Diagnosing a failed IOL in the latent phase
Something about myself
Objectives

- Appropriate duration of Pitocin and A/SROM in the latent phase prior to diagnosing failed induction of labor:
  - 12 h for nulliparous women
  - 15 h in multiparous women
- Understand detrimental maternal and neonatal effects of prolonged latent phase
- How does this fit into ‘safe prevention of the primary cesarean delivery’
Why is this important?
Definition of active phase

- Contemporary patterns of spontaneous labor
- Data from Consortium on Safe labor
- Nulliparous and multiparous women progress at similar pace before 6 cm
Active phase arrest

- Beyond 6 cm of cervical dilation with ruptured membranes
- Failure to progress in spite of:
  - 4 hours adequate uterine activity
  - 6 hours of oxytocin administration with inadequate uterine activity
Original Research

Duration of Oxytocin and Rupture of the Membranes Before Diagnosing a Failed Induction of Labor

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Methods

- The Consortium on Safe Labor

- Inclusion criteria
  - Singleton, cephalic at 37 or greater, known rupture time and oxytocin initiation time, initial cervical exam < 2 cm dilation

- Exclusion criteria: unknown time of rupture and initiation of Pitocin, prior uterine scar, HIV, HSV, IOL for chorioamnionitis, antepartum birth and congenital abnormalities as well as maternal pre-existing diabetes, heart disease and renal disease

- Did not take cervical ripening into account

- Defined time zero = occurrence of both oxytocin and rupture of membranes
• Majority of nulliparous women (97.2%) achieved the active phase or delivered after 15 hours of oxytocin and rupture of membranes

• Majority of multiparous women (98.5%) achieved active phase or delivered after 12 hours of oxytocin and rupture of membranes
A  

Bar graphs showing the percentage of NICU admissions over time for NICU, mechanical ventilation, and neonatal sepsis. The graphs are divided into two groups, A and B, with different patient numbers for each category.

B  

Bar graphs showing the percentage of NICU admissions over time for NICU, mechanical ventilation, and neonatal sepsis. The graphs are divided into two groups, A and B, with different patient numbers for each category.

Legend:  
- **Latent phase**  
- **Active phase or delivered**
• Only 6.5% of nulliparous and 0.6% of multiparous women remained in latent phase of labor at 12 and 15 hours respectively

• Nulliparous/multiparous women remaining in latent phase had increasing rates of chorioamnionitis, endometritis and PPH

• Rate of NICU admission for nulliparous women remaining in latent phase at 12 and 15 hours was increased
Early amniotomy and early oxytocin for prevention of, or therapy for, delay in first stage spontaneous labour compared with routine care

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Editorial group: Cochrane Pregnancy and Childbirth Group.
No consensus with respect to timing of amniotomy and oxytocin administration in presence of delay in labor

Early intervention with amniotomy and oxytocin is associated with a modest reduction in the risk of cesarean section

Active management of labor
Do we need a standardized protocol?

1. Amniotomy within 24 hours of initiating oxytocin
2. IUPC placement at amniotomy or within 6 hours if still in latent labor
3. Titrate oxytocin to MVUs 200-300
4. Oxytocin for at least 12 h (or up to 18 h) after amniotomy before diagnosing failed IOL
1. Protocol adherent nulliparous women spent 3.5 fewer hours in labor
2. Protocol adherent multiparous women spent 1.5 fewer hours in labor
3. Protocol adherent group who underwent TOLAC had lower rates of failed IOL [0% vs. 22%]
4. Protocol adherent group had fewer cesarean deliveries [34% vs. 66%] than protocol non-adherent group
5. Significantly lower rates of failed IOL in protocol adherent group
   • Nulliparous [3.8% vs. 9.8%; p = .043]
   • Multiparous [0% vs. 6%; p = 0.0004]
Safe prevention of primary cesarean delivery

Fig. 3. Indications for primary cesarean delivery. (Data from Barber EL, Lundsberg LS, Belanger K, Pettifer CM, Fuenzalida EF, Illuzzi JL. Indications contributing to the increasing cesarean delivery rate. Obstet Gynecol 2011;118:29–38.)
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References


Early amniotomy and early oxytocin for prevention of, or therapy for, delay in first stage spontaneous labour compared with routine care. Cochrane Database of Systematic Reviews 2013; Issue 8