A planned caesarean hysterectomy for placenta accreta spectrum at 35 weeks of gestation: antenatal identification and a multidisciplinary approach to manage an increasing condition

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A 37-year-old woman, who was 35 weeks into a singleton pregnancy, was admitted to our hospital for a planned caesarean hysterectomy.

Previously, she had two children, both delivered by caesarean section; this was her third pregnancy. She had no other notable medical history.

At 20 weeks' gestation, an ultrasound scan had shown a low-lying anterior placenta.

At 32 weeks, a repeat ultrasound scan showed placenta praevia with heterogeneity of the placental tissue—some lacunae were seen (figure). Additionally, a placental bulge was identified anteriorly, with deficient overlying myometrium: findings suggestive of placenta accreta spectrum (PAS).

An MRI confirmed the thin myometrium with underlying lacunae, loss of tissue planes at the site of the previous caesarean scar, and large varices in the uterovesical fold.

Laboratory investigations showed a preoperative haemoglobin concentration of 130 g/L (typical range 120–160); the platelet count, clotting screen, and renal function were within typical range.

The patient had an elective caesarean hysterectomy at 35 weeks and 4 days' gestation—a balance having been made between fetal maturity and the risk of an unplanned emergency delivery.

At surgery, the findings correlated with the pre-operative imaging; specifically, we found neovascularisation in the

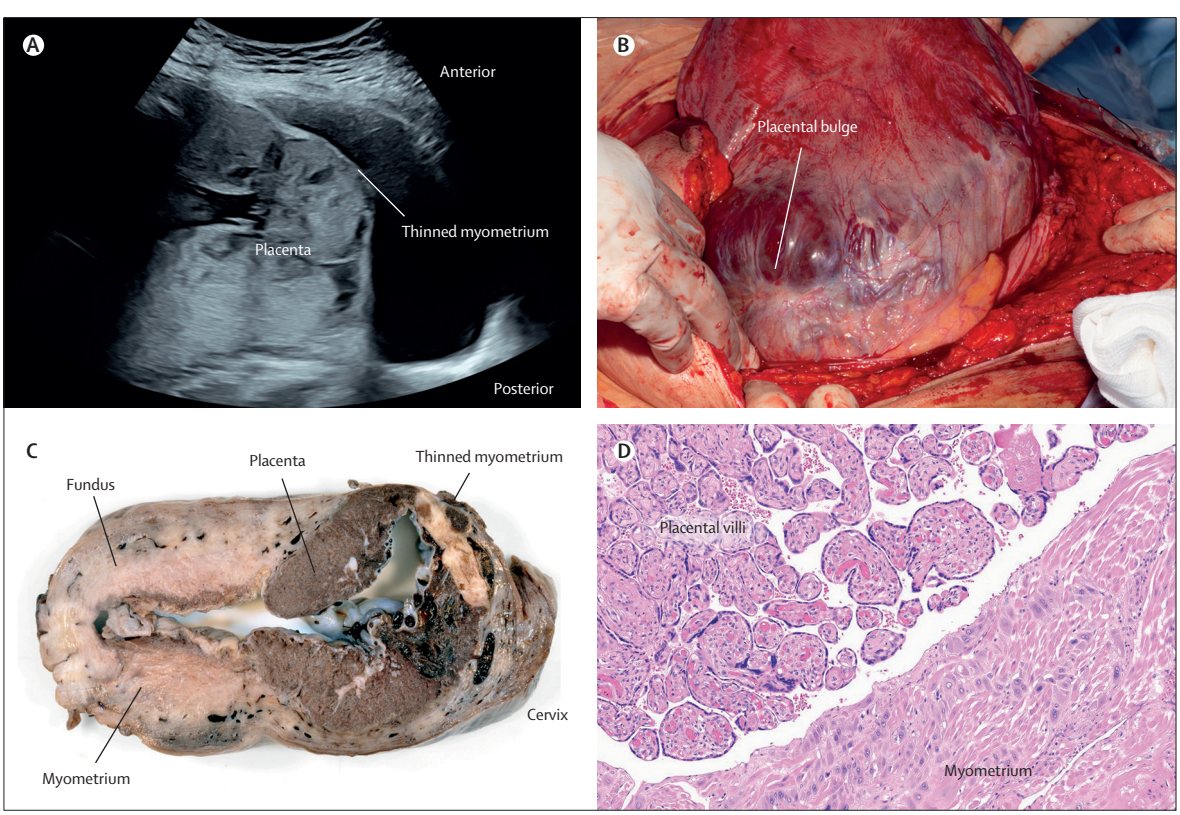

Figure: **Placenta accreta spectrum leads to caesarean hysterectomy at 35 weeks' gestation**
(A) At 32 weeks, an ultrasound scan shows placenta praevia with heterogeneity of the placental tissue. (B) Photograph of uterus at surgery shows neovascularisation in the uterovesical fold. (C) Postoperative examination of the gross morphology of a slice through the formalin-fixed excised uterus shows the placenta covering the cervix and an extremely thin myometrium anteriorly. (D) Histopathological examination of a sample of the uterus shows placental villi directly adjacent to myometrial fibres with no intervening decidua (haematoxylin and eosin stain). Original magnification ×10.

uterovesical fold (figure). The myometrium was particularly deficient and ruptured during uterovesical dissection. We delivered the baby girl via a fundal incision and closed the uterus, leaving the placenta in situ; we then did a total hysterectomy.

The patient, who had a blood loss of 2·5 L, was initially managed with high-dependency care, and made an uncomplicated recovery; mother and baby were allowed home after 5 days.

Gross morphology of the formalin-fixed excised uterus showed the placenta covering the cervix and an extremely thin myometrium anteriorly (figure); the site of the rupture was found with placental tissue visible through the defect. Histopathological examination of a sample of the uterus showed placental villi directly adjacent to myometrial fibres with no intervening decidua (figure). Loss of a typical placental contour, deep infiltrating trophoblast cells, and remodelling of deep uterine blood vessels were noted in additional sections—confirming morbid adherence of the placenta to the uterus.

In PAS, the placenta is abnormally adherent to the uterus, preventing spontaneous separation of the placenta after the birth; subsequent haemorrhage can result in maternal morbidity and mortality. Good outcomes depend upon identifying PAS prior to caesarean section, and appropriate intra-operative management.

Current classification delineates three main clinical grades of PAS: grade 1 is where the placenta is abnormally adherent with trophoblast attached to the myometrium; grade 2 is where the placenta is abnormally invasive with trophoblast invasion into the myometrium; and grade 3 is where the placenta is abnormally invasive with trophoblast breaching myometrial serosa.

The major risk factor for PAS is myometrial scarring, and as rates of caesarean section increase globally, the prevalence of PAS will continue to rise. Patients having a caesarean section should be informed about this potential future complication. Caesarean sections for PAS are best done electively by a multidisciplinary team to prevent extensive blood loss and adjacent organ injury (video).

See Online for video

Contributors

LCM conceptualised the article, collated the images, and wrote the manuscript. CS cared for the patient antenatally and did the ultrasound scans. DW cared for the patient and carried out the operation. KT analysed the specimen and provided microscopic and macroscopic images. We all reviewed and edited the manuscript and images. Written consent for publication was obtained from the patient.

Declaration of interests

We declare no competing interests.