Guideline: Management of the 3rd Stage of Labor

The following guideline covers management of the 3rd stage of labor for term or near-term pregnancies delivering vaginally (spontaneous or assisted). These guidelines do not apply to preterm deliveries or other circumstances where alternative management is indicated.

General Principles
The 3rd stage of labor may be managed expectantly or actively, and several protocols for these have been promoted. Recent evidence compiled by the WHO and Cochrane Library have included systematic reviews concluding that active management of the 3rd stage (AMTSL) provides specific benefits of reducing specific risks to mothers, but carries modest risks. When executed properly, there does not appear to be an increased risk of retained placenta, as purported by some.

Ultimately, choice of management of the 3rd stage should be discussed in detail with the mother, either antenatally or early in labor. Many will have a specific idea of how they would like the 3rd stage managed, including purely physiological management and significantly delayed cord clamping. The clinician's role is to provide a balanced appraisal of risks and benefits of different methods and comply with the patient's wishes whenever feasible.

If the NICU team is attending the delivery, the plan for 3rd stage management should be included in their briefing upon entry into the delivery room.

Benefits of AMTSL:
1. Reduced mean blood loss¹
2. Reduced incidence of EBL over 500 mL¹
3. Reduced incidence of EBL over 1000 mL¹
4. Decreased neonatal bilirubin levels
5. Decreased incidence of neonatal jaundice

Potential risks of AMTSL:
1. Increased pain (after pains) for mother
2. Increased incidence of nausea / vomiting (maternal)
3. Increased diastolic BP (maternal)
4. Decreased infant iron stores* (with immediate clamping protocol)
5. There is unknown impact on cord blood harvesting
Components of AMTSL

1. **Administer uterotonic upon delivery of anterior shoulder or infant**
   a. 1st line uterotonic is oxytocin by IV infusion
   b. 10 units of oxytocin intramuscularly is an alternative for those without IV access
   c. Misoprostil via rectal (1000 mcg) or buccal (200 mcg) route are also alternate regimens
   d. Additional uterotonic agents should be immediately available, particularly for those at increased risk for hemorrhage

2. **Clamping of cord may be performed immediately or up to 2 – 3 minutes following infant delivery**
   a. Evidence suggests increased iron stores and hemoglobin in infant with delayed clamping, but no clear clinical effects shown.
      i. As described in the evidence base, delayed clamping should be done with infant at level of placenta or perineum.
         1. 75% of blood available for placenta to fetus transfusion is transfused in 1st minute.
         ii. Delayed clamping may increase neonatal bilirubin and incidence of jaundice.
         iii. Effects may be more beneficial for preterm infants.
   b. For infants in need of immediate resuscitation, immediate clamping should be done.

3. **Controlled cord traction**
   a. Gentle traction on umbilical cord
   b. Uterine countertraction (Brandt-Andrews maneuver - upward pressure applied at the lower segment, just above the pubis)
      i. Do NOT massage or manipulate the uterus
      ii. Do NOT apply traction to cord without simultaneous countertraction

4. **4th stage management**
   a. Uterine massage should be performed ONLY following placental delivery
   b. Inspect placenta and membranes to ensure intact delivery
   c. Uterine tone should be monitored every 15 minutes for the 1st hour following delivery.
References:


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Notification to Users

These algorithms are designed to assist the primary care provider in the clinical management of a variety of problems that occur during pregnancy. They should not be interpreted as a standard of care, but instead represent guidelines for management. Variation in practices should take into account such factors as characteristics of the individual patient, health resources, and regional experience with diagnostic and therapeutic modalities. The algorithms remain the intellectual property of the University of North Carolina at Chapel Hill School of Medicine. They cannot be reproduced in whole or in part without the expressed written permission of the school.

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