MANAGEMENT OF THE SECOND STAGE OF LABOR

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**Persistent anterior cervical lip**

- Occasionally an anterior lip persists for **>30 minutes** and may indicate malposition or a labor abnormality, especially if the lip becomes edematous.

*Manage expectantly* or *Manual reduction ???*
Perineal care

Application of warm compresses and perineal massage with a lubricant have been proposed as means of softening and stretching the perineum to reduce perineal trauma during birth.
Pushing position and technique

- Initiating pushing as soon as complete cervical dilation is identified.
- Delay pushing for as much as an hour until the presenting part has descended further along the birth canal.

*There* is no strong evidence that one approach is better than another.
• Upright positions or Lying position ???

• What is The optimum pushing technique???
Duration (time from full dilation to birth)

- As long as the FHR pattern is normal and some degree of progress is observed.

- There is no strict upper limit to the duration of the second stage.
Maternal position for delivery

- If no fetal manipulation or complications are anticipated, delivery can be accomplished with the mother in almost any position that she finds comfortable.

- The lithotomy position is advantageous if fetal manipulation or need for optimal surgical exposure is anticipated.
The second stage appears to be shortened by a few minutes in women without epidural anesthesia who birth in an upright position.

Maternal birth position does not appear to have a significant effect on risk of third and fourth degree lacerations.
Episiotomy

• High risk of severe perineal laceration

• Significant soft tissue dystocia

• Need to facilitate delivery of a possibly compromised fetus.
1. Head floating, before engagement
2. Engagement; descent, flexion
3. Further descent, internal rotation
4. Complete rotation, beginning extension
5. Complete extension
6. Restitution (external rotation)
7. Delivery of anterior shoulder
8. Delivery of posterior shoulder
Delivery of the newborn

• Hands-off technique
• Hands-on technique

➢ Oropharyngeal care
➢ Cord clamping
➢ Cord milking
➢ Cord blood
NORMAL LABOR PROGRESSION

- **First stage** = The latent phase is characterized by gradual cervical change and the active phase is characterized by rapid cervical change.

- **Second stage** = Time from complete cervical dilation to fetal expulsion. When pushing is delayed, some clinicians divide the second stage into a passive phase (from complete cervical dilation to onset of active maternal expulsive efforts) and an active phase (from beginning of active maternal expulsive efforts to expulsion of the fetus).

- **Third stage** = Time between fetal expulsion and placental expulsion
Criteria for normal progress

• **Friedman (historic) criteria**

• **Contemporary criteria**

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First stage = A + B + C + D, where A = latent phase, B = acceleration phase, C = phase of maximum slope, and D = deceleration phase. Second stage = E.

# Abnormal Labor Progression

**Table 23-2. Abnormal Labor Patterns, Diagnostic Criteria, and Methods of Treatment**

<table>
<thead>
<tr>
<th>Labor Pattern</th>
<th>Diagnostic Criteria</th>
<th>Preferred Treatment</th>
<th>Exceptional Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Prolongation Disorder</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Prolonged latent phase</td>
<td>&gt;20 hr</td>
<td>Bed rest</td>
<td>Oxytocin or cesarean delivery for urgent problems</td>
</tr>
<tr>
<td><strong>Protraction Disorders</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protracted active-phase dilation</td>
<td>&lt;1.2 cm/hr</td>
<td>Expectant and support</td>
<td>Cesarean delivery for CPD</td>
</tr>
<tr>
<td>Protracted descent</td>
<td>&lt;1 cm/hr</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Arrest Disorders</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prolonged deceleration phase</td>
<td>&gt;3 hr</td>
<td>Evaluate for CPD: CPD: cesarean</td>
<td>Rest if exhausted Cesarean delivery</td>
</tr>
<tr>
<td>Secondary arrest of dilation</td>
<td>&gt;2 hr</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arrest of descent</td>
<td>&gt;1 hr</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Failure of descent</td>
<td>No descent in deceleration phase or second stage</td>
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</tbody>
</table>

CPD = cephalopelvic disproportion.
Modified from Cohen, 1983.
Second stage

- Descent

- Duration

  - Factor may also play a role in predicting the duration of the second stage:

  - Normal progression in induced labors???
ASSESSMENT OF LABOR PROGRESS

• Digital examination

• Partogram

• Ultrasound
Prevalence

• Approximately 20 percent of all labors ending in a live birth involve a protraction and/or arrest disorder. The risk is highest in nulliparous women with term pregnancies.

• When only the second stage is considered, the prevalence in nulliparous women with epidural anesthesia was 11.5 percent in a systematic review.
Risk factors

• Hypocontractile uterine activity

• Maternal obesity

• Cephalopelvic disproportion

• Non-occiput anterior position

• Bandl's ring

• Neuraxial anesthesia
**PROLONGED SECOND STAGE**

- **Nulliparous**, allow up to 4h for the second stage or 3h of pushing prior to diagnosing arrest of labor, when maternal and fetal conditions permit.

- **Multiparous**, allow up to 3h for the second stage or 2h of pushing prior to diagnosing arrest of labor, when maternal and fetal conditions permit.
Management

Candidates for oxytocin augmentation:

After 60 to 90 minutes of pushing, begin oxytocin augmentation if descent is minimal (<1 cm) or absent and uterine contractions are less frequent than every 3 minute.
Timing of operative delivery:

Nulliparous: 3 hours
Multiparous: 2 hours

We avoid operative delivery (vacuum, forceps, cesarean) in the second stage as long as the fetus continues to descend and/or rotate to a more favorable position for vaginal delivery, and the fetal heart rate pattern is not concerning.

Prompt operative intervention is indicated for fetuses with category III fetal heart rate tracings, regardless of labor progress.
Extending the duration of the second stage to **four** hours in nulliparous and **three** hours in multiparous women with **epidural anesthesia** may increase the chance of achieving a vaginal delivery, without significantly increasing maternal or neonatal morbidity, but evidence is limited.
● Obstetric history – A previous vaginal delivery

● Medical/surgical history – No comorbidities likely to impact labor

● Clinical pelvimetry

● Maternal height and weight – Gravida is not short and/or obese

● Fetal position – Occiput anterior, minimal caput and molding

● Maternal temperature – Absence of temperature ≥38.0°C
● EFW – Appropriate for GA

● Effectiveness of maternal pushing – Effective pushing, mother is not exhausted

● FHR – Category I tracing

● Woman's desire to proceed with labor
Ineffective management interventions

• Turning down the epidural
• Changing maternal position
• Fundal pressure
THANKS for your attention