BREECH PRESENTATION DELIVERY
Renata Nicula

Educational objectives
What you need to know
- The main notions for determining the diagnosis of breech presentation
- Specific features of breech presentation
- The importance of age, parity, foetal volume, uterine dynamics in adopting appropriate medical conduct
- Particularities of labour assistance in breech presentation
- The obstetric manoeuvres specific to birth assistance in the breech presentation.

What you need to do
- Establish a diagnosis of breech presentation
- Appreciate the foetal volume and the size of the mother's pelvis
- Assess vaginal delivery conditions and its prognosis
- State the situations requiring a caesarean section
- Monitor the pregnant patient and the foetus during labour
- Anticipate possible complications and prepare yourself to solve them
- Work with members of the multidisciplinary team (obstetrician, neonatologist, anaesthetist) for birth assistance

Definition
Breech delivery is the birth at the eutocic - distocic limit, in which the foetal presentation is represented by the pelvic extremity. Complete breech, in which the legs and pelvis are pointing towards the inferior pelvic strait (Complete Breech and Frank Breech), and incomplete breech (Footling Breech and Kneeling Breech).
Figure 1. Complete Breech, Frank Breech and Incomplete Breech

**Causes**
- maternal:
  - multipara
  - uterine malformations / uterine hypoplasia
  - pelvic / abdominal tumours
  - distocic pelvis
- foetal:
  - prematurity
  - macrosomia/ foetal hypotrophy
  - malformations / foetal tumours
  - twins
- adnexal:
  - polyhydramnios/ oligohydramnios
  - short / long cervix
  - placenta praevia

**Positive diagnosis**
- anamnesis: delivery breech antecedents
- long longitudinal uterine axis
- palpation: palpation of the skull in the uterus fundus, and palpation of the foetal pelvis at the level of the lower segment
- in labour, the meconium is eliminated after the membranes rupture
- paraclinical: by ultrasound examination

**Particularities**
- longer dilation period
• the birth has certain peculiarities, the more voluminous extremity, the head, is the last engaged and delivered
• the birth consists of the pelvis delivery, the shoulders delivery and the head delivery

The birth mechanism

Pelvis delivery
The pelvis engages with the sacro-pretibial diameter, slightly reducible, in the oblique diameter of the superior pelvic strait, and the posterior hip passes first.

The pelvis descends under the action of uterine contractions with internal rotation so that the bitrohanterian diameter reaches the anteroposterior diameter of the inferior pelvic strait. The pelvis delivery, initially the posterior thigh, the anterior one is fixed under the pubic symphysis, then the anterior thigh.

Shoulders delivery
The engagement of shoulders with biacromial diameter, in the same oblique diameter in which the pelvis was engaged or in the opposite one. Internal descent and rotation with the biacromial diameter reaching the anteroposterior diameter of the inferior pelvic strait. The delivery of the posterior shoulder after the anterior shoulder gets under the symphysis.

Head delivery
Head engagement, flexed, with biparietal diameter in the same diameter as the shoulders. Internal descent and rotation coincide with shoulder extra-pelvic rotation. The subocciput is fixed under the symphysis and through deflection the chin, the mouth, the nose, the forehead, the bregma, the occiput are delivered.

Obstetrical conduct
• vaginal delivery
• caesarean section
• the external cephalic version

External cephalic version - is a manoeuvre currently abandoned due to the risks of placental detachment or compression on the umbilical cord.
**Caesarean section** - the indications are represented by the contraindications of vaginal delivery:

- pelvis abnormalities
- uterine scars
- tumours / placenta praevia
- prematurity
- macrosomia
- foetal distress
- umbilical cord displacement

**Vaginal delivery** can be achieved if certain conditions are met:

- absence of caesarean section indications
- normal uterine dynamics
- maternal and foetal condition in physiological parameters.

**Methods and maneuvers**

**Total abstinence (Vermelin method):** the propulsion force is represented exclusively by uterine contraction. The pelvis lowers, relaxes the perineum and episiotomy is performed. The back is anteriorly rotated, and the moment of abdomen delivery the cord loop is undone. The shoulders are delivered in the transverse diameter, and a pressure on the uterine fundus hurries the expulsion of the head, maintaining its flexion.

**Bracht manual aid:** in the moment of scapula delivery, the foetal pelvis is held with both hands and risen to the mother's abdomen, making a curve around the pubic symphysis. At the same time, an assistant pushes over the symphysis to prevent head deflection.

**Mauriceau-Pinard manoeuvre** After the delivery of the pelvis is performed, the foetus is placed on the left forearm of the physician, waiting for the shoulders delivery. The index and the middle finger are fixed in the mouth of the foetus maintaining the flexion, while the other hand comprises the neck between the index and the middle finger. When the occiput gets under the symphysis, the foetus is lifted and pivoted around the symphysis, delivering the menton, mouth, nose, forehead, occiput. All this time the assistant presses continuously on the suprapubic.

**Patrial breech extraction:** supposes the use of obstetrical manoeuvres (Bracht, Muller, Pajot, Mauriceau) after birth of the foetus to the umbilicus.
**Total breech extraction:** performed only for the second foetus in the case of twins.

A.

*Figure 2. A. Bracht-Moriceau manoeuvre and B-C. Moriceau manoeuvre*

**Breech presentation and shoulder dystocia**

*During dilation:* dilation stagnation requires the correction of dynamics with oxytocin perfusion. Lack of pelvic progression requires the reconsideration of vaginal delivery and performing a caesarean section. Umbilical cord displacement requires caesarean section. Any sign of foetal distress requires caesarean section.

*Dystocia during expulsion*

*Raising the arms beside the head* blocks the head progress and requires helping manoeuvres:

- **Pajot's manoeuvre:** involves the delivery of the posterior shoulder by lifting the foetus to the mother's abdomen, later releasing the anterior shoulder after it has turned into the posterior shoulder.

  *Figure 3. Pajot's manoeuvre*

- **Muller's manoeuvre:** First, release the anterior shoulder on the ventral side of the foetus, pressing in the elbow pivot to flex the limb.

  The retention of the head in the excavation requires the **Mauriceau manoeuvres.**

**Incidents and accidents**

- foetal trauma with possible neurological, muscle sequelae
- foetal brain haemorrhage
- aspiration of amniotic fluid by the foetus through a reflex action
- episodes of foetal hypoxia.
- foetal mortality and morbidity.

(Self-)Assessment form

<table>
<thead>
<tr>
<th>Stage / Criteria</th>
<th>Correct</th>
<th>Incorrect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnosis of breech presentation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maternal and foetal parameters monitored during labour</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vaginal delivery requirements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indications for caesarean section</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Possible intrapartum accidents - incidents</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Helping manoeuvres in the case of dystocia</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>