ABNORMAL FETAL RESENTATION

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Delivery presentations

Delivery presentation describes the way that baby (fetus) is positioned to come down the birth canal for delivery.
Fetal station:
This is the relationship between the presenting part of the baby -- the head, shoulder, buttocks, or feet -- and two parts of the mother's pelvis called the ischial spines. Normally the ischial spines are the narrowest part of the pelvis. They are a natural measuring point for the delivery progress.
If the presenting part lies above the ischial spines, the station is reported as a negative number from -1 to -5 (each number is a centimeter). If the presenting part lies below the ischial spines, the station is reported as a positive number from +1 to +5. The baby is said to be "engaged" in the pelvis when it is even with the ischial spines at 0 station.
Fetal lie:
This is the relationship between the head to tailbone axis of the fetus and the head to tailbone axis of the mother. If the two are parallel, then the fetus is said to be in a longitudinal lie. If the two are at 90-degree angles to each other, the fetus is said to be in a transverse lie. Nearly all (99.5%) fetuses are in a longitudinal lie.
Fetal attitude:
The fetal attitude describes the relationship of the fetus' body parts to one another. The normal fetal attitude is commonly referred to as the fetal position. The head is tucked down to the chest, with arms and legs drawn in towards the center of the chest. Abnormal fetal attitudes may include a head that is extended back or other body parts extended or positioned behind the back. Abnormal fetal attitudes can increase the diameter of the presenting part as it passes through the pelvis, increasing the difficulty of birth.
Fetal presentation:

Cephalic (head-first) presentation:
Cephalic presentation is considered normal and occurs in about 97% of deliveries. There are different types of cephalic presentation, which depend on the fetal attitude. Rarely, the fetus' head is extended back, and the chin, face, or forehead will present first depending on the degree of extension. This is a more difficult delivery, because this is not the smallest part of the fetus' head. It may result in a need for cesarean delivery.
A cesarean delivery may be recommended for any of the fetal positions other than cephalic.
Descent of the fetal head

- It should be assessed by abdominal examination immediately before doing a vaginal examination, using the rule of fifth to assess engagement.
- The rule of fifth means the palpable fifth of the fetal head are felt by abdominal examination to be above the level of symphysis pubis.
- When 2/5 or less of fetal head is felt above the level of symphysis pubis, this means that the head is engage, and by vaginal examination, the lowest part of vertex has passed or is at the level of ischial spines.
LONGITUDINAL LIE VERTEX PRESENTATION

**LOA**

**LOP**
Persistent Occiput Posterior Position

Most occiput posterior positions undergo spontaneous anterior rotation followed by uncomplicated delivery. Although the precise reasons for failure of spontaneous rotation are not known, transverse narrowing of the midpelvis is undoubtedly a contributing factor.
Labor and delivery need not differ remarkably from that with the occiput anterior. Progress may be determined by assessing cervical dilatation and descent of the head. In most instances, delivery usually can be accomplished without great difficulty once the head reaches the perineum. The possibilities for vaginal delivery are: (1) spontaneous delivery, (2) forceps delivery with the occiput posterior, (3) manual rotation to the occiput anterior followed by spontaneous or forceps delivery, and (4) forceps rotation to occiput anterior and delivery.

Spontaneous Delivery
Vacuum-assisted birth

Forceps-assisted birth
Face Presentation
Breech presentation:

Breech presentation is considered abnormal and occurs about 3% of the term, 20% at 30 WK, 40% at 26WK. A frank breech extended (most common) occurs when the hips are flexed so the legs are straight and completely drawn up toward the chest. A complete breech (less common) presentation occurs when the buttocks present first, and both the hips and knees are flexed. And less common is footling breech, in which a foot present at the cervix. Cord and foot prolapse are risks in this situation. The three management options available at this point should be discussed with the woman. These are external cephalic version (ECV), vaginal breech delivery and elective Caesarean section.
Figure 8.3 (a) Frank breech (also known as extended breech) presentation with extension of the legs. (b) Breech presentation with flexion of the legs. (c) Footling breech presentation. (d) Transverse lie. (e) Oblique lie.
Variations of the breech presentation

Complete breech

Incomplete breech

Frank breech
Predisposing factors for breech presentation

Maternal
- Fibroids
- Congenital uterine abnormalities, e.g. bicornuate uterus
- Uterine surgery

Fetal/placental
- Multiple gestation
- Prematurity
- Placenta praevia
- Abnormality, e.g. anencephaly or hydrocephalus
- Fetal neuromuscular condition
- Oligohydramnios
- Polyhydramnios
External cephalic version

ECV is a relatively straightforward and safe technique and has been shown to reduce the number of Caesarean sections due to breech presentations. Success rates around 50 per cent (and are higher in multiparous)

The procedure is performed at or after 37 completed weeks by an experienced obstetrician. ECV should be performed with a tocolytic (e.g. nifedipine) as this has been shown to improve the success rate.

If the procedure fails, or becomes difficult, it is abandoned.

A fetal heart rate trace must be performed before and after the procedure and it is important to administer anti-D if the woman is Rhesus-negative.
Figures 8.4 External cephalic version. (a) The breech is disengaged from the pelvic inlet. (b) Version is usually performed in the direction that increases flexion of the fetus and makes it do a forward somersault. (c) On completion of version, the head is often not engaged for a time. (d) The fetal heart rate should be checked after the external version has been completed.
Contraindications to ECV
• Fetal abnormality (e.g. hydrocephalus)
• Placenta praevia
• Oligohydramnios or polyhydramnios
• History of antepartum haemorrhage
• Previous Caesarean or myomectomy scar on the uterus
• Multiple gestation
• Pre-eclampsia or hypertension
• Plan to deliver by Caesarean section anyway
Risks of ECV

- Placental abruption
- Premature rupture of the membranes
- Cord accident
- Transplacental haemorrhage (remember anti-D administration to Rhesus-negative women)
- Fetal bradycardia
Mode of delivery

If ECV fails, or is contraindicated, and Caesarean section is not indicated for other reasons, then women should be counselled regarding elective Caesarean section and planned vaginally delivery. A recent large multicentre trial (the Term Breech Trial) confirmed that planned vaginal delivery of a breech presentation is associated with a 3 per cent increased risk of death or serious morbidity to the baby. Although this trial did not evaluate long-term outcomes for child or mother, it has led to the recommendation that the best method of delivering a term breech singleton is by planned Caesarean section.
Prerequisites for vaginal breech delivery
Feto-maternal:
• The presentation should be either extended (hips flexed, knees extended) or flexed (hips flexed, knees flexed but feet not below the fetal buttocks).
• There should be no evidence of feto-pelvic disproportion with a pelvis clinically thought to be adequate and an estimated fetal weight of 3500 g (ultrasound or clinical measurement).
• There should be no evidence of hyperextension of the fetal head, and fetal abnormalities that would preclude safe vaginal delivery (e.g. severe hydrocephalus) should be excluded.
Technique

Delivery of the buttocks

full dilatation and descent of the breech will have occurred naturally.
Once the anterior buttock is delivered and the anus is seen over the fourchette (and no sooner than this), an episiotomy can be cut.

Delivery of the legs and lower body
If the legs are flexed, they will deliver spontaneously.
If extended, they may need to be delivered using Pinard’s manoeuvre. This entails using a finger to flex the leg at the knee and then extend at the hip.
Delivery of the shoulders
The baby will be lying with the shoulders in the transverse diameter of the pelvic mid-cavity. As the anterior shoulder rotates into the anterior–posterior diameter, the spine or the scapula will become visible. At this point, a finger gently placed above the shoulder will help to deliver the arm. As the posterior arm/shoulder reaches the pelvic floor, it too will rotate anteriorly (in the opposite direction). Once the spine becomes visible, delivery of the second arm will follow. This can be imagined as a ‘rocking boat’ with one side moving upwards and then the other. Loveset’s manoeuvre essentially copies these natural movements
Delivery of the head
The head is delivered using the Mauriceau–Smellie–Veit manoeuvre: the baby lies on the obstetrician’s arm with downward traction being levelled on the head via a finger in the mouth and one on each maxilla. Delivery occurs with first downward and then upward movement (as with instrumental deliveries). If this manoeuvre proves difficult, forceps need to be applied. An assistant holds the baby’s body aloft while the forceps are applied in the usual manner.
Figure 8.5 Lovejoy’s manoeuvre.
Figure 8.6 Mauriceau–Smellie–Veit manoeuvre for delivery of the head
Figure 8.7  Delivery of the aftercoming head with forceps
Shoulder presentation:
The shoulder, arm, or trunk may present first if the fetus is in a transverse lie. This type of presentation occurs less than 1% of the time. Transverse lie is more common with premature delivery or multiple pregnancies.
**Transverse Lie**

In this position, the long axis of the fetus is approximately perpendicular to that of the mother. When the long axis forms an acute angle, an *oblique lie* results. The latter is usually only transitory, because either a longitudinal or transverse lie commonly results when labor supervenes. For this reason, the oblique lie is called an *unstable lie*. Some of the more common causes of transverse lie include: (1) abdominal wall relaxation from high parity, (2) preterm fetus, (3) placenta previa, (4) abnormal uterine anatomy, (5) hydramnios, and (6) contracted pelvis.
A transverse lie is usually recognized easily, often by inspection alone. The abdomen is unusually wide, whereas the uterine fundus extends to only slightly above the umbilicus. No fetal pole is detected in the fundus, and the ballottable head is found in one iliac fossa and the breech in the other. Spontaneous delivery of a fully developed newborn is impossible with a persistent transverse lie. After rupture of the membranes. If caesarean section is not performed both the mother and baby are at considerable risk of morbidity and mortality.
Fetus in transverse lie presentation
Compound Presentation

In a compound presentation, an extremity prolapses alongside the presenting part, and both present simultaneously in the pelvis
Face Presentation

With this presentation, the head is hyperextended so that the occiput is in contact with the fetal back, and the chin (mentum) is presenting. The fetal face may present with the chin (mentum) anteriorly or posteriorly, relative to the maternal symphysis pubis. Although many may persist, many mentum posterior presentations convert spontaneously to anterior even in late labor. If not, the fetal brow (bregma) is pressed against the maternal symphysis pubis.
Causes of face presentations are numerous and include conditions that favor extension or prevent head flexion. Preterm infants, with their smaller head dimensions, can engage prior to conversion to vertex position. In exceptional instances, marked enlargement of the neck or coils of cord around the neck may cause extension. reported that fetal malformations and hydramnios were risk factors for face or brow presentations. Anencephalic fetuses naturally present by the face. High parity is a predisposing factor to face presentation.

Face presentation is diagnosed by vaginal examination and palpation of facial features. Face presentations rarely are observed above the pelvic inlet. Instead, the brow generally presents early and is usually converted to present the face after further extension of the head during descent.
Brow Presentation

This rare presentation is diagnosed when that portion of the fetal head between the orbital ridge and the anterior fontanel presents at the pelvic inlet, the fetal head thus occupies a position midway between full flexion (occiput) and extension (face). Except when the fetal head is small or the pelvis is unusually large, engagement of the fetal head and subsequent delivery cannot take place as long as the brow presentation persists.
The causes of persistent brow presentation are the same as those for face presentation. A brow presentation is commonly unstable and often converts in transient brow presentations, the prognosis depends on the ultimate presentation. If the brow persists, prognosis is poor for vaginal delivery unless the fetus is small or the birth canal is large. Principles of management are the same as those for a face presentation to a face or an occiput presentation