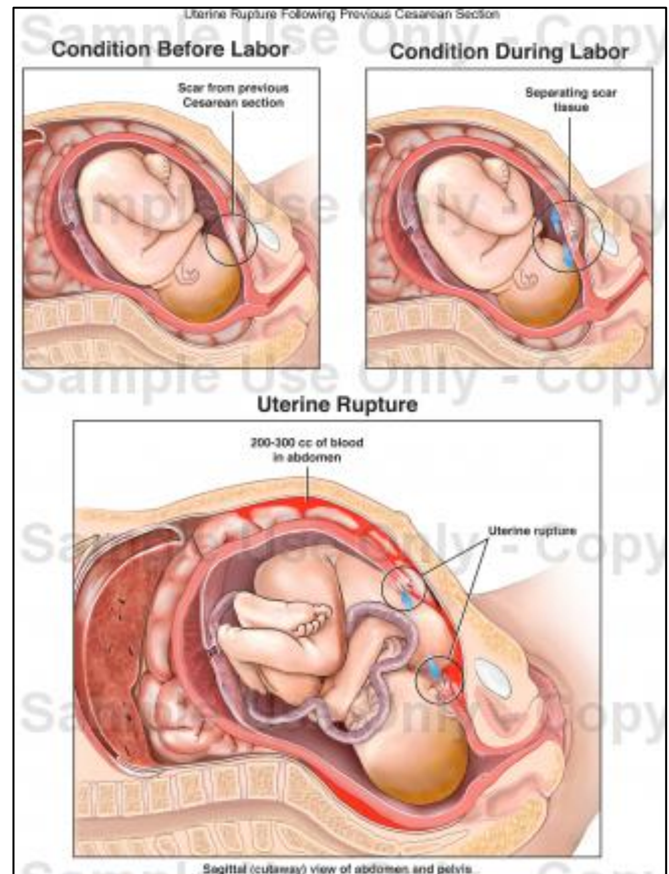
Diagnosis of Uterine Rupture

Anesthetic Pearls: Anesthetic Implications and Management of Uterine Rupture

Uterine rupture is uncommon but a potentially catastrophic obstetric complication. Mortality is low when rupture is promptly recognized and treated. Maternal death from uterine rupture occurs because the possibility of rupture is not considered, blood transfusions are inadequate, and laparotomy is delayed or not done. With traumatic rupture or spontaneous rupture and no uterine scar, maternal mortality from obstetric hemorrhage was 26% and 66%, respectively. Incidence in full term pregnancy in the United States is up to approximately 0.1%.



Causes:

1. Separation of the uterine scar (prior c-section / VBAC)
2. Rupture of the myomectomy scar
3. Previous difficult deliveries
4. Rapid / spontaneous / tumultuous labor
5. Prolonged labor in association with excessive oxytocin stimulation or cephalopelvic disproportion
6. Weak or stretched uterine muscles (grand multipara, multiple gestations, or polyhydramnios)
7. Traumatic rupture (iatrogenic) occurring from intrauterine manipulations, difficult forceps applications, and excessive suprafundal pressure

Diagnosis (signs and symptoms depend on the extent of the rupture):

A. Vaginal bleeding
B. Severe uterine or lower abdominal pain
C. Shoulder pain (referred) from sub-diaphragmatic irritation by blood
D. Disappearance of fetal heart tones
E. Severe maternal hypotension and shock

Management and Treatment:

1. Prompt recognition and obstetrical planning
2. Operative intervention (laparotomy with primary repair vs. C-section vs. hysterectomy)
3. Rapid sequence intubation with general anesthesia
4. Adequate infusion access (2 large bore IV's or CVL)
5. Aggressive fluid management
6. Blood transfusion (maintaining and maximizing maternal oxygen carrying capacity)