

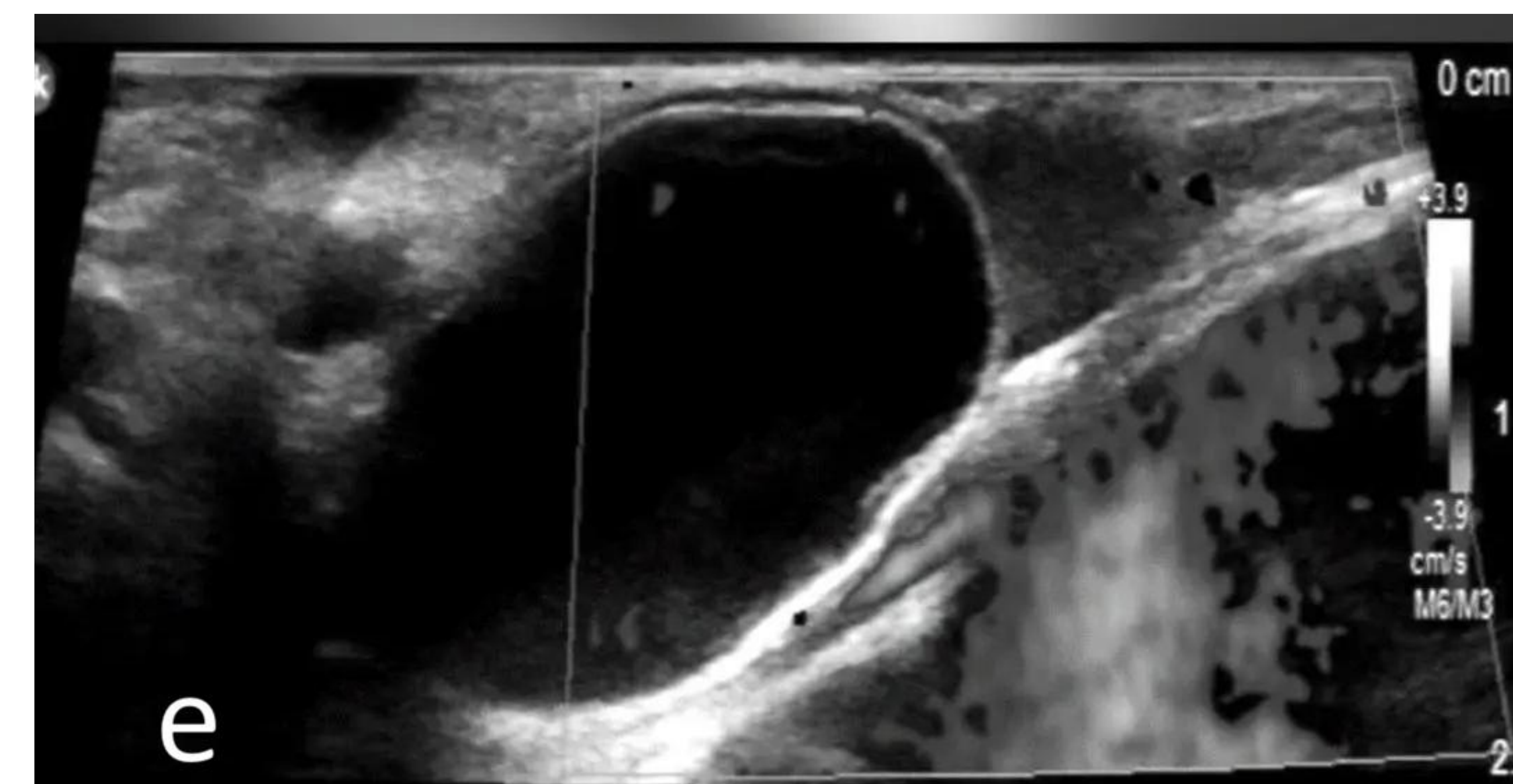
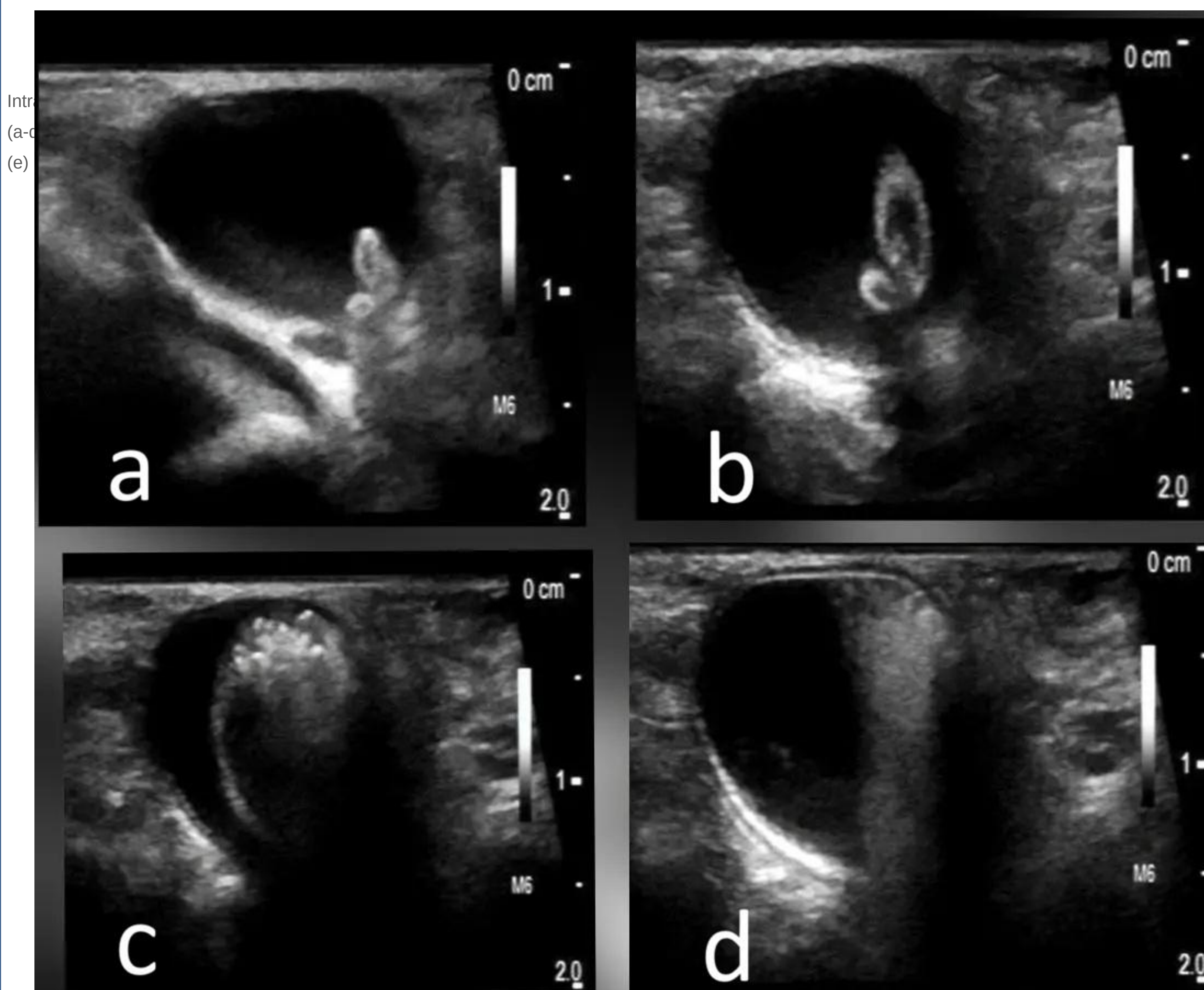
State of the art ultrasound navigation in cesarean section for placenta percretaof the aorta

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Objectives: o evaluate the effectiveness of intraoperative contact duplex ultrasonography (ICDUS) in the navigation of prophylactic balloon occlusion of the aorta (PBOA) is placenta percreta cases.

Methods: In a reference center for PAS not equipped with X-ray navigation, 87 patients with placenta percreta and low bladder invasion (FIGO Grade 3b PAS, Types T3-T4 of the topographic classification) were delivered between 2020 and 2025 and divided into two groups based on the primary method of bleeding prevention. Group 1 – 62 patients: distal hemostasis, Group 2 – 25 patients: PBOA under ICDUS navigation performed using a BK5000 ultrasound system (GE Healthcare, USA) with a 12-5 MHz sterile probe.



Intraoperative contact duplex ultrasonography (a-d) transverse scans of the abdominal aorta show a balloon inflation.

(e) longitudinal scan shows balloon occlusion of the abdominal aorta

Results:

In all cases, ICDUS allowed real-time control of introducer movement, balloon placement, and aortic blood flow occlusion. The only PBOA-associated complications were 3 (12%) hematomas at the site of femoral artery puncture, which did not require surgical intervention.

A total blood loss volume of ≥ 2500 ml was seen in 25 cases (40.3%) in Group 1 but in only 3 case (12%) in Group 2 ($p=0.011$). Average total blood loss (2550 ml vs 980 ml) of women was significantly higher in Group 1 in comparison to Group 2 ($p<0.001$).

Conclusions: ICDUS is a safe and effective method of navigation in PBOA to reduce blood loss in cases of placenta percreta..