

Pelvic vascular malformation in pregnancy: a multidisciplinary approach

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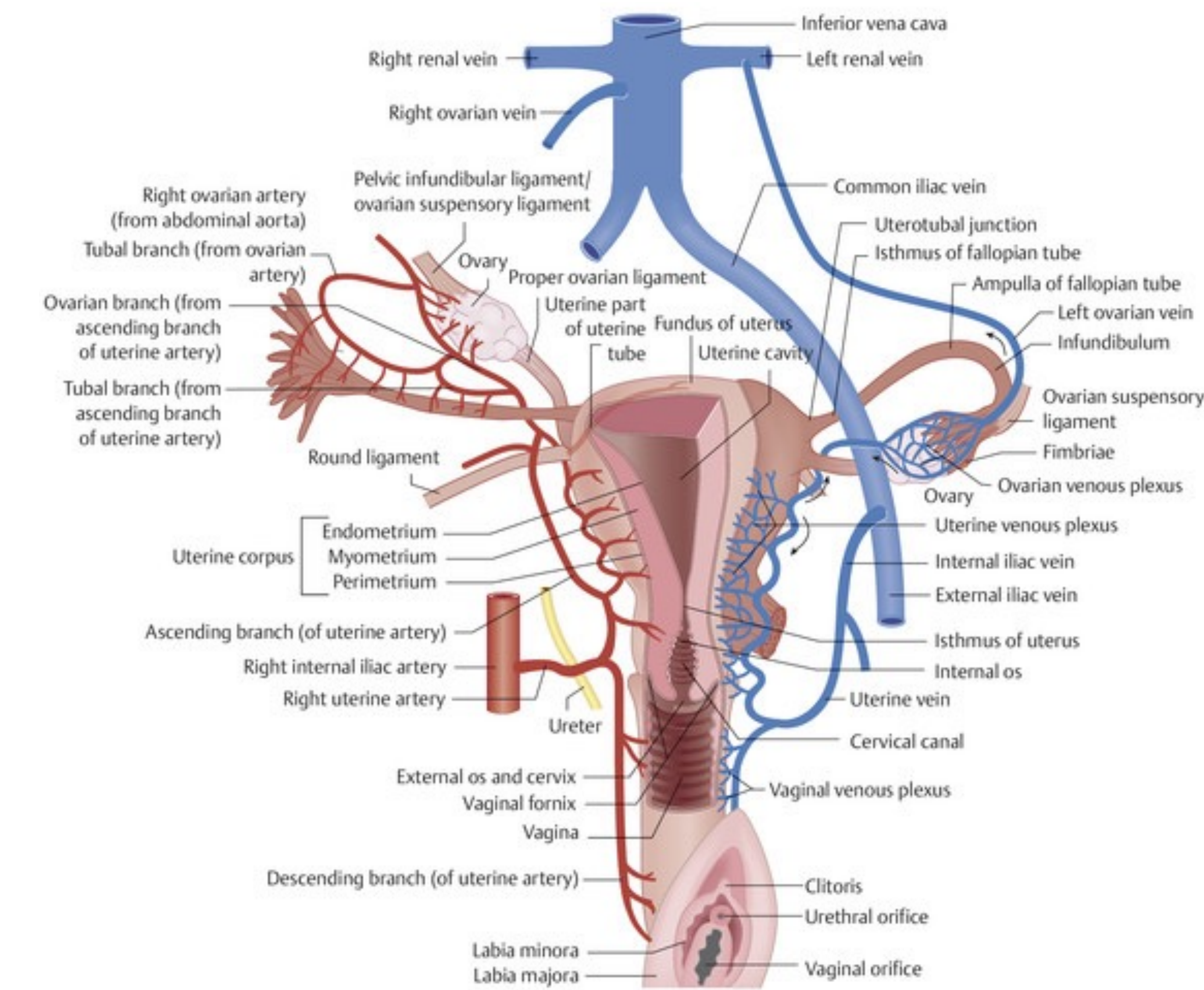
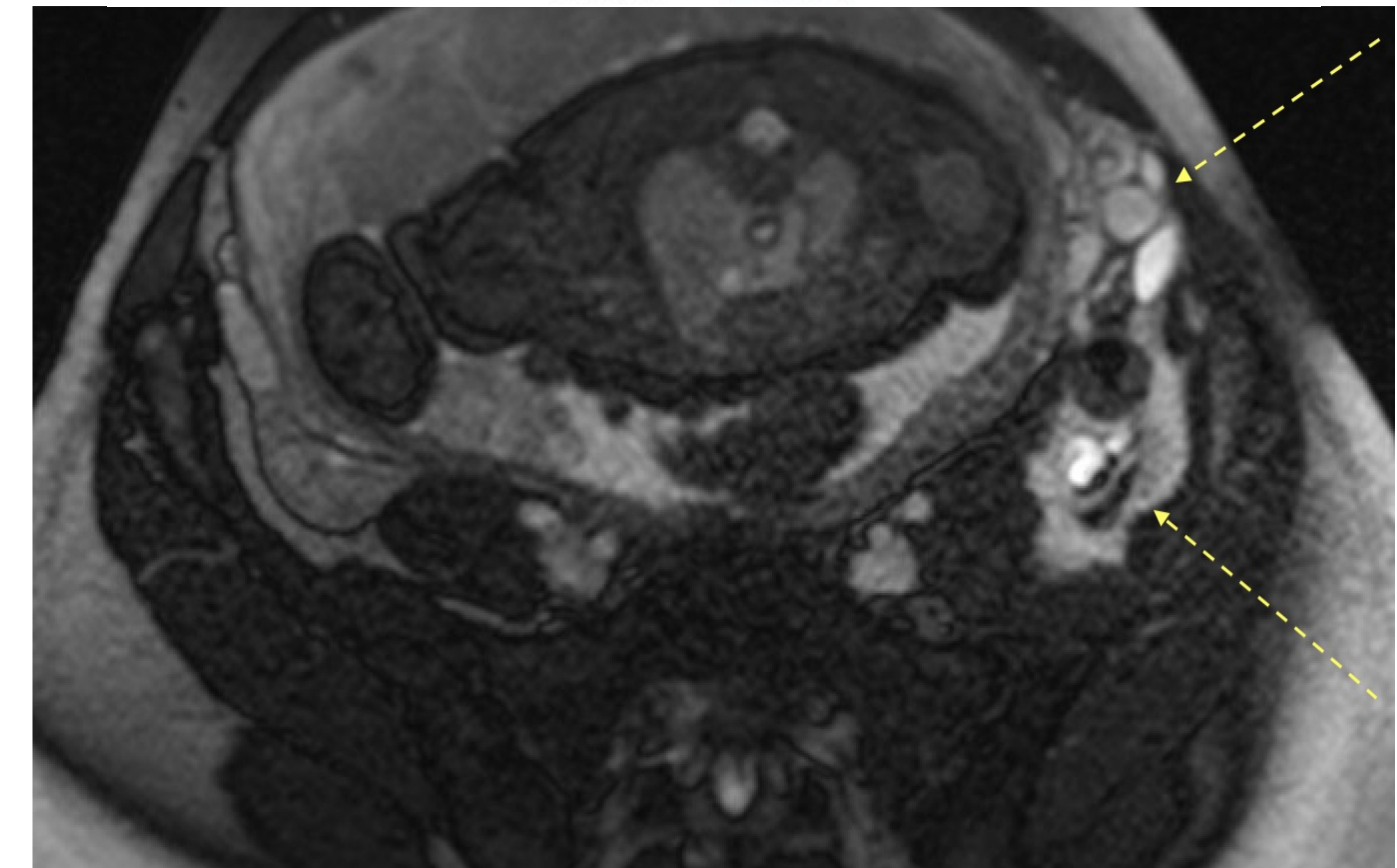


Background

- Vascular malformations (VMs) in the pelvis are rare and can be asymptomatic for years but can grow with hormonal changes of pregnancy.
- Because the treatment strategy depends on content and flow characteristics, correct diagnosis and classification are crucial.

Case presentation

- 31-year-old G1P0 with a painful, swollen groin mass
- Diagnosed with a left pelvic VM at 21 weeks gestation
- Color/spectral doppler ultrasound consistent with high flow arteriovenous malformation; subsequent non-contrast MRA pelvis indeterminant re: exact location and flow characteristics
- Vaginal delivery was contraindicated due to concern for rupture



Multidisciplinary Peripartum Management

Obstetrics

- Cesarean delivery scheduled at 39 weeks
- No abnormally dilated vascular structures identified during surgical entry

Vascular Surgery

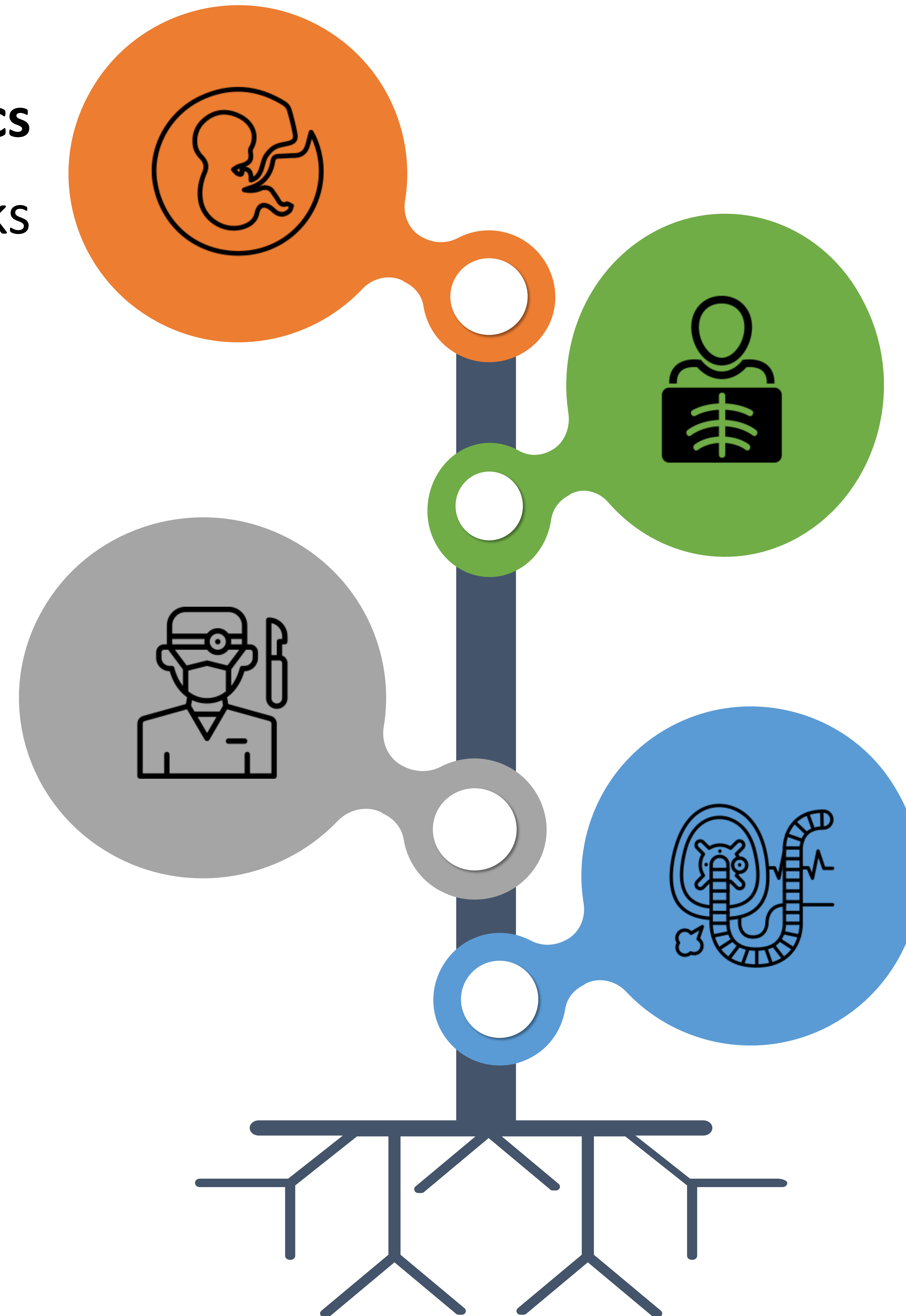
- Present during entire surgery for vascular surveillance and intervention as needed

Interventional Radiology

- Diagnostic angiography (dose reduction)
- Bilateral internal iliac artery (IIA) balloon catheters
- Balloons inflated just prior to uterine incision

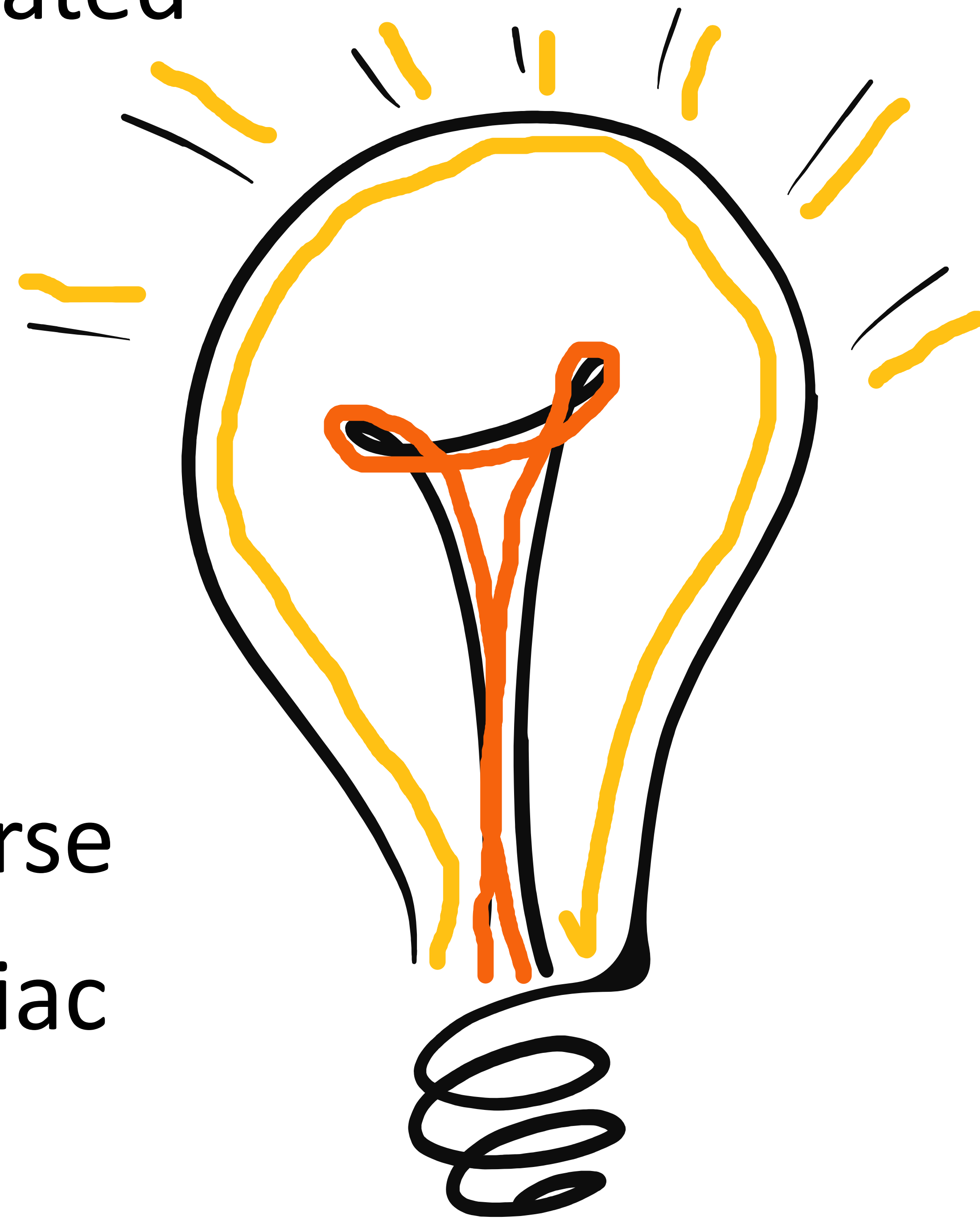
Anesthesiology

- Thorough consent process
- Combined spinal epidural (CSE) → GETA
- Pre-induction arterial line, 2 peripheral IVs
- 6u pRBC, 4u FFP, 1u Platelets, Cell salvage



Outcome and Discussion

- IIA balloons were inflated for 2 minutes during neonatal delivery then deflated to evaluate for hemostasis
- Oxytocin, methylergonovine, tranexamic acid
- QBL 700mL
- Catheters/sheaths removed
- Uncomplicated postoperative course
- Pelvic CTA (8w postpartum): left iliac venous varix/aneurysm



- Pelvic VM growth can be stimulated by trauma or hormonal change
- Digital subtraction angiography (DSA) is the gold standard for diagnosis
- Peripartum characterization is challenging due to risk to growing fetus
- A multidisciplinary approach minimizes bleeding and maximizes resources in the case of massive hemorrhage