Cord Presentation and Prolapse

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Cord Length

- The length of the umbilical cord varies from no cord (achordia) to 300 cm, with diameters up to 3 cm.
- Umbilical cords are helical in nature, with as many as 380 helices.
- An average umbilical cord is 55 cm long, with a diameter of 1-2 cm and 11 helices.[1]
- For unknown reasons, most cords coil to the left.[2]
- About 5% of cords are shorter than 35 cm, and another 5% are longer than 80 cm.

Definitions

- **In both conditions a loop of the cord is below the presenting part.**
- **The difference is in the condition of the membranes; if intact it is cord presentation and if ruptured it is cord prolapse.**
- **Incidence 0.6% of deliveries, 5-10% in cases with incomplete breech**

Etiology &Predisposing Factors

Etiology

The presenting part is not fitting in the lower uterine segment due to:

- **(A) Fetal causes:**
- **1- Malpresentations : e.g. complete or footling breech, transverse and oblique lie.**
- **2- Prematurity.**
- **3- Anencephaly.**
- **4- Polyhydramnios.**
- **5- Multiple pregnancy.**
- **(B) Maternal causes:**
- **1- Contracted pelvis.**
- **2- Pelvic tumours.**

Predisposing factors

- **1- Placenta praevia.**
- **2- Long cord.**
- **3- Sudden rupture of membranes in polyhydramnios.**

Diagnosis

- **- It is diagnosed by vaginal examination .**
- **If the cord is prolapsed it is necessary to detect whether it is pulsating i.e. living fetus or not i.e. dead fetus but this should be documented by auscultating the FHS.**
- During the course of labor, fetal bradycardia may indicate compression of a prolapsed cord, which should be ruled out with a vaginal examination.
- **- Ultrasound: occasionally can diagnose cord presentation.** Loops of cord in front of the presenting part can be visualized using color Doppler studies

Management

- **) Cord presentation**:
- **Caesarean section: for contracted pelvis.**
- **In other conditions the treatment depends upon the degree of cervical dilatation:**
- **i) Partially dilated cervix : prevent rupture of membranes as long as possible by:**
- **- putting the patient in trendlenberg position,**
- **- avoiding high enema,**
- **- avoiding repeated vaginal examination.**
- **- When the cervix is fully dilated manage as mentioned later .**
- **ii) Fully dilated cervix: the fetus should be delivered immediately by:**
- **- Rupture of the membranes and forceps delivery : in engaged vertex presentation.**
- **- Rupture of the membranes and breech extraction: in breech presentation.**
- **- Rupture of the membranes + internal podalic version + breech extraction : may be tried in transverse lie otherwise,**
- **- Caesarean section : is indicated as well as for non-engaged vertex and other cephalic malpresentations.**

Management

- **Cord prolapse**:
- **Management depends upon the fetal state:**
- **i) Living fetus:**
- **(I) Partially dilated cervix: Immediate caesarean section is indicated. During preparing the theatre minimize the risk to the fetus by:**
- **putting the patient in trendlenberg position,**
- **manual displacement of the presenting part higher up,**
- **if the cord protrudes from the vulva, handle it gently and wrap it in a warm moist pack.**
- **giving oxygen to the mother.**
- **(II) Fully dilated cervix: the fetus should be delivered immediately as in cord presentation.**
- **ii) Dead fetus**:
- **Spontaneous delivery is allowed.**
- **Caesarean section : is the safest procedure in obstructed labor as destructive operations is out of modern obstetrics.**
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