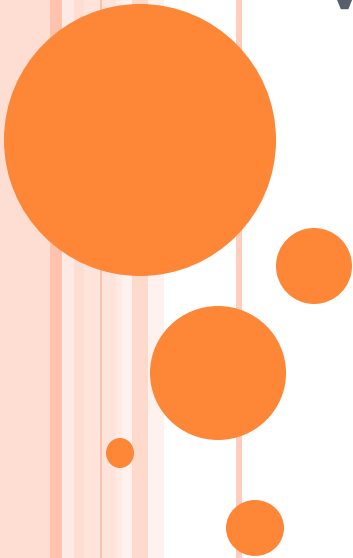


RETAINED PLACENTA AFTER VAGINAL BIRTH



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INTRODUCTION

The third stage of labor is the interval from delivery of the infant to expulsion of the placenta.

Delayed placenta separation and expulsion is a potentially life-threatening event because it impedes normal postpartum contraction of the uterus, which can lead to hemorrhage.



DEFINITION

- lack of expulsion of the placenta within 30 minutes of delivery
- administration of a uterotonic agent and controlled cord traction: **98 percent**
- Physiologic management :increases the frequency of retained placenta **only 80 percent** it takes approximately 60 minutes before 98 percent of placentas are expelled
- 3-fold higher in preterm gestations
- In second trimester the risk is 21-fold higher compared with term gestations
- For gestations at 20 and 30 weeks to achieve a 90 percent spontaneous placental delivery rate, a life-table analysis predicted it would take 180 and 21 minutes, respectively



In part for these reasons

W H O

concluded that the length of time before making a
diagnosis of retained placenta should be

"left to the judgement of the clinician"



TYPES OF RETAINED PLACENTA

- **Trapped or incarcerated placenta**
- **Placenta adherens**
- **Placenta accreta spectrum**



PATHOGENESIS

- An abnormality in one or more of these phases may be the mechanism for retained placenta:
- **Latent phase** – Immediately after birth, all of the myometrium contracts except for the portion beneath the placenta.
- **Contraction phase** – The retroplacental myometrium contracts
- **Detachment phase** – Contraction of the retroplacental myometrium produces horizontal (shear) stress on the maternal surface of the placenta, causing it to detach.
- **Expulsion phase** – Myometrial contractions expel the detached placenta from the uterus.



PREVALENCE

- In a systematic review of observational studies, the median prevalence of retained placenta at 30 minutes in high-resource settings was 2.7 percent of vaginal deliveries compared with 1.5 percent in low-resource settings
- prevalence are probably related to differences in epidemiology and risk factors.



RISK FACTORS

- Previous retained placenta
- Preterm gestational age
- Use of ergometrine **in contrast to oxytocin**
- Uterine abnormalities **17 percent**
- Previous cesarean delivery
- Preeclampsia, stillbirth, SGA
- Velamentous cord insertion **breakage of the fragile cord**
- Maternal age ≥ 30 years
- Delivery in a teaching hospital



CLINICAL FINDINGS AND DIAGNOSIS

- diagnosis of retained placenta when the placenta has not been expelled within 30 minutes of delivery of the infant.
- diagnosis of trapped placenta is made when the classic clinical signs of placental separation are not present (lengthening of the umbilical cord, gush of blood from the vagina, change in the shape of the uterine fundus from discoid to globular, elevation of the fundal height, and contraction of the fundus) and the edge of the placenta is palpable through a small but patent cervical os.
- A diagnosis of placenta adherens or placenta accreta is made in the absence of signs and symptoms of placental separation. Placenta adherens is generally only clinically distinguishable from placenta accreta at the time of attempted manual removal. If a clean plane of separation can be created between the entire placenta and decidua, the diagnosis is placenta adherens. If areas of myometrial invasion prevent clean separation of part of the placenta, the diagnosis is focal placenta accreta. However, a mild focal placenta accreta can be difficult to distinguish clinically from placenta adherens.



IMAGING

- Ultrasound can distinguish between a detached trapped placenta and an adherent placenta
- With a trapped placenta, the myometrium is thickened all around the uterus and the placenta is seen within but largely separate from the uterine body in the lower segment.
- By contrast, with an adherent placenta the myometrium will be thickened in all areas except where the placenta is attached, where it will be very thin or even invisible and no area of the placenta will be separate from the uterine body.



COMPLICATIONS

- postpartum hemorrhage
- postpartum endometritis
- Uterine inversion less common
- In high-resource settings, death from retained placenta is very rare.
- In settings with fewer resources, however, the case fatality rate is commonly around 1 percent, depending upon women's ability to access services for treatment and support



INDICATIONS FOR INTERVENTION

- **Patients with severe bleeding**
- Severe bleeding is an obstetric emergency that requires prompt intervention. Bimanual compression is not possible with a retained placenta, but aortic compression may be effective as an emergency measure.
- The retained placenta should be manually removed as soon as possible.
- Expulsion of the placenta promotes global uterine contraction and will likely reduce bleeding



PATIENTS WITHOUT SEVERE BLEEDING

- perform a physical examination (and sometimes ultrasound) to determine whether the placenta is merely trapped or still adherent
- There is no consensus worldwide as to when intervention is indicated.
- We suggest discontinuing expectant management at 60 minutes based on data suggesting that delaying intervention until at least 30 minutes have elapsed will lead to spontaneous delivery of many placentas, and the risk of hemorrhage does not begin to increase until 20 to 30 minutes after birth
- In the second trimester, for most patients, waiting two hours for placental expulsion



MANAGEMENT

- **Apply controlled cord traction**

 - Brandt-Andrews maneuver

 - "Windmill technique"

- **Manage bleeding**

- oxytocin should be administered

- Prostaglandin F2-alpha

- Tranexamic acid (1 gram intravenous [IV] injection)

- Ergometrine should be avoided

- Intrauterine balloon tamponade has no role in this situation



If these measures fail to reduce bleeding, then **aortic compression** (checking that it has been effective by feeling for loss of femoral pulse) is a useful maneuver to stop pelvic blood flow while the patient's hemodynamic and hemostatic status is evaluated and supported and while arrangements for laparotomy are made.



ADDRESS CONTRIBUTING UTERINE FACTORS

○ Excessive cervical/uterine contraction

Nitroglycerin

- ❖ two sprays (400 micrograms/spray) onto or under the tongue
- ❖ administration of sequential bolus IV injections: 50 micrograms, may repeat at one minute intervals (maximum cumulative dose of 250 micrograms)
- ❖ sublingual tablets 0.6 to 1 milligram

Uterine relaxation occurs within 60 seconds after the dose and lasts for one to two minutes.

Side effects

- drop in blood pressure
- Headache is a common side effect



ADDRESS CONTRIBUTING UTERINE FACTORS

Atony

- If the uterus is atonic, separation and/or expulsion of the placenta may fail to occur.
- IV infusion of **oxytocin** may facilitate placental delivery.
- A reasonable dose is 10 to 30 units in 500 mL saline, with the rate of infusion adjusted, as needed, to reverse uterine atony and prevent recurrence.



PERFORM MANUAL EXTRACTION

- Manual extraction is painful
except in cases of severe bleeding or other emergency
- adequate analgesia should be achieved with regional or general anesthesia or conscious sedation.
- performed in a room where aseptic technique is easily achieved and appropriate personnel, medications, and equipment
- administer prophylactic antibiotics
- one hand follows the path of the umbilical cord through the vagina, cervix, and lower uterine segment to find the maternal-placental interface, while the other hand is placed on the mother's abdomen and used to maintain the uterine fundus in position
- If the opening of the cervix is too small nitroglycerin
- no role for routine uterine curettage or aspiration after manual extraction
risk of uterine perforation and Asherman syndrome
- Routine ultrasound evaluation of the uterus after manual extraction is also unnecessary



MANAGEMENT OF REFRACTORY OR COMPLICATED CASES

Instrument extraction

- If digital extraction is not possible, a large-headed forceps (Bierer forceps, ring forceps) can be used to grip and extract the placenta in pieces or as an intact specimen; ultrasound guidance can be helpful.
- This procedure requires less analgesia than digital extraction.
- The placenta and the uterus should be examined after extraction to ensure that the placenta was completely removed.



MANAGEMENT OF REFRACTORY OR COMPLICATED CASES

Incomplete extraction

- During manual placental extraction, the clinician may note a small area where the placenta is very adherent to the uterus.
- This can usually be managed by slow persistent finger dissection to create a plane of separation at the maternalplacental interface.
- Curettage should be avoided, if possible, as the myometrium may be very thin at the point of adherence, thus increasing the risk of perforation.
- Curettage of the postpartum uterus also increases the risk of formation of intrauterine adhesions (Asherman syndrome).
- However, if placental tissue is retained and the patient is bleeding excessively, then curettage using a large blunt placental curette or aspiration is reasonable to remove the remaining placental tissue



MANAGEMENT OF REFRACTORY OR COMPLICATED CASES

Unexpected placenta accreta spectrum

- Rarely, the placenta accreta spectrum is first recognized at the time of manual removal of the placenta.
- there is no plane of dissection between the uterus and placenta and, almost invariably, attempts at manual removal lead to life-threatening hemorrhage.
- We suggest administration of uterotonic drugs and preparation for hysterectomy, which is the definitive therapy



UNPROVEN AND INEFFECTIVE APPROACHES

- There is no high-quality evidence that any pharmacologic therapy is effective for expulsion of placenta adherens in patients who have been managed with parenteral oxytocin and cord traction as part of active management of the third stage of labor
- administration of an additional uterotonic drug may be effective in this setting, in part because placenta adherens appears to result from contractile failure in the retroplacental area
- combination of an ergot derivative and oxytocin appears no more effective than oxytocin alone for preventing retained placenta and increases the rate of side effects
- avoiding intraumbilical oxytocin injection or administration of prostaglandins by any route for facilitation of expulsion of a retained placenta



PREVENTION

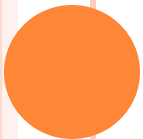
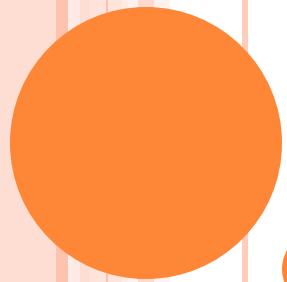
- Cord drainage during the third stage reduced the frequency of retained placenta at 30 minutes



RECURRENCE RISK

- the absolute risk of recurrent retained placenta
6.25 percent
- the absolute risk of recurrent manual removal of
the placenta 17 percent





THANKS