



كلية : كلية الطب العام

القسم او الفرع : النسائية والتوليد

المرحلة: الرابعة

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اسم المادة باللغة العربية :التوليد

اسم المادة باللغة الإنكليزية : Obstetrics

اسم المحاضرة التاسعة باللغة العربية: Malpresentation

اسم المحاضرة التاسعة باللغة الإنكليزية : التوجه غير عادي للجنين

محتوى المحاضرة التاسعة

Malpresentation

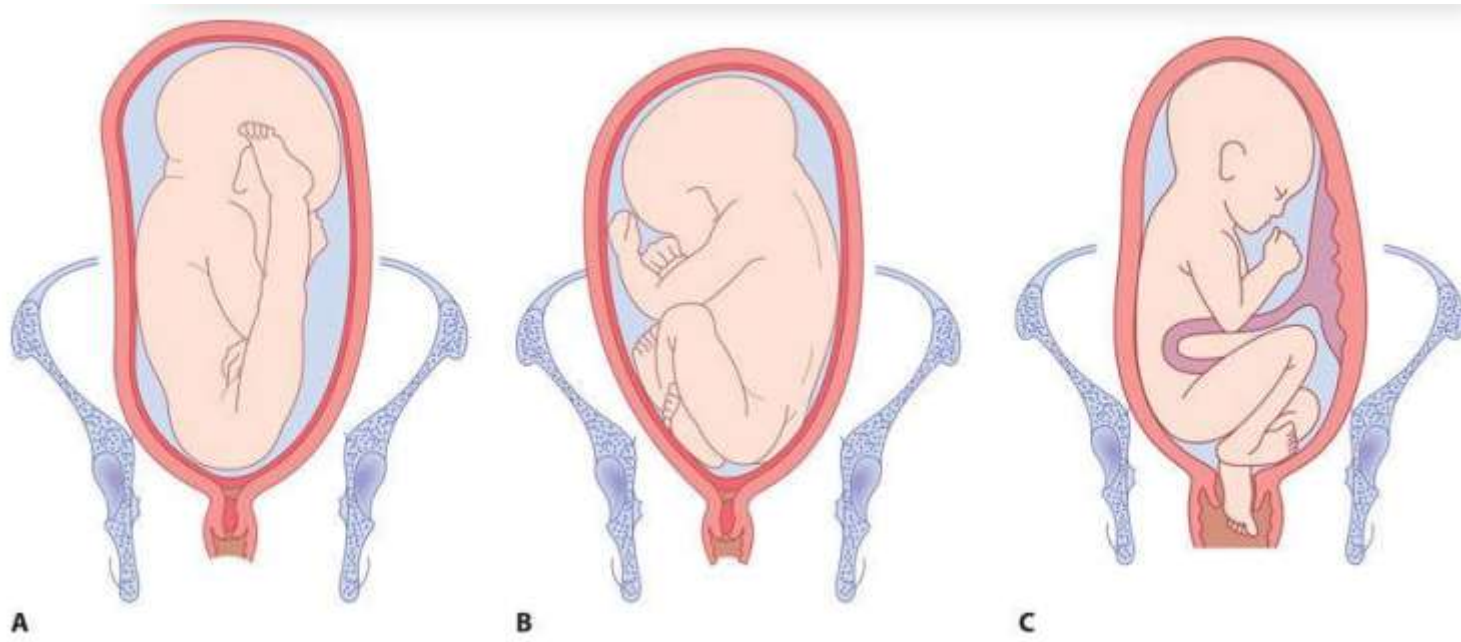
Malpresentation is a presentation that is not cephalic. Breech presentation is the most commonly encountered malpresentation and occurs in 3–4% of term pregnancies, but is more common at earlier gestations. Similarly, oblique and transverse positions are not uncommon antenatally. They only become a problem if the baby (or first presenting baby in a multiple gestation) is not cephalic by 37 weeks.

Breech presentation

There are three types of breech: the commonest is extended (frank) breech; less common is a flexed (complete) breech; and least common is footling breech, in which a foot presents at the cervix, Cord and foot prolapse are risks in this situation.

The varying relations between the lower extremities and buttocks of breech presentations form the categories of frank, complete, and *Footling* breech presentations. With a *frank breech* presentation, the lower extremities are flexed at the hips and extended at the knees, and thus the feet lie in close proximity to the head. A flexed (*complete*) *breech* presentation differs in that one or both knees are flexed. *Footling breech* is in which with one or both feet below the breech.

extended (frank) breech (**A**); less common is a flexed (complete) breech (**B**); and least common is footling breech, in which a foot presents at the cervix (**C**)



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.

Antenatal management of breech presentation

If a breech presentation is clinically suspected at or after 36 weeks, this should be confirmed by ultrasound scan. The scan should document fetal biometry, amniotic fluid volume, the placental site and the position of the fetal legs. The scan should also look for any anomalies previously undetected. 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.

Planned vaginal delivery of a breech presentation is associated with a 3% increased risk of death or serious morbidity to the baby.

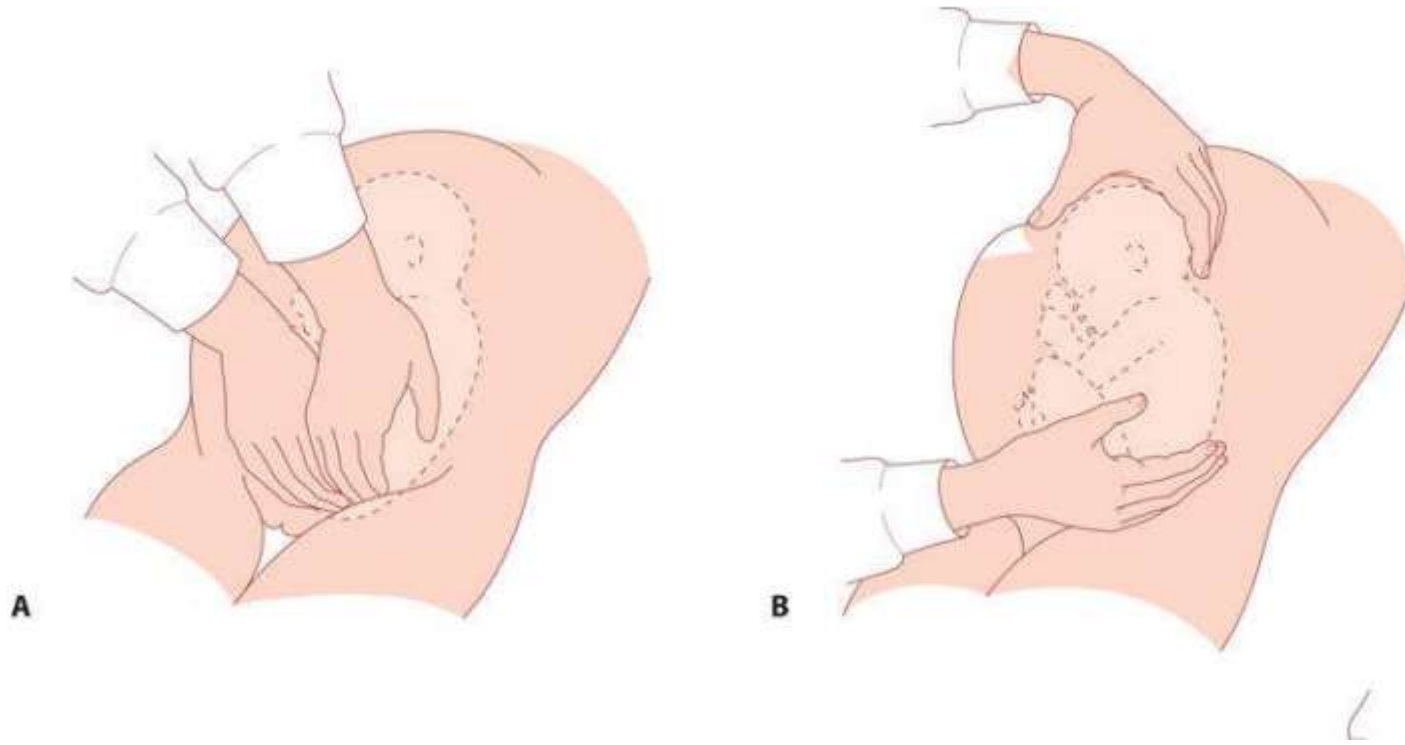
Although the trials did not evaluate long-term outcomes for child or mother, it has led to the recommendation that the best method of delivering a term breech singleton is by planned caesarean section. Despite this, either by choice or as a result of precipitous labour, a small proportion of women with breech presentations will deliver vaginally. It therefore remains important that clinicians and hospitals are prepared for vaginal breech delivery.

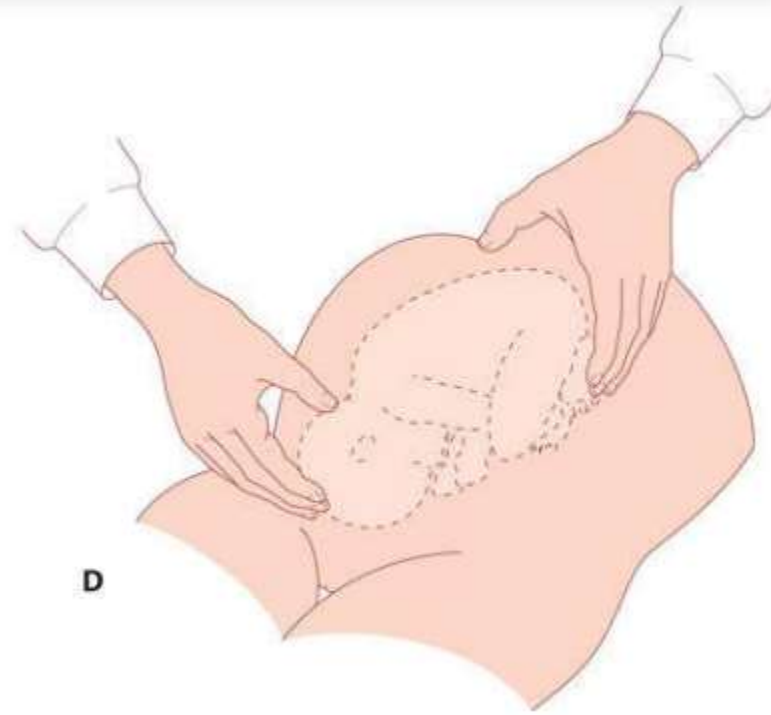
External cephalic version

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 vary according to the experience of the operator but in most units are around 50% (and are higher in multiparous women who tend to have lax abdominal musculature).

The procedure is performed at or after 37 completed weeks' gestation by an experienced obstetrician at or near delivery facilities. ECV should be performed with a tocolytic (e.g. nifedipine) as this has been shown to improve the success rate. The woman is laid flat with a left lateral tilt having ensured that she has emptied her bladder and is comfortable. With ultrasound guidance, the breech is elevated from the pelvis and one hand is used to manipulate this upward in the direction of a forward role whilst the other hand applies gentle pressure to flex the fetal head and bring it down to the maternal pelvis . The procedure can be mildly uncomfortable for the mother and should last no more than 10 minutes. 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.

External cephalic version





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 vaginal delivery. Although evidence suggests that it is probably safer for breech babies to be delivered by caesarean section, there is still a place for a vaginal breech delivery in certain circumstances.

Maternal choice and the failure to detect breech presentation until very late in labour mean that obstetricians need to be expert in the skills of breech vaginal delivery and aware of the potential complications.

Pre-requisites 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 <3,500 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.

Management of labour

Fetal wellbeing and progress of labour should be carefully monitored. An epidural analgesia is not essential but may be advantageous; it can prevent pushing before full dilatation.

Fetal blood sampling from the buttocks provides an accurate assessment of the acid–base status (when the fetal heart rate trace is suspect). There should be an operator experienced in delivering breech babies available in the hospital.

Although much emphasis is placed on adequate case selection prior to labour, a survey of outcome of the undiagnosed breech in labour managed by experienced medical staff showed that safe vaginal delivery can be achieved.

Technique

A vaginal breech delivery should be characterized by 'masterly inactivity' (hands off). Problems are more likely to arise when the obstetrician tries to speed up the process by pulling on the baby, and this should be avoided.

Delivery of the buttocks

In most circumstances, full dilatation and descent of the breech will have occurred naturally. When the buttocks become visible and begin to distend the perineum, preparations for the delivery are made. The buttocks will lie in the anterior–posterior diameter. 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 buttocks



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. With contractions and maternal effort, the lower body will be delivered. Usually a loop of cord is drawn down to ensure that it is not too short.

Pinard's manoeuvre



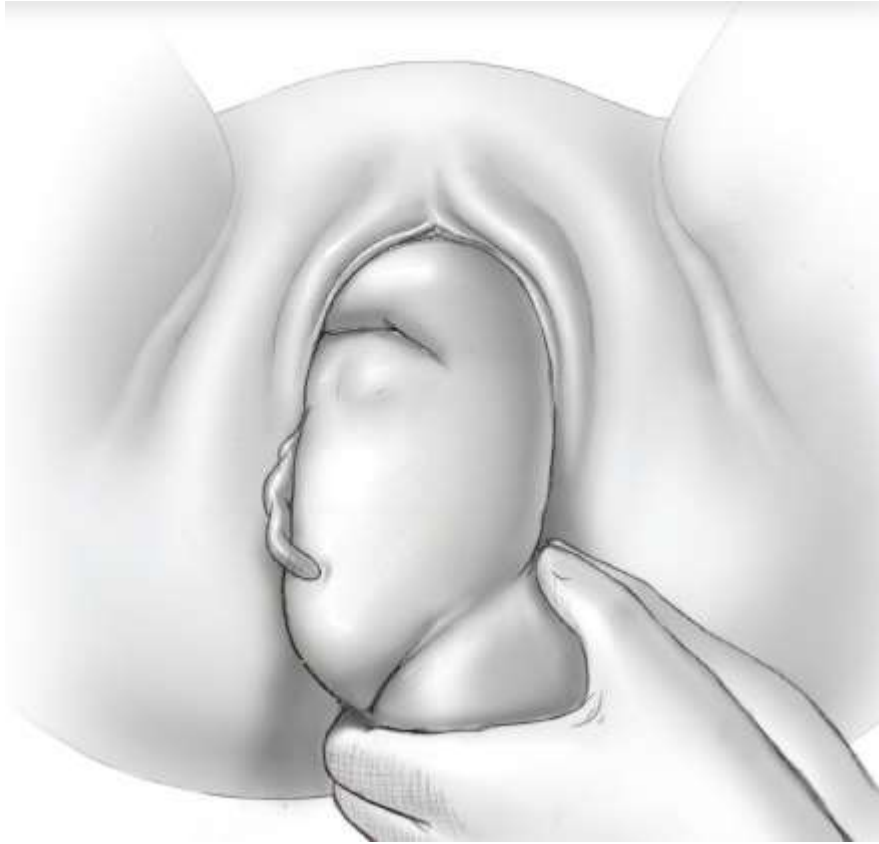
Delivery of the shoulders

The baby will be lying with the shoulders in the transverse diameter of the pelvic midcavity. 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. However, it is unnecessary and meddlesome to do routinely (one risks pulling the shoulders down but leaving the arms higher up, alongside the head).

Loveset's manoeuvre

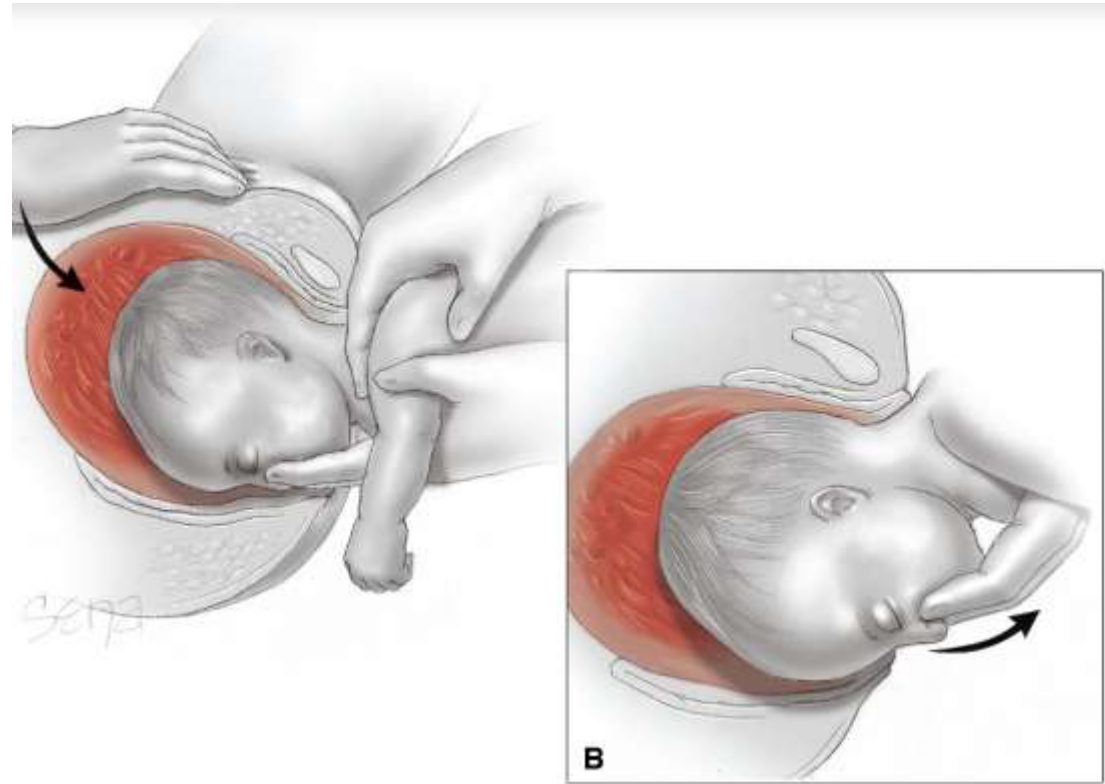




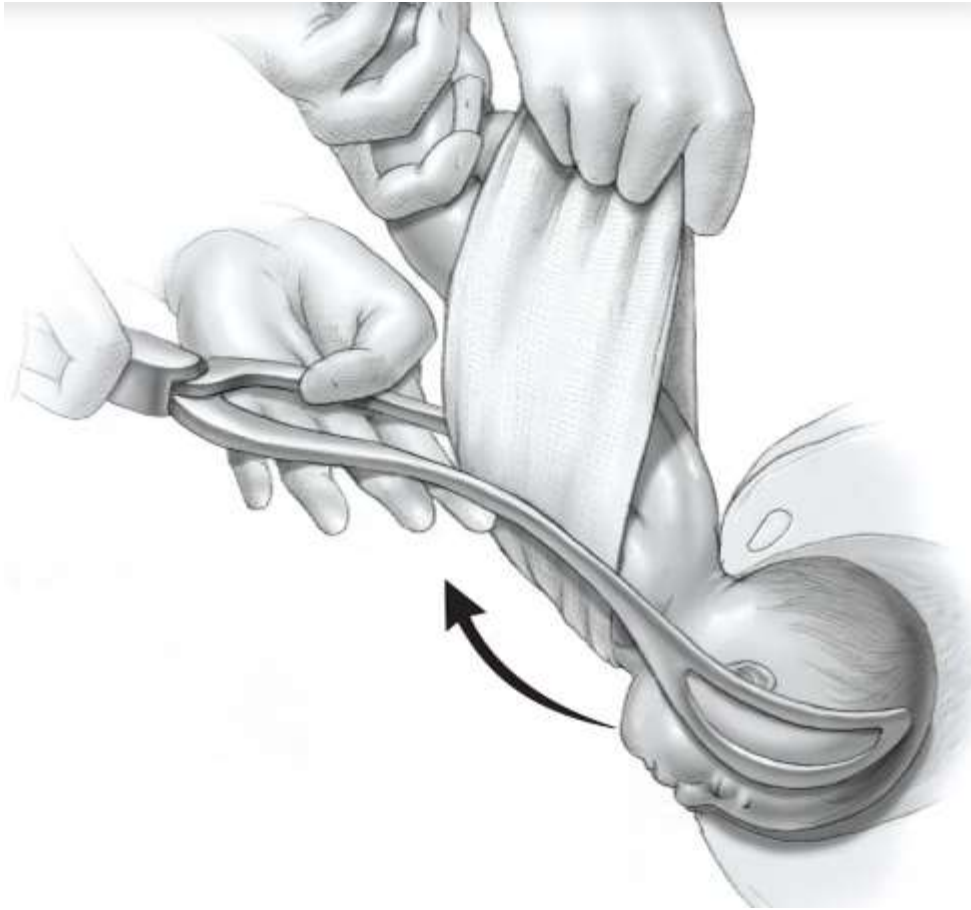
Delivery of the head

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 upwards while the forceps are applied in the usual manner.

Mauriceau–Smellie–Veit manoeuvre for delivery of the head



Delivery of the head by forceps



Complications

The greatest fear with a vaginal breech is that the baby will get 'stuck'.

Interference in the natural process by the inappropriate use of oxytocic agents or by trying to pull the baby out (breech extraction) will paradoxically increase the risk of obstruction occurring. When delay occurs, particularly with delivery of the shoulders or head, the presence of an experienced obstetrician will reduce the risk of death or serious injury.

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. This position precludes flexion of the fetal head necessary to negotiate the birth canal. Approximately 1 in 2000 had a face presentation at delivery.

Face Presentation



Mentoanterior and mentoposterior



Etiology

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. fetal malformations and hydramnios were risk factors for face or brow presentations. Anencephalic fetuses naturally present by the face.

- Extended positions develop more frequently when the pelvis is contracted or the fetus is very large. This high incidence of pelvic contraction should be kept in mind when considering management.
- High parity is a predisposing factor to face presentation. In these cases, a pendulous abdomen permits the back of the fetus to sag forward or laterally, often in the same direction in which the occiput points. This promotes extension of the cervical and thoracic spine.

Diagnosis

Face presentation is diagnosed by vaginal examination and palpation of facial features, it is possible to mistake a breech for a face presentation because the anus may be mistaken for the mouth and the ischial tuberosities for the malar prominences. The radiographic demonstration of the hyperextended head with the facial bones at or below the pelvic inlet is characteristic.

Mechanism of Labor

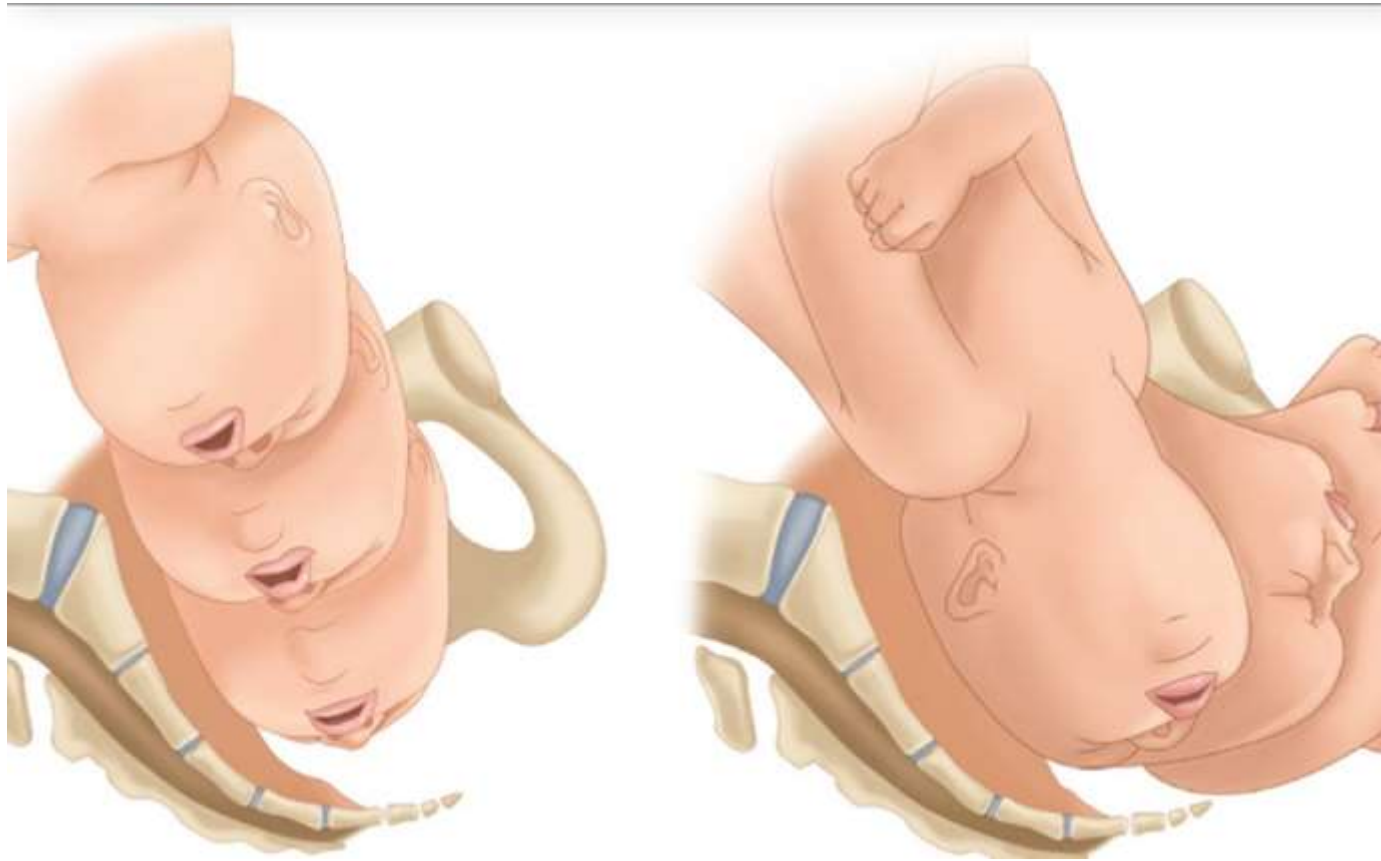
Face presentations rarely are observed above the pelvic inlet. Instead, the brow generally presents early and is usually converted to present the face after further extension of the head during descent. The mechanism of labor in these cases consists of the cardinal movements of descent, internal rotation, and flexion, and the accessory movements of extension and external rotation. Descent is brought about by the same factors as in cephalic presentations. When resistance is encountered, the occiput must be pushed toward the back of the fetus while the chin descends.

The objective of internal rotation of the face is to bring the chin under the symphysis pubis. Only in this way can the neck traverse the posterior surface of the symphysis pubis. If the chin rotates directly posteriorly, the relatively short neck cannot span the anterior surface of the sacrum, which measures about 12 cm in length. Moreover, the fetal brow (bregma) is pressed against the maternal symphysis pubis. This position precludes flexion necessary to negotiate the birth canal. Hence, birth of the head from a mentum posterior position is impossible unless the shoulders enter the pelvis at the same time, an event that is impossible except when the fetus is extremely small or macerated. Internal rotation results from the same factors as in vertex presentations.

After anterior rotation and descent, the chin and mouth appear at the vulva, the undersurface of the chin presses against the symphysis, and the head is delivered by flexion. The nose, eyes, brow (bregma), and occiput then appear in succession over the anterior margin of the perineum. After birth of the head, the occiput sags backward toward the anus. Next, the chin rotates externally to the side toward which it was originally directed, and the shoulders are born as in cephalic presentations.

Edema may sometimes significantly distort the face. At the same time, the skull undergoes considerable molding, manifested by an increase in length of the occipitomenatal diameter of the head.

Mechanism of labor for right mentoposterior position with subsequent rotation of the mentum anteriorly and delivery



Management

In the absence of a contracted pelvis, and with effective labor, successful vaginal delivery usually will follow. Fetal heart rate monitoring is probably better done with external devices to avoid damage to the face and eyes. Because face presentations among term-size fetuses are more common when there is some degree of pelvic inlet contraction, cesarean delivery frequently is indicated. Attempts to convert a face presentation manually into a vertex presentation, manual or forceps rotation of a persistently posterior chin to a mentum anterior position, and internal podalic version and extraction are dangerous and not attempted.

Brow Presentation

This is a rare presentation is diagnosed when that portion of the fetal head between the orbital ridge and the anterior fontanel presents at the pelvic inlet. As shown in the Figure 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.

Etiology and Diagnosis

The causes of persistent brow presentation are the same as those for face presentation. A brow presentation is commonly unstable and often converts to a face or an occiput presentation. The presentation may be recognized by abdominal palpation when both the occiput and chin can be palpated easily, but vaginal examination is usually necessary. The frontal sutures, large anterior fontanel, orbital ridges, eyes, and root of the nose are felt on vaginal examination, but neither the mouth nor the chin is palpable.

Brow Presentation



Mechanism Labor:

With a very small fetus and a large pelvis, labor is generally easy, but with a larger fetus, it is usually difficult. This is because engagement is impossible until there is marked molding that shortens the occipitomenstrual diameter or more commonly, until there is either flexion to an occiput presentation or extension to a face presentation. The considerable molding essential for vaginal delivery of a persistent brow characteristically deforms the head. The caput succedaneum is over the forehead, and it may be so extensive that identification of the brow by palpation is impossible. In these instances, the forehead is prominent and squared, and the occipitomenstrual diameter is diminished.

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.

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.

In a transverse lie, the shoulder is usually positioned over the pelvic inlet. The head occupies one iliac fossa, and the breech the other. This creates a *shoulder presentation* in which the side of the mother on which the acromion rests determines the designation of the lie as right or left acromial. And because in either position the back may be directed anteriorly or posteriorly, superiorly or inferiorly, it is customary to distinguish varieties as dorsoanterior and dorsoposterior.

Transverse Lie



Etiology

- 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.
- Women with four or more deliveries have a 10-fold incidence of transverse lie compared with nulliparas. A relaxed and pendulous abdomen allows the uterus to fall forward, deflecting the long axis of the fetus away from the axis of the birth canal and into an oblique or transverse position. Placenta previa and pelvic contraction act similarly. A transverse or oblique lie occasionally develops in labor from an initial longitudinal position.

Diagnosis

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 ballotable head is found in one iliac fossa and the breech in the other. The position of the back is readily identifiable. When the back is anterior a hard resistance plane extends across the front of the abdomen. When it is posterior, irregular nodulations representing fetal small parts are felt through the abdominal wall.

On vaginal examination, in the early stages of labor, if the side of the thorax can be reached, it may be recognized by the "gridiron" feel of the ribs. With further dilatation, the scapula and the clavicle are distinguished on opposite sides of the thorax. The position of the axilla indicates the side of the mother toward which the shoulder is directed.

Mechanism of Labor

Spontaneous delivery of a fully developed newborn is impossible with a persistent transverse lie. After rupture of the membranes, if labor continues, the fetal shoulder is forced into the pelvis, and the corresponding arm frequently prolapses. After some descent, the shoulder is arrested by the margins of the pelvic inlet, with the head in one iliac fossa and the breech in the other. As labor continues, the shoulder is impacted firmly in the upper part of the pelvis. The uterus then contracts vigorously in an unsuccessful attempt to overcome the obstacle. With time, a retraction ring rises increasingly higher and becomes more marked.

With this *neglected transverse lie*, the uterus will eventually rupture. Even without this complication, morbidity is increased because of the frequent association with placenta previa, the increased likelihood of cord prolapse, and the necessity for major operative efforts. If the fetus is small—usually less than 800 g—and the pelvis is large, spontaneous delivery is possible despite persistence of the abnormal lie. The fetus is compressed with the head forced against its abdomen. A portion of the thoracic wall below the shoulder thus becomes the most dependent part, appearing at the vulva. The head and thorax then pass through the pelvic cavity at the same time.

In a transverse lie, the shoulder is usually positioned over the pelvic inlet. The head occupies one iliac fossa, and the breech the other. This creates a *shoulder presentation* .



Management

Active labor in a woman with a transverse lie is usually an indication for cesarean delivery. Before labor or early in labor, with the membranes intact, attempts at external version are worthwhile in the absence of other complications. If the fetal head can be maneuvered by abdominal manipulation into the pelvis, it should be held there during the next several contractions in an attempt to fix the head in the pelvis.

With cesarean delivery, because neither the feet nor the head of the fetus occupies the lower uterine segment, a low transverse incision into the uterus may lead to difficult fetal extraction. This is especially true of dorsoanterior presentations. Therefore, a vertical incision is typically indicated (Classical Cesarean Incision).

Compound Presentation

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

Incidence and Etiology

Much less common was prolapse of one or both lower extremities alongside a cephalic presentation or a hand alongside a breech. It occurs in incidence of approximately 1 in 1000. Causes of compound presentations are conditions that prevent complete occlusion of the pelvic inlet by the fetal head, including preterm labor.

Compound Presentation



Management and Prognosis

In most cases, the prolapsed part should be left alone, because most often it will not interfere with labor. If the arm is prolapsed alongside the head, the condition should be observed closely to ascertain whether the arm retracts out of the way with descent of the presenting part. If it fails to retract and if it appears to prevent descent of the head, the prolapsed arm should be pushed gently upward and the head simultaneously downward by fundal pressure.

The infant developed ischemic necrosis of the presenting forearm, which required amputation. In general, rates of perinatal mortality and morbidity are increased as a result of concomitant preterm delivery, prolapsed cord, and traumatic obstetrical procedures.

THANK YOU