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CORD PROLAPSE - REVIEW ARTICLE

KEYWORDS

Cord prolapse, Occult Prolapse, Cord Presentation, Deceleration of fetal heart rate, fetal soufflé, vasospasm.

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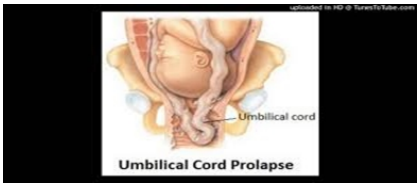
ABSTRACT Cord prolapse is one of the life threatening obstetrical emergencies during child birth. The fetus is at the risk of developing anoxia due to acute placental insufficiency from the moment the cord is prolapsed. The incidence of cord prolapse is about 1 in 3 hundred deliveries. It occurs mostly in multiparous women. When diagnosis of cord prolapse is made the obstetrician and midwives calls for urgent assistance to prevent complications to the mother and the fetus. The health care professionals must also take judicious judgement and prompt treatment to save the life of mother and fetus.

INTRODUCTION

Cord prolapse refers to prolapse of umbilical cord which lies below the presenting part of the fetus. The risk factors for cord prolapse may be Malpresentations like Breech Presentations and transverse lie of the fetus. The factors includes prematurity, multiple pregnancy, ppolyhydramnious and multi parity. The cord prolapse requires emergency treatment and management to prevent complications to mother and fetus. The maternal risks are incidental due to emergency operative delivery which involves the risk of anesthesia, blood loss and infections. The risk for fetus are fetal asphyxia and fetal distress. The midwives must know the protocol to manage the obstetrical emergencies of cord prolapse.



FACTORS CONTRIBUTING TO INCREASE THE RISK OF CORD PROLAPSE

Any situation where the presenting part is neither well applied to the lower uterine segment nor well down in the pelvis may make it possible for a loop of cord to slip down infront of the presenting part. Such situations include the following:

- ***Malpresentations***

The malpresentations like Breech Presentation or shoulder presentation increase the risk of cord prolapse. In this condition the degree of compression exerted by the presenting part of the fetus is less comparing to cephalic presentation. Hence it may result in the prolapse of cord. The commonest malpresentation for cord prolapse is tranverse lie, followed by incomplete breech presentation especially the footling presentation, face and brow presentation are less common cause of cord prolapse

- ***Prematurity***

The size of the fetus in relation to the pelvis for which the uterus allows the cord to prolapse. Babys of low birth weight, less than 1500g, are particularly vulnerable.

- ***Multiple Pregnancy***

Malpresentation of the second twin is common in multiple pregnancy. If one baby is delivered the other baby will have the risk of cord prolapse.

- ***Polyhydramnious***

The cord is liable to be swept down in a gush of liquor if the membranes rupture spontaneously. The occurrence of cord prolapse can be prevented by controlled release of liquor with artificial rupture of membrance.

- ***High Head:***

If the membranes are ruptured spontaneously while the fetal head is high, a loop of cord may passes between the uterine wall and fetus which results in cord prolapse.

- ***Multiparity***

Repeated child birth may results in loss of muscle tone of pelvic floor muscles which promote the occurrence of cord prolapse

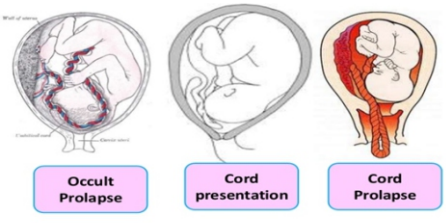
TYPES OF CORD PROLAPSE

There are 3 clinical types of abnormal descent of the umbilical cord by the side of the presenting part.

1. Occult cord Prolapse : The cord lies along side, but not infront of the presenting part which is not felt by the fingers during internal examination.

2. Cord presentation: The cord is slipped down below the presenting part and lies infront of it within the intact bag of membranes.

3. Cord prolapse: The cord is lying inside the vagina or outside the vulva following rupture of membranes.



DIAGNOSIS

Occult Prolapse:

Occult prolapse is difficult to diagnose. The possibility should be suspected if there is persistence of variable deceleration of fetal heart rate pattern detected on continuous electronic fetal monitor.

Cord presentation:

The diagnosis is made by feeling the pulsation of the cord through the intact membranes.

Cord prolapse:

The cord is palpated directly by the fingers and its pulsation can be felt if the fetus is allied. Cord pulsation may cease during uterine contraction, which however returns after the contraction passes off.

MANAGEMENT OF CORD PRESENTATION

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The aim is to preserve the membranes and to expedite the delivery.

- Avoid vaginal examination to reduce the risk of rupturing membranes
- During the time of preparing the woman for operative delivery, she is kept in sims position to minimize the cord compression.

MANAGEMENT OF CORD PROLAPSE

Immediate action: (First aid management)

- If the cord lies outside the vagina it should be replaced into the vagina with gloved fingers to minimize vasospasm.
- If the most of the cord is outside the vulva. It should be covered with sterile wet gauze, to prevent spasm of the umbilical vessels due to draughts.
- The women is placed in elevated sims postion, the foot end of the bed should be elevated to support the cord in position.
- If oxytocin infusion is in progress, it should be discontinued to prevent fetal hypoxia. At the same time intravenous fluid and oxygen by face mask is given.
- Bladder filling is done to raise the presenting part of the compressed cord till such time patient has delivered. Bladder is filled with 450 - 750 ml of normal saline. Bladder is emptied before caesarean delivery.

MANAGEMENT DURING LABOR:

Management protocol should be based on baby living or dead, maturity of the baby and degree of dilatation of the cervix.

- If the fetus is alive and the head is engaged, delivery is completed by forceps/ ventouse. When a breech engaged , breech extraction is done.
- Caesarean section is the ideal management when the fetus is alive and delivery is not immediate. The birth must be expedited with the greatest possible speed to reduce the fetal mortality associated with this condition.
- If the fetus is confirmed dead, labor is allowed to proceed, awaiting for spontaneous termination.

CONCLUSION

Cord prolapse may increase the risk of mother and fetus. If appropriate management is not done. The prognosis is related with the interval between its reduction and delivery of the baby. If the delivery is completed with in 10 - 30 minutes the fetal mortality can be reduced to 10%.

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