Clinical Practice Guidelines: Obstetrics/Cord prolapse

Policy code	CPG_OB_CP_0720
Date	July, 2020
Purpose	To ensure consistent management of a cord prolapse.
Scope	Applies to Queensland Ambulance Service (QAS) clinical staff.
Health care setting	Pre-hospital assessment and treatment.
Population	Applies to all ages unless stated otherwise.
Source of funding	Internal – 100%
Author	Clinical Quality & Patient Safety Unit, QAS
Review date	July, 2023
Information security	UNCLASSIFIED – Queensland Government Information Security Classification Framework.
URL	https://ambulance.qld.gov.au/clinical.html

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Cord prolapse

July, 2020

Cord prolapse is an obstetric emergency occurring in 1 in 200 pregnancies and is associated with a high perinatal mortality rate.[1] It occurs following membrane rupture, when the umbilical cord slips down in front of the presenting part of the foetus and protrudes into the vagina. Diagnosis is made by visualising the cord at the vaginal opening which should appear as a bluish white, shiny, pulsating structure.

This condition worsens as labour progresses and the presenting part descends, compressing the cord and cutting off the foetal blood supply, leading to hypoxia and eventual foetal demise.[2]

The principle of pre-hospital management is to monitor the cord for pulsations and use maternal positioning to prevent compression. If the cord stops pulsating, the pressure from the presenting part will need to be alleviated, either indirectly using gravity (maternal knee-chest position) or directly, by gently pushing the foetus off the cord.[2]

Risk factors for cord prolapse include:[2]

- multiparity
- low birth weight (< 2.5 kg)
- pre-term labour (< 37 weeks)
- foetal congenital anomalies
- breech presentation
- transverse, oblique and unstable lie*
- second twin
- polyhydramnios
- unengaged presenting part
- low-lying placenta

** Unstable lie is when the longitudinal axis of the foetus (lie) is changing repeatedly after 37 weeks.*[3,4]

Clinical features

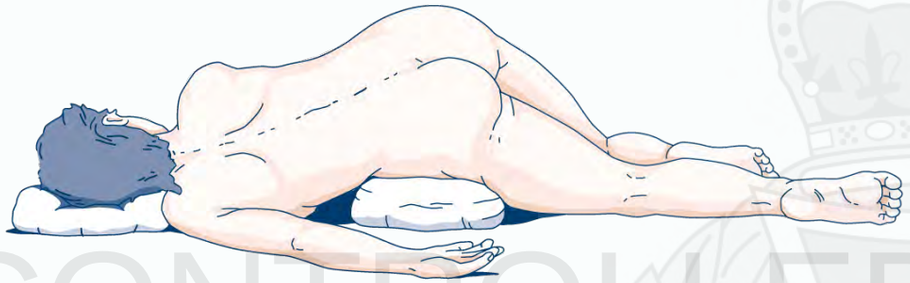
- Umbilical cord visible at, or external to, the vaginal opening.
- Evidence of membranes having ruptured.
- change in foetal movement pattern.
- Meconium in the amniotic fluid (vaginal discharge may be stained green).

Risk assessment

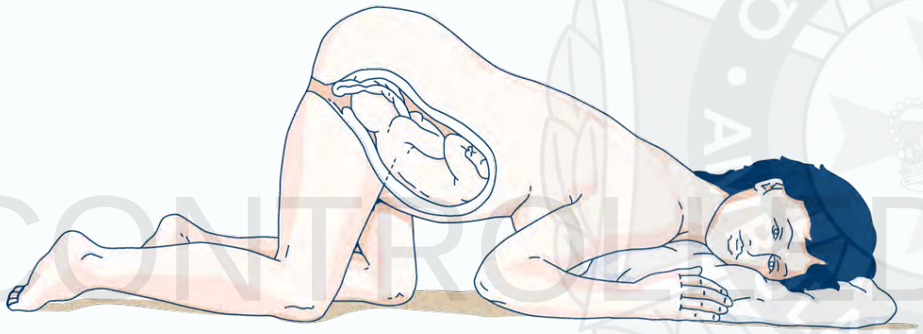
- Caesarean section is the recommended mode of delivery in cases of cord prolapse when vaginal birth is not imminent in order to prevent foetal hypoxic acidosis.[3,5]
- Cord presentation or prolapse should be excluded by visual vaginal examination in labour after spontaneous rupture of membranes (ask mother to feel for the cord).[4,6,7]
- Caution is required if manoeuvring the umbilical cord as pinching can cause vasospasm, use a DRY pad to replace the cord within the opening of the vulva and prevent further prolapse (underwear may be used to hold pad in place).[6,7]

Risk assessment

- During emergency ambulance transfer, the knee-chest position is potentially unsafe and the exaggerated Sims position (left lateral with pillow under hip) should be used
- Use a stretcher or walk patient to stretcher, avoid use of a stair chair if possible



Exaggerated Sims position
The exaggerated Sims position is the preferred position for transport



The knee-chest position Sims position
Difficult to appropriately restrain patient for transport

CPG: Clinician safety
CPG: Standard cares

PULSATIVE CORD EVIDENT?
- **Umbilical cord presenting at vaginal opening**
- **Loop of cord hanging down**

Y

- **Assist the mother into the exaggerated SIMS position**
- **Ask the mother to gently push the cord back into the vagina (this must be done carefully to avoid vasospasm) use a dry pad**

N

- **Assist mother to assume the knee-chest position**
- **Carefully attempt to push the presenting part off the cord**

Transport in exaggerated SIMS position

Transport to hospital
Pre-notify as appropriate

Note: *Clinicians are only to perform procedures for which they have received specific training and authorisation by the QAS.*

Additional information

- Early notification of obstetrics unit is essential to minimise time to caesarean section.[3]