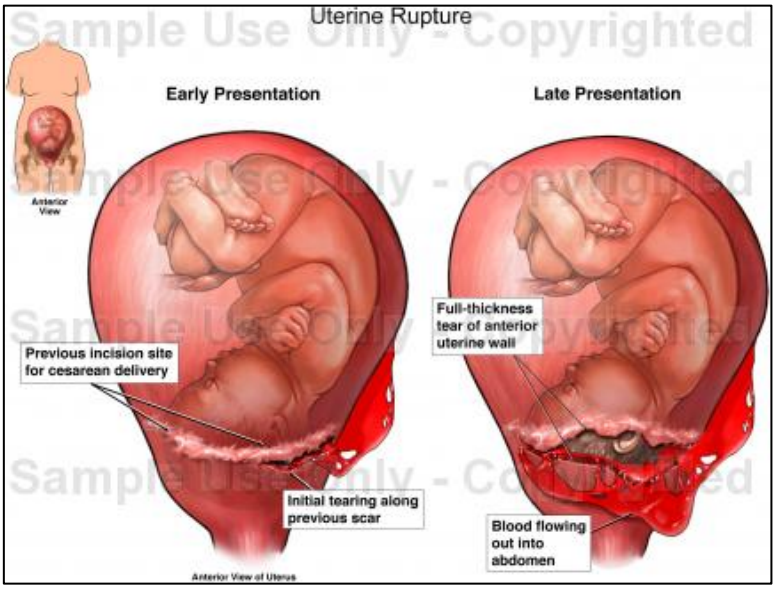
Uterine Rupture

Anesthetic Pearls: Anesthetic Implications and Management of Uterine Rupture

Incidence: 0.08 - 0.1%

- 4.3% occur prior to labor
- 35% of cases recognized before delivery
- 20% at emergency cesarean section
- 45% after vaginal delivery



Maternal Mortality:

- Complete uterine rupture (4%)
- Scar dehiscence (very rare mortality)

Fetal Mortality: 50 – 70% with uterine rupture

Etiology:

A. **Incomplete** rupture or dehiscence of uterine scar in patient with previous cesarean section (patients undergoing vaginal birth after cesarean delivery [VBAC])
B. **Complete** rupture of unscarred uterus from obstetric or other cause (most commonly occurs during labor).

Risk Factors:

1. Previous uterine surgery, curettage, or myomectomy (classical vertical uterine incision)
2. Prolonged difficult labor
3. Uterine manipulation
4. Grand multiparity (multiple concurrent gestations)
5. Uterine distention with macrosomia or hydramnios
6. Infection
7. Adenomyosis or trophoblastic invasion (placenta accreta)
8. Forceps assisted delivery
9. Excessive fundal pressure

Presentation: severe constant abdominal pain, hypotension, bradycardia, cessation of uterine contractions, fetal distress or arrest, uterine irritability

Management:

A. Immediate cesarean delivery under general anesthesia (emergent treatment is necessary because outcome worsens with delayed therapy).
B. Possible obstetric hysterectomy
C. Active resuscitation of both mother and infant (the mother's abdomen can hold up to 2 - 4 liters of blood after catastrophic uterine rupture therefore resuscitation focuses on volume and blood replacement).
D. Anesthetic induction drugs of choice:
   - IV Ketamine 1 mg/kg or Etomidate 0.3 mg/kg
   - Succinylcholine 1 mg/kg