Hypogastric artery ligation for morbidly adherent placenta

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Objective
To analyse preoperative and early postoperative complications and outcomes in a group of high-risk patients with morbidly adherent placentas after selective bilateral hypogastric artery ligation (BHAL) at the time of delivery.

Methods
This was a longitudinal prospective cohort study in a tertiary perinatal centre with more than 5,000 deliveries per year. The high-risk group consisted of patients with prenatally ultrasound-diagnosed morbidly adherent placenta that underwent BHAL at the time of delivery between January 2005 to December 2016.

Results
Twenty-seven singleton pregnancies with ultrasound findings of morbidly adherent placenta previa after previous caesarean section were identified and BHAL was performed at the time of delivery after midline laparotomy, extraplacental uterine incision and extraction of the fetus. Mean maternal age at birth was 32 years, and there were 18 primiparous women. No cases of stillbirth were recorded and the mean gestational age at delivery was 34 weeks with a mean birth weight of 2345 grams (514-3430 grams, SD-780.6). An elective caesarean section was performed in 85,2% (23/27) of cases with emergency section in the other 14,8% (4/27) because of bleeding or contractions. In 96,3% (26/27) of cases BHAL was performed prior to placental manipulation. Separation of the placenta was possible in 33,3% (9/27) of the cases. In 2 cases hysterectomy was necessary due to perioperative uterine hypotonia. In 25,9 % (7/27) of our patients the uterus was preserved, the dehiscence of the lower uterine segment was resected, and the defect was closed with a suture. In cases where placenta did not separate, hysterectomy followed. The following postoperative complications were recorded: one unrecognized bladder injury, and one febrile morbidity without soft tissue necrosis (7%, 2/27). In the follow-up, 71% (5/7) patients with preserved uterus become pregnant.

Conclusion
Selective BHAL is a safe and effective method in cases with ultrasound diagnosed morbidly adherent placenta. It preserves future fertility and has a minimum of preoperative and postoperative complications.