Diagnosis and Management of Abnormal Labour
“Dystocia”

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Normal and Abnormal Labor (Dystocia)
Pattern of Normal Labor
Consequence of Abnormal Labor (Dystocia)
Types of Abnormal Labour
Causes of Abnormal Labour
Risk Factors for Abnormal labour
Diagnosis Abnormal Labour
Management of Abnormal Labor
Normal Labour

- **Normal Labour**: Regular Uterine Contractions That Cause Progressive Cervical Changes (*Dilation And Effacement*) and Descent of the Fetal Head.

The Process of Normal Labour is expected to take a “Normal” Period Hours.

Prolonged labour may be due to problems in contractions, the cervical dilatation, or the descent of the head.
Pattern of Progress of Normal Labour:

Duration:
• **First stage:**
  Time from the onset of labor until complete cervical dilatation
  
  **Cervical Changes**

• **Second stage:**
  Time from complete cervical dilatation to expulsion of the fetus
  **Head Descent**

• **Third stage:**
  Time from expulsion of the fetus to expulsion of the placenta
**First Stage**

- Latent phase
  - Contractions **short, mild, irregular**
  - Cervical **effacement, and dilatation**

**Active phase**

- Accelerate cx dilation at least 1 to 2 cm/h
Obstetrics Vaginal examination
to check cervical dilatation and relation to cervical spines
The partogram

Fig. 136 Partogram—fetal section.

Fig. 137 Partogram—progress section.
Partogram – Progress Section
# Duration of “Normal” Labour

## First Stage

<table>
<thead>
<tr>
<th>Primigravida</th>
<th>Multigravida</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duration</td>
<td>6-8</td>
</tr>
<tr>
<td>Rate of cervical Dilatation During Active Phase</td>
<td>1 cm/h</td>
</tr>
</tbody>
</table>

## Second Stage

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Duration</td>
<td>&gt;30/m-3h</td>
</tr>
</tbody>
</table>
Definition: Normal Labor
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Consequence of Abnormal Labor (Dystocia)
Types of Abnormal Labour
Causes of Abnormal Labour
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Diagnosis Abnormal Labour
Management of Abnormal Labor
Consequence of Abnormal Labor

Short Term On the Mother:
• Postpartum hemorrhage.
• Increased rate of traumatic complications: Lacerations, injuries to adjacent organs.
• Increased risk of infection (prolonged labor)
• Increased rate of difficult operative delivery.

Long Term Consequences:
• Psychological effects of a Traumatic Experience

On the Fetus: {increased rate of perinatal morbidity and mortality }
• Potential Complications of traumatic delivery
• Low Apgar score
• Neonatal complications (Birth Asphyxia, trauma ..etc.)
- Definition: Normal Labor
- Pattern of Normal Labor
- Consequence of Abnormal Labor *(Dystocia)*
- Types of Abnormal Labour
- Causes of Abnormal Labour
- Risk Factors for Abnormal labour
- Diagnosis Abnormal Labour
- Management of Abnormal Labor
Types – Of Labor Abnormalities

- **Slow Progress** “Protraction disorders”: refer to slower-than-normal labor progress.

- **Arrest of Progress** “arrest disorders”: refer to complete cessation of progress.

  Protraction and arrest disorders may occur in both the first and second stage of labor.

- **Precipitate Labour**: Complete Deliver within ≤1 hour
First Stage Abnormalities

Prolonged First Stage

Abnormalities in the Latent Phase:

✓ Prolonged (prolonged) Latent Phase
  (20 Hours For The Nullipara And 14 Hours For The Multiparous Woman. Occur In 4-6%)

Abnormalities in the Active Phase

✓ Protracted Active Phase
✓ Secondary Arrest of Cervical Dilation
Second Stage Abnormalities

Prolonged Second Stage

- Failure of Descent of The Head
- Arrest of Head Descent
Second Stage

Latent phase
- Prolonged Latent Phase

Active phase
- Protraction
- Secondary Arrest of Cervical Dilation

Head Descent
- Failure
- Arrest
Latent Phase

- An Abnormally Long Latent Phase (4-6%)
  - 20 Hours For The Nullipara
  - 14 Hours For The Multiparous Woman

Prolonged Latent Phase Is Responsible For 30% Abnormalities In Nulliparas And Over 50% Of Abnormalities In Multiparous Women
Protracted (Slow) Progress in the Active Phase of Cervical Dilatation
Secondary Arrest of Progress in the Active Phase of Cervical Dilatation
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ETIOLOGY OF PROTRACTION AND ARREST DISORDERS:

Abnormal labor can be due to abnormalities in one or more of (i.e. The Passage, The passenger and the Force):

- The cervix.
- The maternal pelvis
- The Fetus.
- The uterus.

\[
\text{The Passage} \quad \{ \text{The Passenger} \quad \text{The Force} \}
\]
Active Phase

Protraction or Arrest Of Active Phase:

- Dystocia due to cephalopelvic disproportion: (Absolute):
  - Absolute CPD: True disparity between fetal and maternal pelvic dimensions e.g. Macrosomia, Hydroceph, Contracted pelvis.

- Relative CPD: Dystocia due to malposition: E.G. Occiput posterior (OP), Mentum posterior, Brow

Role of Epidural analgesia:
Occipitofrontal Diameter
Diameter of the OP Position

Submentobregmatic (face)

Verticomental (brow)

9.5 cm

13.5 cm

11.0 cm

Suboccipitobregmatic (vertex, flexed)
Risk Factors for Abnormal Labor‡

Older maternal age
Pregnancy complications
Nonreassuring fetal heart rate
Epidural anesthesia
Macrosomia
Pelvic contraction
Occiput posterior position
Nulliparity
Short stature (less than 150 cm)
High station at full dilatation
Chorioamnionitis
Postterm pregnancy

Definition: Normal Labor

Pattern of Normal Labor

Consequence of Abnormal Labor (Dystocia)

Types of Abnormal Labour

Causes of Abnormal Labour

Risk Factors for Abnormal labour

Diagnosis Abnormal Labour

Management of Abnormal Labor
Diagnosis of Abnormal Labor

- Risk Factors
- Accurate Diagnosis of onset of Labour
- Monitoring of The Progress of Labour (Regular Assessment of Cervical Dilatation and head descent)
- Use of the Partogram
# Diagnostic Criteria For Abnormal Pattern in Active Labour

## Active Phase

<table>
<thead>
<tr>
<th>Condition</th>
<th>Nulligravida</th>
<th>Multigravida</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protracted (slow) Dilation</td>
<td>&lt;1.2 /h</td>
<td>&lt;1.5 /h</td>
</tr>
<tr>
<td>Arrested Dilation</td>
<td>&gt;2/ h</td>
<td>&gt;2 / h</td>
</tr>
</tbody>
</table>

## Second Stage

<table>
<thead>
<tr>
<th>Condition</th>
<th>Nulligravida</th>
<th>Multigravida</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arrest of Descent (epidural)</td>
<td>&gt;3/ h</td>
<td>&gt;2/ h</td>
</tr>
<tr>
<td>Arrest of descent (no epidural)</td>
<td>&gt;2/ h</td>
<td>&gt;1/ h</td>
</tr>
</tbody>
</table>
Curves of Normal and Abnormal Labor
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Management of Prolonged Labor

First Stage
- Latent Phase
  - Therapeutic rest
  - ? Oxytocin
  - ? Amniotomy
  - Cervical ripening

- Active Phase
  - No Absolute CPD {if present for CS}
  - Evaluate Maternal and Fetal condition
  - ?Stimulation of Uterine Contractions (Amniotomy, Oxytocin)
  - Review Progress hourly for 2 hs
  - If No Progress → CS

Second Stage
- Continued observation.
- Attempt operative vaginal delivery (forceps, Vento use).
- Cesarean delivery.

Important Actions:
- Good Analgesia (Epidural)
- Fluid Balance (in put and output)
- Fetal Monitoring
- Emotional support of the parturient
Thanks