Breech Presentation
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Breech presentation
Incidence
- Incidence of breech presentations at term is 3-4%.
- The incidence falls with gestational age, being 20% at 28 weeks, 16% at 32 weeks, falling to 3-4% at term (as most breeches will turn spontaneously by 36 weeks).
- So the commonest cause for breech presentation is prematurity.

Causes of breech presentation
Excluding prematurity, in which the incidence is increased, there are several possible reasons why breech presentations persist to term:
1. Extended legs preventing spontaneous version, by 'splinting' the body
2. Uterine anomalies (septate uterus, unicornuate uterus)
3. Something preventing engagement (e.g., placenta previa, fibroid)
4. Multiple pregnancy.
5. Amniotic fluid abnormalities (poly or oligohydramnios).
6. Fetal anomalies, especially hydrocephalus and anencephaly.
7. In the majority of cases no cause is found.

Types of breech presentation:
1. The breech commonly presents with flexion at the hip and extension at the knees (extended or frank breech).
2. The breech presenting with flexion at the hips and knees (flexed or complete breech).
3. At times one leg could be flexed and the other extended (incomplete breech).
4. Rarely one or both feet may present (footling breech) and at times it may be knee presentation.

-Because of the inappropriate fit of the presenting part of the breech to the pelvis, there is a greater chance of cord prolapse and it is higher with footling presentation when it may be as high as 10%.

Types of breech:

Frank breech 65%
Both legs extended

Complete breech 10%
Both legs flexed at knee and hip

Footling breech 25%
One foot up, one foot down (more common in multigestation due to lax abdominal muscles)
**Diagnosis:**
- With careful palpation breech presentation is recognized in the antenatal period.
- Identification becomes easier with increasing gestation and if the mother is multiparous or has a thin abdomen.
- The fetus would be in the longitudinal lie with the head palpable as a spherical hard mass in the upper pole.
- The head is usually to one or the other side under the hypochondrium and is tender on deep palpation.
- The breech which is broader is felt above or within the pelvis.
When the breech is extended there is difficulty in identifying the head.
- If the extended breech is in the pelvis it may be difficult to distinguish from a deeply engaged head.
- An ultrasound examination or vaginal examination will help to identify the head that is engaged.
- On auscultation with a stethoscope the fetal heart is located above the umbilicus.

**Antenatal management:**
- Increased perinatal mortality and morbidity with breech presentation is well recognized.
- With routine prenatal screening congenital malformation has become a rarer cause, leaving prematurity, birth asphyxia due to cord accidents and trauma as the main cause of morbidity.

- Although current literature recommends elective Caesarian section (CS) for term breeches, training in assisted vaginal delivery is needed as some mothers elect to have assisted vaginal births.

- If breech presentation is diagnosed at any time in pregnancy before 36 weeks nothing is done as most of them will undergo spontaneous version to cephalic presentation.

- If there is persistent breech at 36-37 weeks an **External cephalic version (ECV)** can be attempted to change breech to cephalic presentation.

**External cephalic version (ECV):**
- This procedure is done by manipulating the fetus through the maternal abdomen and trying to turn it into cephalic presentation.

- The woman should be carefully selected as there are many contraindications and risks to this procedure.

**Procedure (ECV):**
- ECV should only be performed in a setting where urgent CS is possible should there be evidence of fetal compromise during or soon after ECV.
- It is done in the delivery room after confirming by a scan that the fetus is still in breech presentation and after making a note of the side of the fetal back, type of breech presentation, fetal attitude, position of the placenta and the quantity of amniotic fluid.
- A cardiotocograph (CTG) done 20-30 min prior to ECV should indicate the fetus is not hypoxic.
- Multiparity, flexed breech presentation, adequate liquor volume and breech mobile above the brim favour the chance of success.
- Positioning the mother in the Trendelenberg position, intravenous hydration prior to the process with the hope of increasing amniotic fluid, use of vibro-acoustic stimulation and uterine relaxation with a short-acting tocolytic have been advocated to increase the success rates.
- After disengaging the breech and shifting it to the opposite side to where the head is moved, followed by movement of the head to the lower pole.
- If the mother was Rhesus negative, anti-D should be pre-scribed after the attempt of ECV and a Kleihauer-Betke test carried out to determine the adequacy of the dose.
- The average success rate is about 60% in multiparous women, less than 40% in primiparous women.

**External cephalic version**

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<td>- Preterm labour</td>
<td>Relative</td>
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<td>- Use tocolytics</td>
<td>- Abruptio placentae</td>
<td>- Previous caesarean section</td>
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<td>- Administer anti-D to rhesus negative mothers</td>
<td>- Cord accident</td>
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*Risks of ECV:*
1. Preterm labour.
2. Premature rupture of membranes.
3. Placental abruption.
5. Feto-maternal transfusion in Rh-ve woman.
6. Rupture of uterus in the presence of previous scar in the uterus.
7. Fetal compromise or death.

- The CTG after ECV for 30-40 min should show a reactive normal trace and no uterine irritability.
- There should be no bleeding, leaking of amniotic fluid per vagina or uterine tenderness prior to discharge.
- Those where ECV did not succeed need counselling regards the options of an elective CS or assisted vaginal breech delivery.

**The persistent breech**
- If ECV is unsuccessful or not suitable a decision has to be made on the mode of delivery - either by *elective caesarean section* or *vaginal delivery*.

- The data for term breeches showed perinatal morbidity three times higher in the group delivered vaginally compared to those delivered by *elective caesarean section*.
- Therefore, each case must be judged carefully by an experienced obstetrician before a decision is made to allow a vaginal breech delivery.

- Abdominal palpation may reveal a baby that is obviously so large that elective Caesarean section is required.
- An ultrasound is performed at 37 weeks to estimate the fetal birth weight (EBW) and more importantly the biparietal diameter (BPD).
- The U/S scan will also indicate the degree of extension or flexion of the head and legs.
- Also the type of breech.

- Vaginal delivery is safer in the case of a frank or complete breech as there is an increased risk of cord prolapse with an ill-fitting presenting part (footling).

*An attempt must also be made to assess the size of the pelvis.*
- Clinically, this can be done by a gentle vaginal examination to estimate:
  1. The width of the subpubic angle
  2. The gap between the ischial spines
  3. The sacral curve.
- An erect lateral pelvimetry X-ray may be helpful or magnetic resonance imaging (MRI) pelvimetry can be performed.
- A well-curved sacrum provides a large pelvic cavity;
- A flat sacrum limits the space available to the after coming head and may cause problems during a vaginal delivery, even if the inlet and outlet are adequate.

**Indications for caesarean section for term breech even if vaginal delivery requested**

**Elective caesareans**

**Pelvic**
- small pelvis, flat sacrum, bony abnormalities, e.g. rickets

**Fetal**
- estimated birth weight 4 kg or over
- Large biparietal diameter, e.g. hydrocephalus
- Hyperextension of fetal head.
  --Footling presentation.

**Pre-existing obstetric problems**
- pre-eclampsia
- bad obstetric history
- placental insufficiency
Pre-existing maternal problems
- history of infertility
- older primigravida
- diabetes

Emergency caesareans
- Failure to progress in first stage.
- Failure of descent of breech in second stage.

Management of vaginal breech delivery:
- Spontaneous onset of labour is preferred. Induction of labour with breech should be only in highly selected cases as CS may be a better option than Induction.
- Mothers are advised to attend the delivery unit when membranes rupture or with onset of painful contractions.
- Cord presentation or prolapse should be excluded on admission.
- The labour is conducted as for vertex presentation
- The progress of labour and fetal heart rate are monitored by partogram.
- If progress of labour was poor, adequacy of uterine contractions should be evaluated.
- Limited period of oxytocin augmentation could be of value and safe in selected cases.
- If the progress is poor in the first few hours of augmentation, it is better to opt for CS.
- The second stage needs full cooperation from the mother and assistance;
- hence epidural anaesthesia is recommended for pain relief and for management of the second stage.
- In most cases of breech presentation there is a tendency for mothers to have early bearing down sensation and hence cervical dilatation should be checked and the
- mother encouraged to bear down only when the breech has reached the Perineal phase of the second stage.
- It is important not to intervene early and to have the mother in lithotomy only after the anterior buttock and anus of the baby come into view over the mother’s perineum with no retraction in between contractions.
- An episiotomy may not be essential in multipara with a distensible perineum.
- But may be an advantage in a primigravida. This is done with the regional block or with pudendal block and local infiltration of the perineum
- Usually the fetus emerges in the sacro-lateral position.
- The mother should be encouraged to bear down with uterine contractions to deliver the fetus unassisted up to the level of the umbilicus.
- In cases with extended knees (frank breech) the legs are delivered by slight abduction at the hip followed by flexion of the knees.
- The body of the fetus is ideally kept with the dorsum facing upwards.
When the scapulae become visible, if the arms are flexed the forearms are delivered by sweeping it in front of the fetal chest.

- If the arms are extended adduction and flexion of the shoulder followed by flexion at the elbow helps to bring down the forearm and hand.

In case this was not possible, 'Lovset manoeuvre' is resorted to where the posterior shoulder, which is below the level of the sacral promontory, is brought anterior below the symphysis pubis by rotating the fetus clockwise by holding the baby with the thumbs on the sacrum and index fingers on the anterior superior iliac spines.

Delivery of the arm by rotation of the body so that the posterior shoulder, which was below the sacral promontory, becomes anterior and below the pubic symphysis.

- After delivery of the shoulder which has come anterior the fetus is turned in the anticlockwise direction to enable descent of the opposite shoulder.

- After delivery of the shoulder the dorsum of the fetus should face anterior and on vaginal examination the chin should be facing the sacrum.

- The descent of the head in the pelvis is assisted by the weight of the fetus which is gently supported till the nape of the neck is seen under the symphysis pubis.

- This signals that the head is low in the pelvis and could be delivered by one of three methods.
**Delivery of the after coming**

(1) Swinging the trunk towards the maternal abdomen till the mouth and the nose of the fetus become visible then traction applied.

(2) by jaw flexion and shoulder traction (Mauriceau- Smellie Veit manoeuvre) can be employed where two fingers are pressed over the maxilla to flex the head and delivery is accomplished by shoulder traction;

(3) A Piper or Neville Barnes Forceps can be applied from below while an assistant hold the fetal body above the horizontal.

-The rest of the head is slowly delivered, not allowing any sudden decompression which could result in pressure alterations inside the skull and so cause intracerebral venous bleeding

jaw flexion and shoulder traction Mauriceau- Smellie Veit manoeuvre

![Delivery of the head by jaw flexion and shoulder traction.](image)

**Risk to the fetus from vaginal breech delivery**

The perinatal mortality in breech is 3-4 times more than cephalic delivery due to:

- Prematurity.
- Intracranial damage: subdural and intracranial haemorrhage often after too rapid delivery of the head
- Rarely hypoxia. This may be:
  (a) Before delivery (prolapsed cord).
  (b) At the time of delivery (too slow delivery of the head).

-Perinatal morbidity is also increased due to the risk of fetal injury at time of delivery e.g. Nerve injury from excessive traction of the head.

-Soft tissues injury.

**Delivery of preterm breech**

The data regarding the delivery of preterm breech is conflicting.

many advocate delivery by Cs to reduce perinatal morbidity of the preterm breech.

Thank you