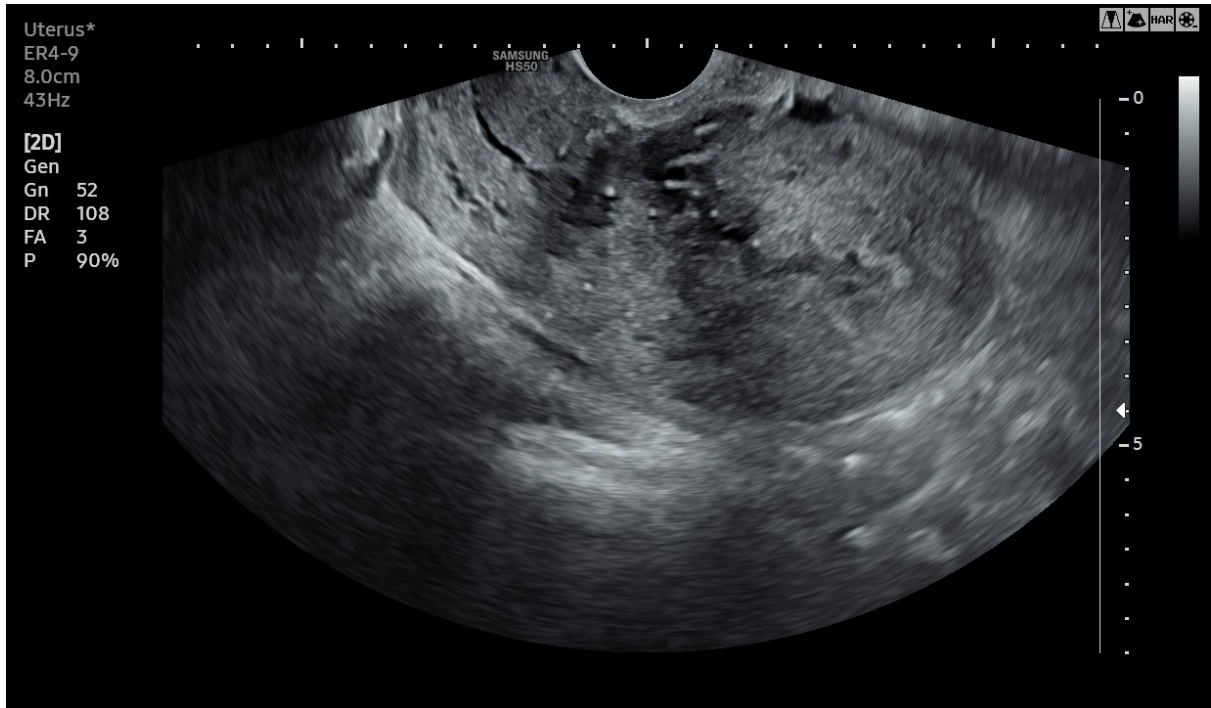


Figure 3. Control ultrasound performed 4 weeks after the procedure

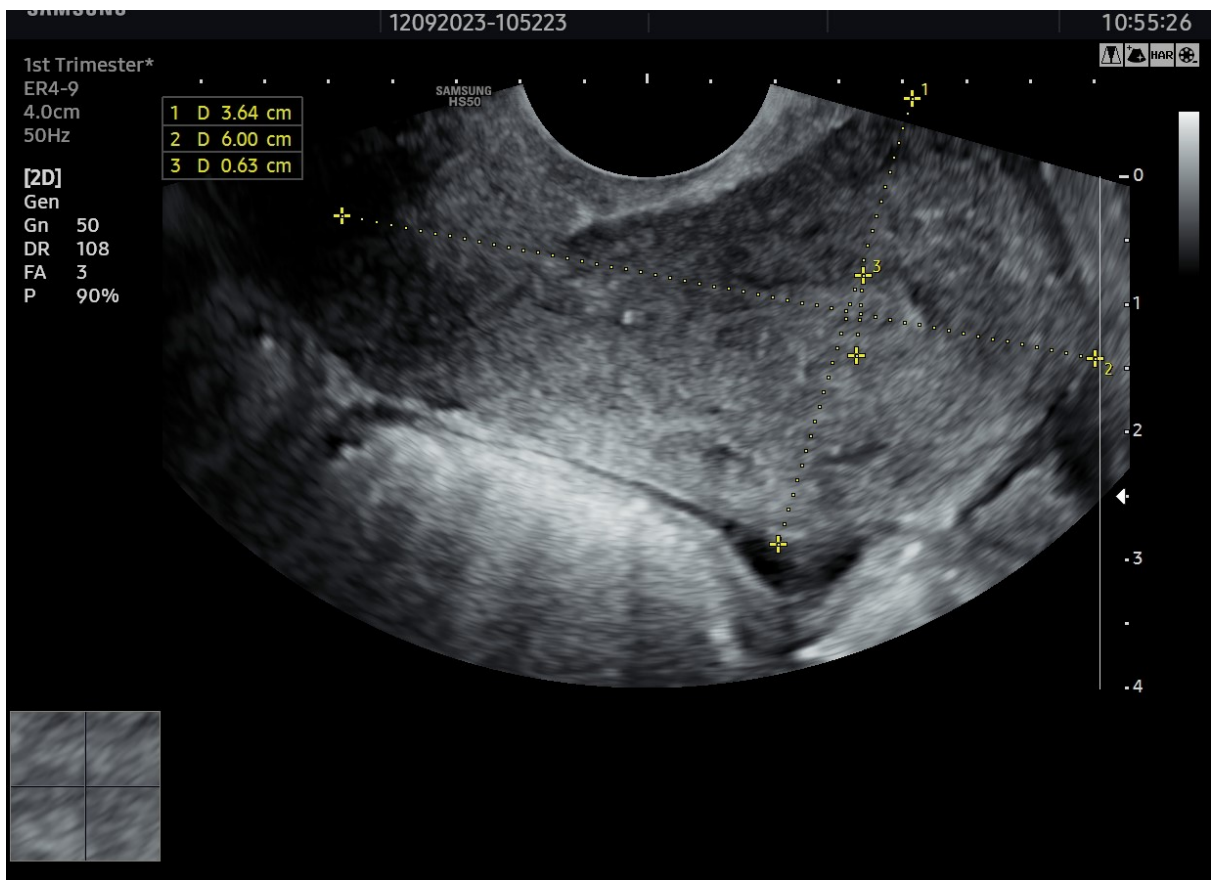


Figure 4. Control ultrasound performed one year after the procedure