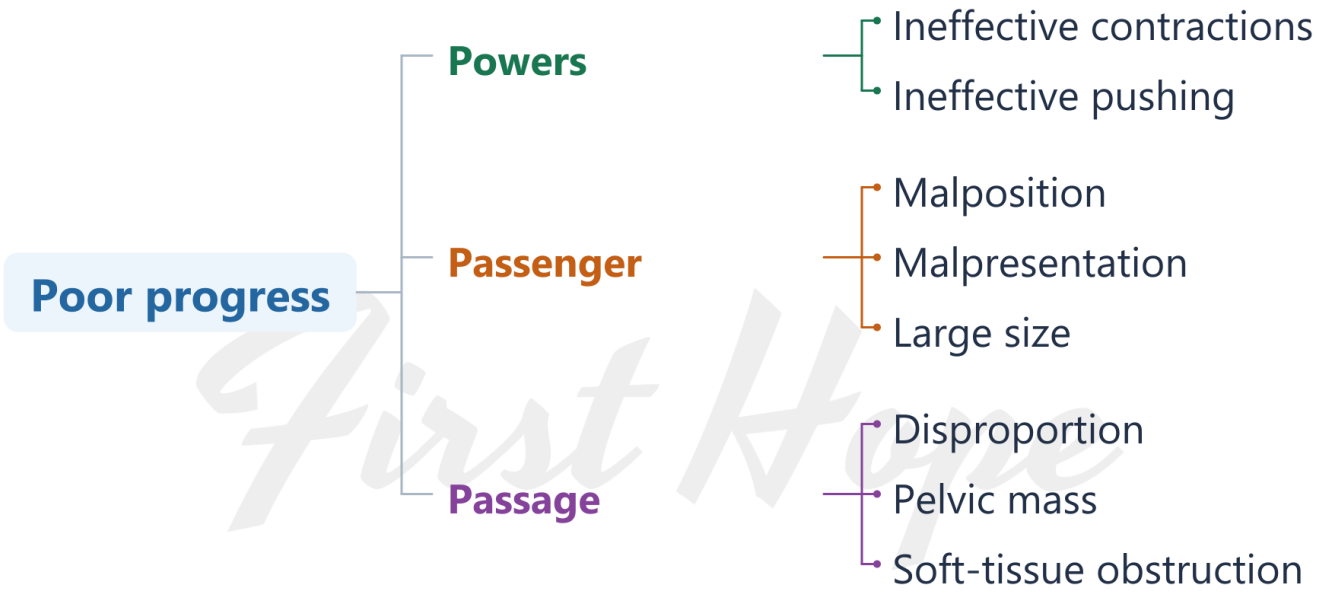
Obstetrics & Gynaecology - Topic 14 - Abnormal Labour

Recognising Abnormal Labour

A Structured Approach to Poor Progress

- Abnormal labour may involve slow cervical change, failure of descent, an abnormal fetal position or presentation, or an unsafe maternal or fetal condition.
- A long labour is not always obstructed, and obstruction can become dangerous before a fixed time limit has elapsed.
- Review the **powers, passenger and passage**, together with maternal wellbeing and fetal heart findings.



Immediate Clinical Assessment

Labour History and Progress

- Ask about the duration of labour, membrane rupture, bleeding, previous uterine surgery and any oxytocin or other medicines already given.
- Review the labour record and reassess contractions, abdominal tenderness, fetal lie, presentation and the amount of head still palpable above the pelvis.
- A careful vaginal examination assesses cervical change, bony station, position, caput, moulding and possible cord prolapse.

Ultrasound and Maternal or Fetal Warning Signs

- Use bedside ultrasound when the head position or presentation is uncertain, particularly before an operative vaginal birth.
- Check vital signs, hydration, bladder distension, urine output and fetal wellbeing, and obtain laboratory tests according to the clinical problem.
- Severe pain between contractions, shock, bleeding or an abnormal fetal heart rate requires urgent senior review rather than routine observation.

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Obstructed Labour

Definition

- Obstructed labour occurs when the presenting part cannot progress because of a mechanical barrier despite uterine contractions.

Causes and Mechanisms of Injury

- Cephalopelvic disproportion, persistent transverse lie, some face or brow presentations, fetal abnormalities and a pelvic mass are possible causes.
- A large fetus may contribute, but an average-sized fetus can also become obstructed through malposition or a restricted pelvic passage.
- Weak contractions alone cause inefficient labour rather than true mechanical obstruction, although both problems can coexist.

Why Injury Develops

- Persistent contractions against an obstruction stretch and thin the lower uterine segment while the upper segment retracts.
- Prolonged compression reduces blood supply to maternal soft tissues, which can later cause necrosis and urinary or rectal fistulae.
- Exhaustion, dehydration and infection worsen maternal condition, while impaired placental exchange and cord compression threaten the fetus.
- Continuing uterotonic stimulation in this setting can lead to uterine rupture.

Findings Suggesting Obstruction

- There may be little cervical change or descent despite strong contractions, with increasing caput and moulding.
- The woman may become exhausted, thirsty, tachycardic and dehydrated, with a distended bladder or blood-stained urine.
- The lower abdomen may be tender, and a pathological retraction ring may appear in advanced obstruction; its absence does not exclude the diagnosis.
- The fetal heart may become abnormal, and severe untreated obstruction can cause fetal death.
- Caput can lie low while the bony head remains high, so do not assume that a swollen scalp proves safe progress.

Consequences

- Maternal complications include haemorrhage, rupture, sepsis, acute kidney injury, bladder damage, fistulae and death.
- The baby may develop hypoxic injury, birth trauma, infection or death.
- Psychological distress and subsequent fear of childbirth also need recognition and support.

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Emergency Management

Stabilise and Stop Harmful Stimulation

- Call the senior obstetric, anaesthetic and neonatal teams, and prepare for urgent delivery in a suitably equipped unit.
- Stop oxytocin and other uterotonic stimulation, obtain intravenous access and assess circulation and oxygenation.
- Send blood for haemoglobin, group and crossmatch, with renal function, electrolytes and coagulation studies when indicated.
- Replace fluid losses carefully, use blood when needed and monitor urine output after cautious bladder catheterisation.
- Give appropriate antibiotics when infection is suspected and surgical prophylaxis when an operation is planned.

Relieve the Obstruction Safely

- The mode of birth depends on the cause, fetal status, head level and available expertise, but many cases require caesarean birth.
- A vaginal instrument must not be used on a high head or when disproportion, position or the safety of extraction is uncertain.
- An impacted head during caesarean birth requires trained team techniques; forceful unplanned extraction can injure both mother and baby.
- When fetal death has occurred, management still prioritises maternal safety and requires senior obstetric expertise rather than unsupervised destructive procedures.
- After birth, reassess bleeding, renal function, infection and urinary tract injury, and arrange follow-up for delayed fistula symptoms.

Prevention

- Antenatal recognition of malpresentation and important risk factors helps plan an appropriate place and mode of birth.
- Accurate labour monitoring, timely referral and careful use of oxytocin reduce delays and avoidable injury.
- A referral should state the labour course, vital signs, fetal findings, treatment and suspected cause, with appropriate resuscitation continuing during transfer.
- Explain what happened in plain language and discuss the implications for a future pregnancy without blaming the woman.

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Uterine Rupture

Causes and Mechanism

Complete Rupture and Scar Dehiscence

- Complete rupture disrupts the full thickness of the uterine wall and may allow the fetus or placenta to enter the peritoneal cavity.
- Scar dehiscence is an incomplete separation with the outer serosal layer remaining intact and may be found without the dramatic features of complete rupture.

Predisposing Factors

- Risk factors include a previous uterine scar, obstructed labour, excessive uterotonic stimulation, trauma and certain difficult obstetric manoeuvres.
- A previous classical caesarean incision or prior rupture carries a different risk from a routine lower-segment transverse scar.
- Rupture can also occur in an unscarred uterus, particularly with severe obstruction or trauma.

Recognising the Emergency

Maternal and Fetal Clues

- An abnormal fetal heart pattern, especially sudden prolonged bradycardia, may be the earliest sign during a trial of labour after caesarean.
- Other findings include new persistent abdominal pain, vaginal bleeding, maternal tachycardia, hypotension and loss of the presenting part's station.
- Contractions may change or stop, and fetal parts may become unusually easy to feel, but these classic findings are not always present.
- Loss of station means that a previously descended bony presenting part moves upwards, which can occur when the fetus partly leaves the uterine cavity.
- Bleeding can be mainly internal, so apparently modest vaginal blood loss does not exclude severe haemorrhage.
- Epidural analgesia does not remove the need to recognise haemodynamic or fetal changes, and scar pain alone is not a reliable diagnostic test.

Emergency Management

Immediate Resuscitation and Emergency Surgery

- Suspected rupture is a clinical emergency requiring immediate resuscitation and laparotomy; imaging must not delay definitive care in an unstable woman.
- Stop oxytocin, call the emergency teams, obtain large-bore intravenous access and activate the major-haemorrhage pathway when appropriate.

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- Give warmed fluids and blood components according to the clinical response, while monitoring oxygenation, coagulation and urine output.

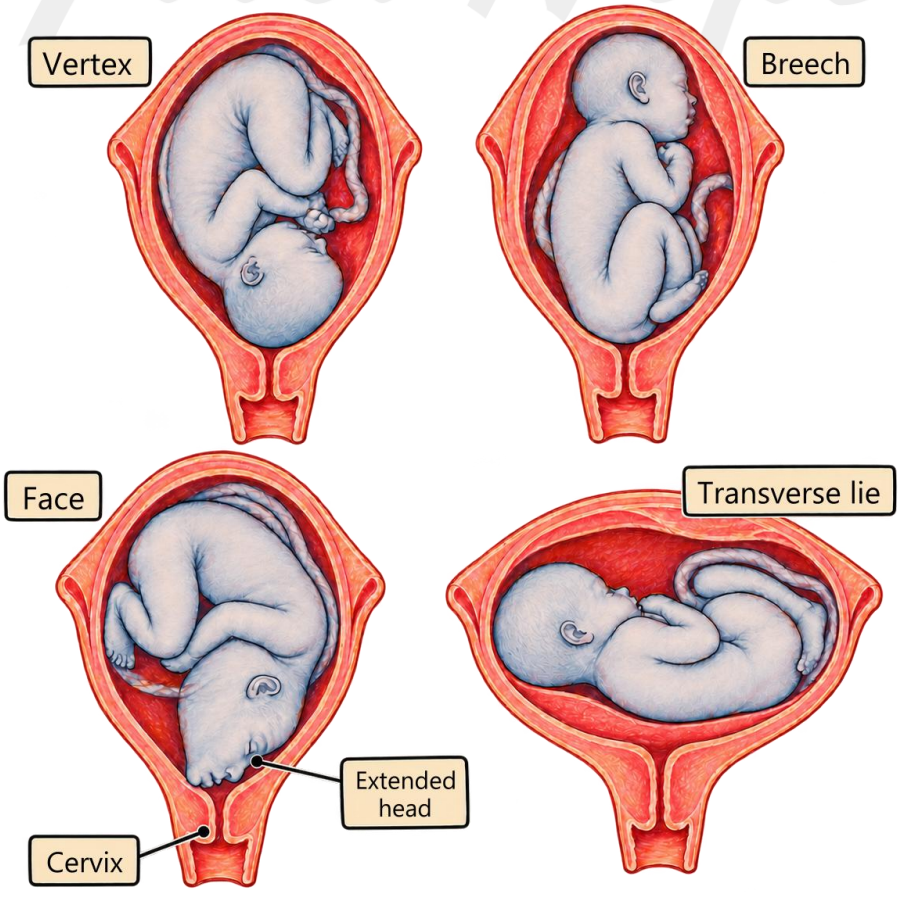
Operative Decisions and Continuing Care

- At surgery, deliver the fetus, control bleeding and inspect the uterus, bladder and surrounding structures.
- Repair may be possible when damage is limited and bleeding can be controlled, while extensive injury or uncontrolled haemorrhage may require hysterectomy.
- Give antibiotics and postoperative critical care as needed, and arrange a clear explanation, psychological support and future-pregnancy counselling.

Malposition and Malpresentation

Important Terms

- **Lie** describes the relationship of the fetal long axis to the maternal long axis, such as longitudinal or transverse.
- **Presentation** describes the part approaching the pelvic inlet, such as vertex, breech or face.
- **Position** describes the orientation of a reference landmark, such as the occiput, sacrum or chin, within the maternal pelvis.
- Occipitoposterior is therefore a malposition of a vertex presentation, whereas breech and face are malpresentations.



Vertex, breech, face and transverse arrangements differ in fetal lie or the part approaching the cervix

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