UT Southwestern Medical Center

Advanced Abdominal Ectopic Pregnancy

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Background

- Embryo implants within peritoneal cavity excluding fallopian tubes, ovaries and cervix
- Incidence of approximately 1 in 10,000 to 30,000 live births
- Mortality rates as high as 18% and 90% to the mother and fetus respectively
- Majority of cases diagnosed at the time of surgery, often missed on ultrasound

Case:

- 28-year-old G2P1 at 23w0d with advanced abdominal ectopic pregnancy

Imaging:

- Placental arterial supply from the uterine/ovarian arteries and venous drainage into ovarian, uterine and internal iliac veins

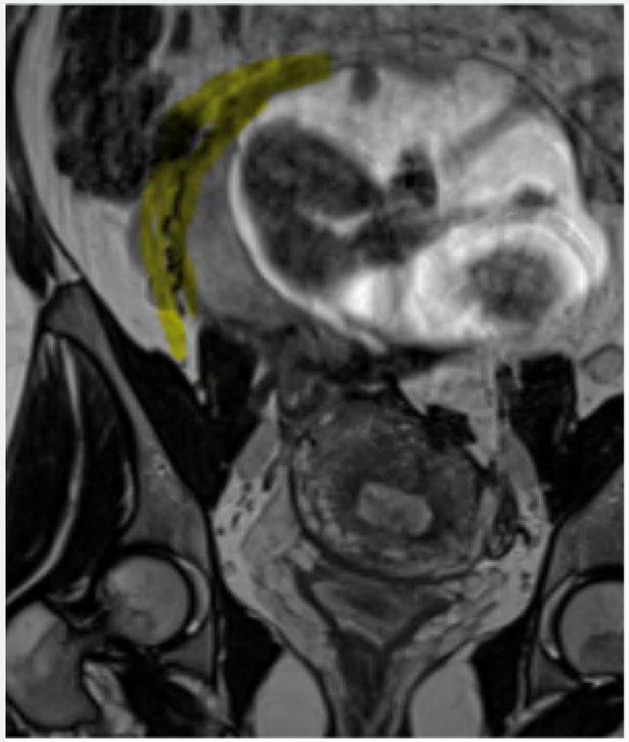

Figure 1: MRI Abdomen/Pelvis showing advanced ectopic pregnancy within the central abdomen, adherent to the anterior and lower segment of the uterine wall of the retroverted uterus.

Plan:

- Multidisciplinary discussion held amongst OBGYN, Gynecology-Oncology, NICU, Interventional Radiology and Anesthesiology teams
- General endotracheal anesthesia, arterial line, central access, blood products available in room as well as a Belmont Rapid Infuser
- IR to place and inflate bilateral internal iliac artery balloons prior to skin incision
- OBGYN to utilize vertical incision to deliver newborn with Gynecology-Oncology and trauma surgery prepared to assist with a hysterectomy and hemostasis if necessary
- NICU to resuscitate newborn

Outcome:

- Balloons successfully minimized bleeding with only 4 u PRBC and 2 u FFP transfused
- Extubated with pre-emergence TAP block at procedure completion and discharged on post op day 6
- NICU intubated and resuscitated the newborn with 1 month NICU stay followed by discharge home

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Teaching Points

- Internal iliac ballooning provided excellent hemostasis, despite uncertain supply to placental bed
- Alternative includes abdominal aortic occlusion balloon (REBOA)
  - Per studies show lower hemorrhage volumes, shorter balloon dilatation time and less fetal radiation
  - Complicated by increased distal ischemia
- Imaging vital to assist with determining blood supply and guiding management; however, most cases are not diagnosed until delivery/surgery
- Multi-disciplinary planning and close communication with surgical team were essential to positive outcomes
- Further studies warranted, but exceedingly challenging due to rare nature of these pregnancies

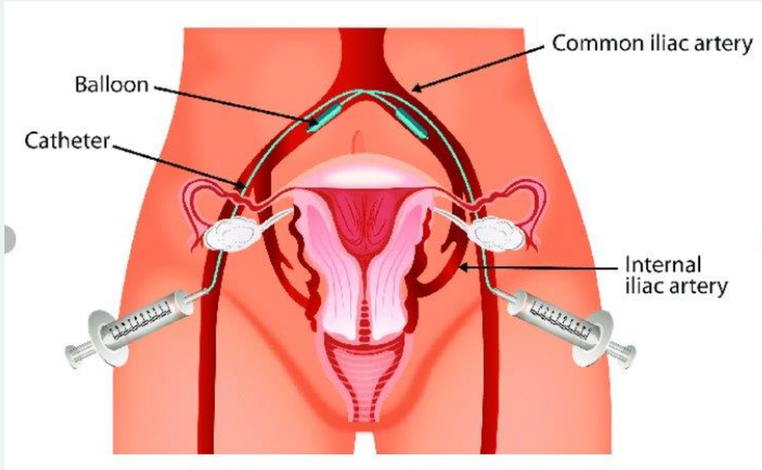

Figure 2: Internal iliac ballooning

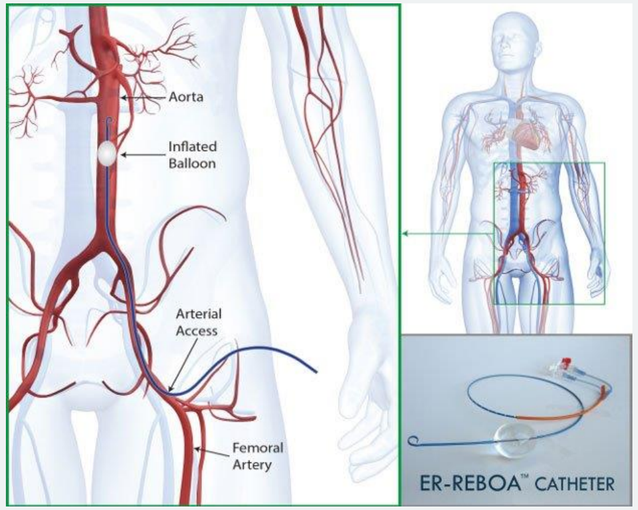

Figure 3: Abdominal aortic occlusion balloon (REBOA)

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