**🏥 Hospital Protocol: Management of Umbilical Cord Prolapse**

**1. Purpose**

To provide a clear, evidence-based, stepwise approach for the **recognition and management of umbilical cord prolapse (UCP)**, with the aim of reducing perinatal morbidity and mortality through timely and appropriate intervention.

**2. Scope**

This protocol applies to all obstetric and neonatal care providers (obstetricians, anesthetists, midwives, nurses, neonatologists, support staff) working in the labour ward, operating theatre, and related obstetric emergency settings.

**3. Definitions**

* **Umbilical cord prolapse (UCP):** descent of the umbilical cord through the cervix, below or alongside the presenting part, after rupture of membranes.
* **Occult cord prolapse:** cord lies alongside presenting part but not palpable/visible beyond cervix; suspected if unexplained fetal heart rate abnormalities occur.

**4. Risk Factors**

* Malpresentation (breech, transverse, oblique)
* Unengaged or high presenting part, especially at ROM
* Polyhydramnios, multiple pregnancy
* Preterm labour
* Long cord
* Iatrogenic: artificial rupture of membranes (AROM) with high head, internal manipulations, external cephalic version

**5. Recognition**

* **Clinical**: visible or palpable cord at or beyond the cervix/vagina
* **Fetal monitoring**: sudden prolonged deceleration, severe variable decelerations, or sustained bradycardia after ROM

**6. Responsibilities**

* **First responder (midwife/doctor):** Recognize, call for help, initiate immediate maneuvers
* **Team leader (obstetrician):** Direct management, decide delivery mode, document times
* **Anaesthetist:** Prepare for urgent cesarean section
* **Neonatal team:** Prepare for potential resuscitation
* **Nursing/midwifery staff:** Assist with positioning, IV access, monitoring, transfer to theatre

**7. Procedure (Stepwise Management)**

**7.1 Immediate Actions**

1. **Call for help** → activate obstetric emergency team & prepare theatre
2. **Maternal positioning** → knee–chest, left lateral with head down (exaggerated Sims), or Trendelenburg
3. **Manual elevation** of presenting part with gloved hand until definitive delivery
4. **Cord care** → minimize handling; if protruding, cover with warm saline-soaked gauze
5. **Adjuncts if delay to theatre:**
   * Bladder filling: 500–750 mL warm saline via Foley (Vago method)
   * Consider tocolysis (e.g., terbutaline 0.25 mg SC)
6. **Supportive measures:** oxygen by mask, IV access, IV fluids, continuous FHR monitoring if feasible

**7.2 Definitive Delivery**

* **Emergency cesarean section** = treatment of choice
  + **Decision-to-delivery interval (DDI):** aim ≤30 minutes
* **If vaginal delivery imminent (full dilatation, head on perineum):** expedite by instrumental delivery (vacuum/forceps)
* **WHO/low-resource setting:** if cesarean unavailable, maintain decompression and expedite vaginal birth if possible; urgent referral

**7.3 Post-delivery Care**

* Neonatal resuscitation team present at delivery
* Maternal postoperative/postnatal care as per routine
* Document: time of diagnosis, maneuvers used, decision time, delivery time, neonatal outcome

**8. Audit & Quality Assurance**

* **Audit criteria:**
  + Time from diagnosis to delivery (target ≤30 minutes)
  + Perinatal outcomes (Apgar, neonatal admission, cord pH)
  + Compliance with maneuvers (positioning, manual elevation, bladder filling if delay)
* **Debrief:** clinical team and parents after event
* **Training:** Regular multidisciplinary **emergency drills** for UCP

**9. References**

* RCOG Green-top Guideline No. 50: Umbilical Cord Prolapse (2022)
* ACOG Practice Bulletin: Obstetric Emergencies / Intrapartum Care
* SOGC Clinical Practice Guidelines
* WHO: *Managing Complications in Pregnancy and Childbirth*

