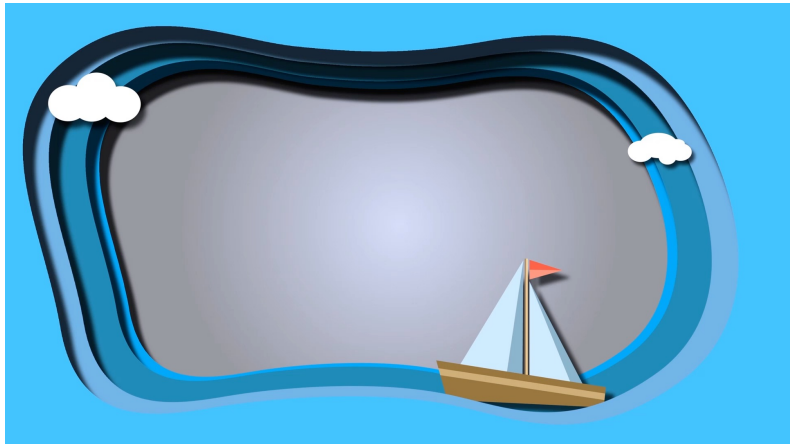
5

MALPRESENTATIONS
SHOULDER, COMPLEX & CORD PRESENTATIONS



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MANSOURA OBSTETRICS

UNDERGRADUATES

The purpose of these lectures is to deliver the basic obstetrical, and gynecological knowledge to the undergraduate medical student, without sophistications or unnecessary details.

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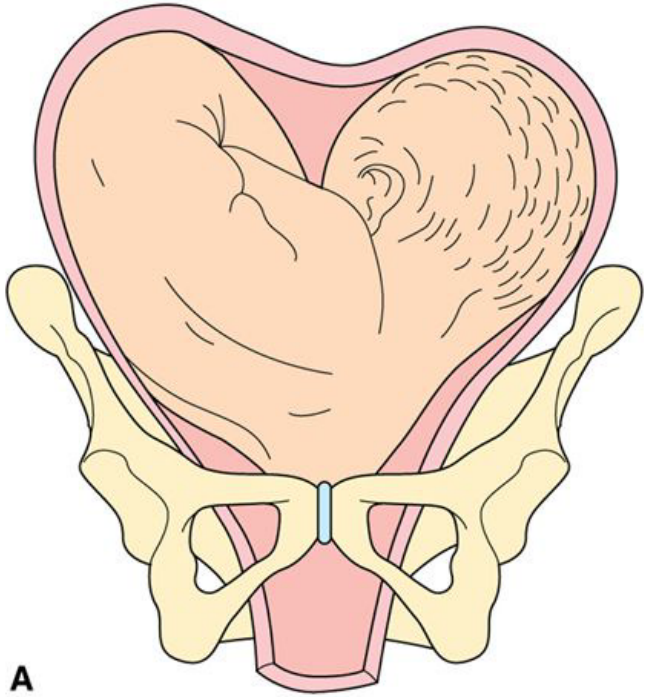
ان الغرض من وراء هذه المحاضرات هو تقديم المعلومات الأساسية في علم التوليد و أمراض النساء دون تفاصيل لا تفيد طالب البكالوريوس. والله من وراء القصد.

Osama M Warda MD

Shoulder presentation (Transverse or oblique lie)

Definition:
Malpresentation in which longitudinal axis of fetus is perpendicular to that of mother (transverse lie) or forms angle with that of mother (oblique lie), denominator is scapula & head is on one side & breech is on the opposite side

Transverse lie. Shoulder presentation



Shoulder presentation
(Transverse or oblique lie)

Incidence: 1/200 (0.5%).

Positions: [dominator is scapula- or Acromio-]

There are 4 classical positions:

1st position: **Lt scapuloanterior (LScA):** back is Lt anterior.

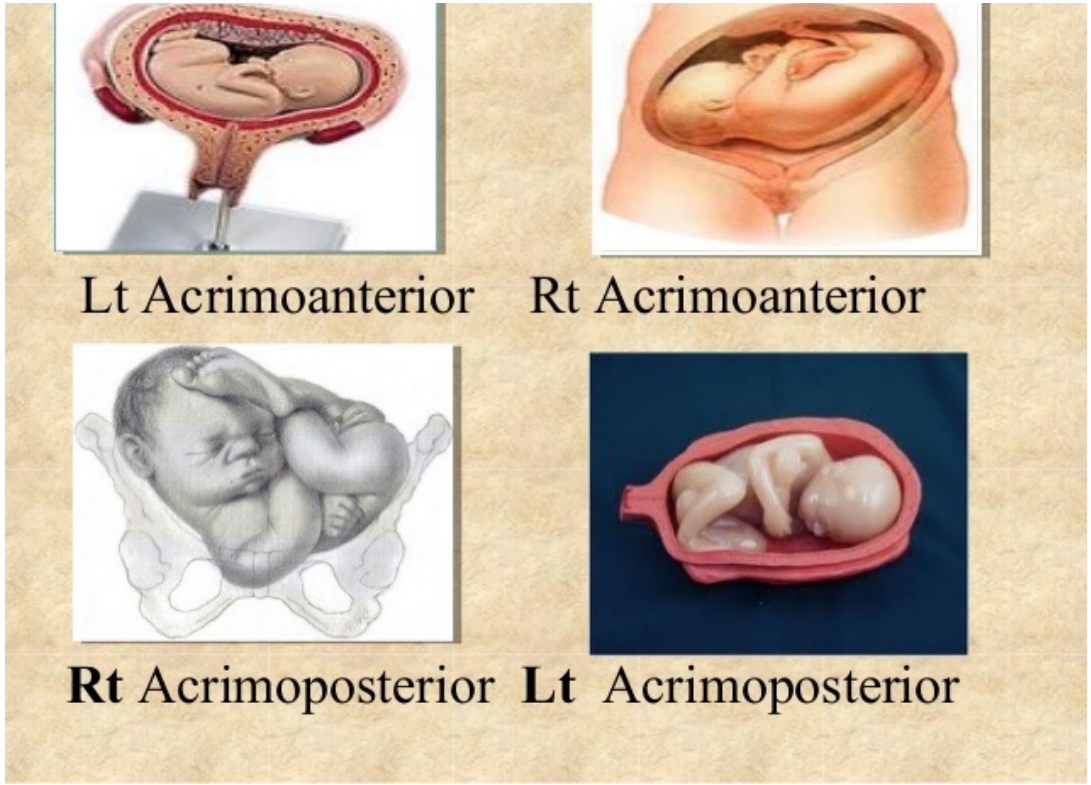
2nd position: **Rt scapuloanterior (RScA):** back is Rt anterior.

3rd position: **Rt scapuloposterior (RScP):** back is Rt posterior.

4thposition: **Lt scapuloposterior (LScP):** back is Lt posterior.

Shoulder presentation (Transverse or oblique lie)

- Scapulo-anterior positions are more common than scapula-posterior positions because concavity at front of fetus (due to flexion) fits into convexity of vertebral column at back of mother (lumbar lordosis).



Shoulder Presentation

Etiology:

1-General causes of malpresentations.

2-Any factor occupying fundus (as uterine anomalies, fundal myoma or fundal insertion of placenta).

SHOULDER PRESENTATION

Mechanism of labor:

A) No mechanism: with mature fetus & average pelvic capacity, labor is obstructed & spontaneous vaginal delivery is impossible.

B) Full term living: ***very Rare*** → One of the followings may occur early in labor before ROM:

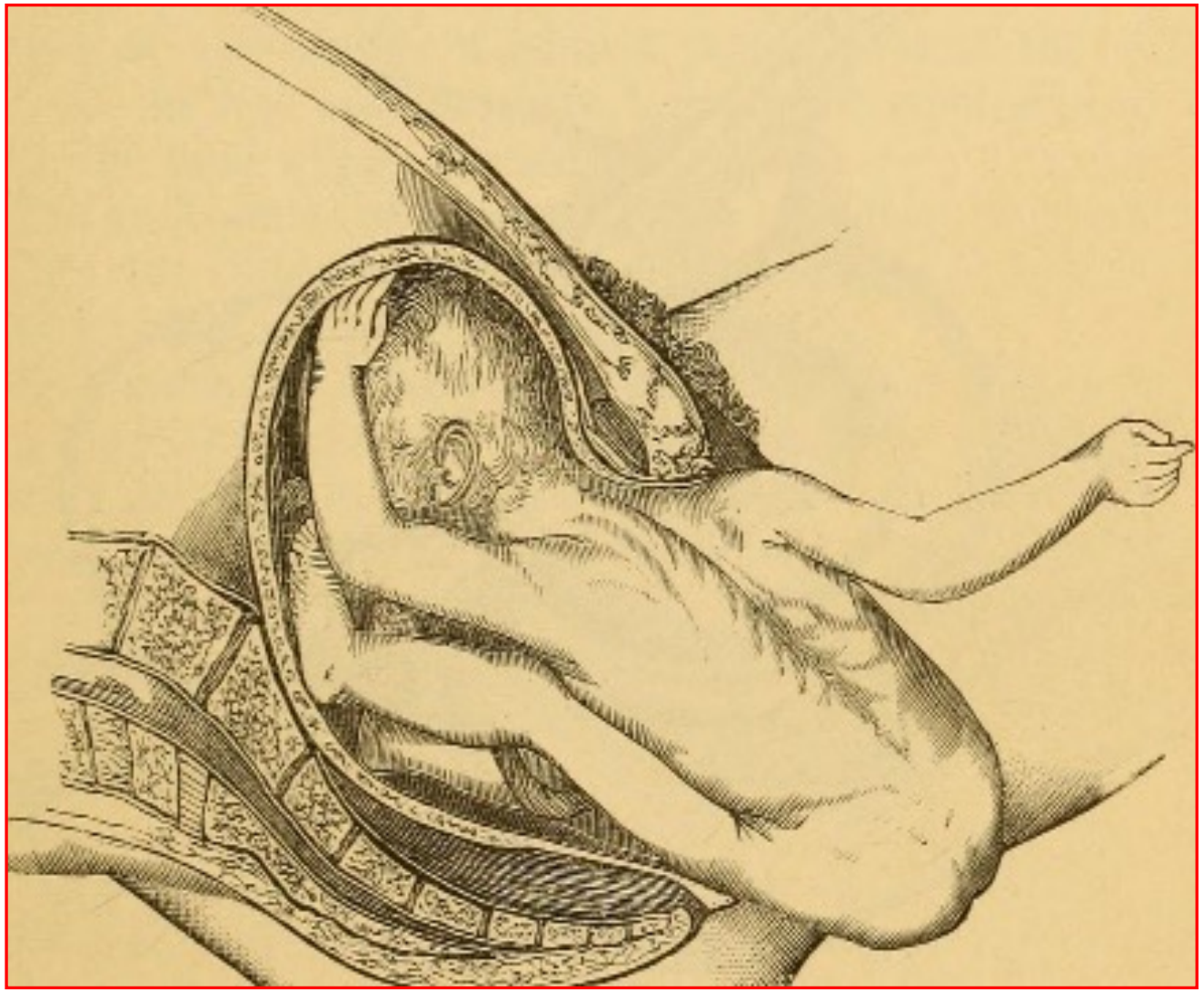
1) **Spontaneous rectification into vertex.**
2) **Spontaneous version into breech.**

SHOULDER PRESENTATION

C) Preterm or dead: ***Extremely rare*** → very small fetus + very wide pelvis + strong uterine contractions, one of the followings may occur:

1) **Spontaneous expulsion:** Fetus is folded like letter **V** & is expelled (partus conduplicato corpore).

2) **Spontaneous evolution:** Head is retained above pelvic brim, neck greatly elongates & breech descends followed by trunk & aftercoming head.

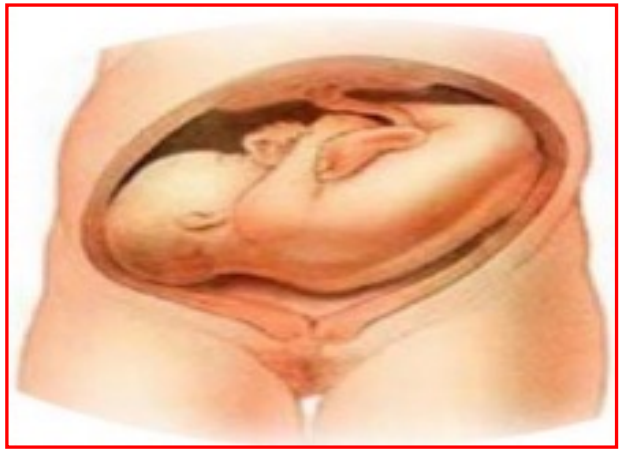


Spontaneous evolution

partus conduplicato corpore

SHOULDER PRESENTATION : diagnosis

A) During pregnancy:



1) History: Abnormal shape of abdomen.

2) Abdominal examination:

***a) Inspection:* Abdomen is broader from side to side.**

b) Palpation:

1- Fundal level: < period of amenorrhea.

2- Fundal grip: No head or breech is felt (empty).

3- Umbilical grip: Head is felt on one side & breech is felt on the other side.

4- Pelvic grips: No head or breech is felt (empty).

***c) Auscultation:* FHS is best heard below umbilicus on side of head.**

3) Ultrasound: To confirm diagnosis & exclude congenital anomalies.

SHOULDER PRESENTATION- diagnosis

B) During labor:

1) **History & abdominal examination:** **As during pregnancy.**

2) **Vaginal examination:**

a) Confirmation of diagnosis:

1- Palpation of tip of scapula, acromion process, clavicle, ribs, axilla, arm & hand.

2- If prolapse of arm occurs:

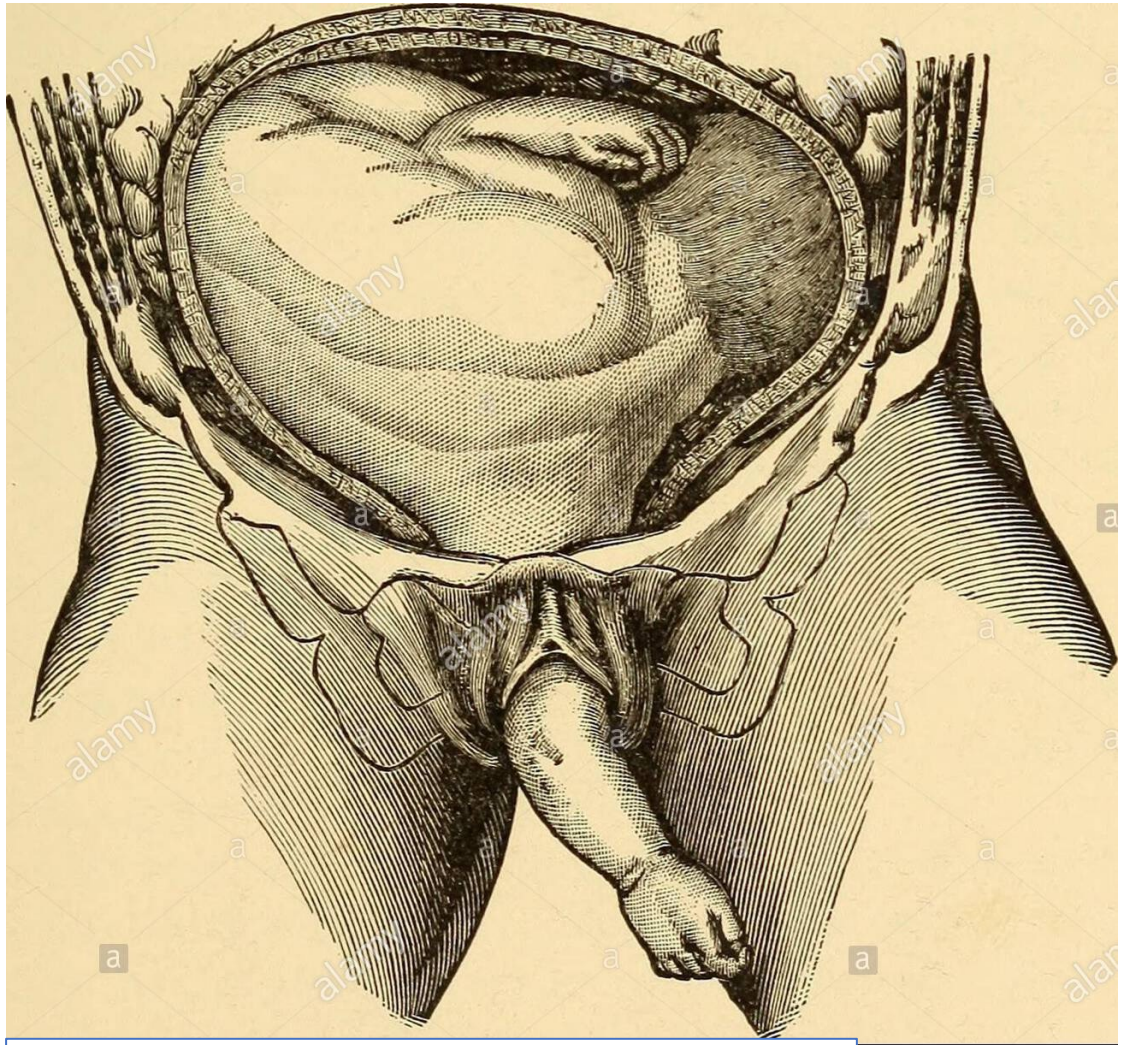
- Dorsum of prolapsed supinated hand points to back & thumb points to side of head (Barcala's sign).

- Side of prolapsed hand (Rt or Lt hand) can be determined by shaking hands è fetus (supinated Rt hand of fetus can be shaked by Rt hand of examiner & Lt hand by Lt hand).

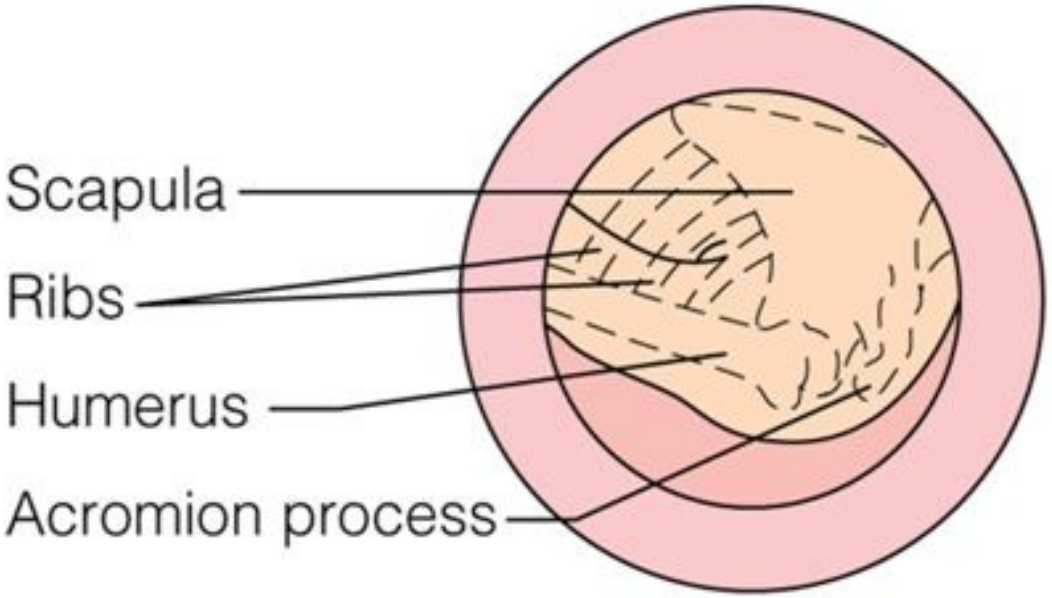
b) Differentiation of hand from foot: **See breech presentation.**

c) Differentiation of elbow from knee: **See breech presentation.**

3) **Ultrasound:** **To confirm diagnosis & exclude congenital anomalies.**



Barcala's sign



Vaginal palpation findings

SHOULDER PRESENTATION : Management

A) During pregnancy:

- **1) Version:** Do ECV → if failed, do external podalic version (EPV).
- **2) Elective CS:** If there is indication.

SHOULDER PRESENTATION- management

B) During labor:

1) 1st stage:

a) ECV or EPV: Can be done early in labor **provided that membranes are intact & there is no indication for CS.**

1- If succeeded: AROM & apply abdominal binder & follow up labor.

2- If failed: Guard against ROM & wait for full cervical dilatation then do IPV.

SHOULDER PRESENTATION- Management

2) 2nd stage:

a) Internal podalic version (IPV) followed by breech extraction:

Can be done provided that:

1- Cervix is fully dilated.

2- Sufficient amount of liquor is present.

3- Uterus isn't tonically contracted & not molded over fetus.

4- No indication for CS.

b) CS: The safest method.

SHOULDER PRESENTATION - Management

c) Decapitation: Old method that can be done if fetus is dead.

d) Management of transverse or oblique lie in 2nd twin:

- 1- ECV or EPV then delivery as cephalic or breech: If membranes are intact.
- 2- IPV followed by breech extraction: If membranes are ruptured.
- 3- CS: If uterus is tonically contracted & considerable time has passed since delivery of 1st fetus.

SHOULDER PRESENTATION - Management

Neglected shoulder presentation:

- ***Definition:*** Neglected cases of shoulder presentation during labor with ruptured membranes, drained liquor & obstructed labor (uterus is tonically contracted & molded over fetus & LUS is distended & thin with high pathological retraction ring).

- ***Diagnosis:*** Signs of obstructed labor + local signs of shoulder presentation ± prolapsed cyanosed arm (commonly) ± prolapsed non pulsating cord.

-***Complications:*** Complications of obstructed labor (specially rupture uterus & fetal distress).

SHOULDER PRESENTATION
- Management

Neglected shoulder presentation: (contd,)

- ***Prevention:*** By proper management of shoulder presentation (neglected shoulder shouldn't be seen in modern obstetrics).

- ***Management:***

1) **Rapid correction of general condition of patient.**

2) **Immediate termination of process of labor:** No place for version (due to ↑↑ risk of rupture uterus).

a) Living fetus: CS (incision is better to be vertical to facilitate extraction).

b) Dead fetus: CS (better) or decapitation.

3) **Exploration of birth canal.**

Complex (compound) presentation

Incidence: 1/1000 deliveries.

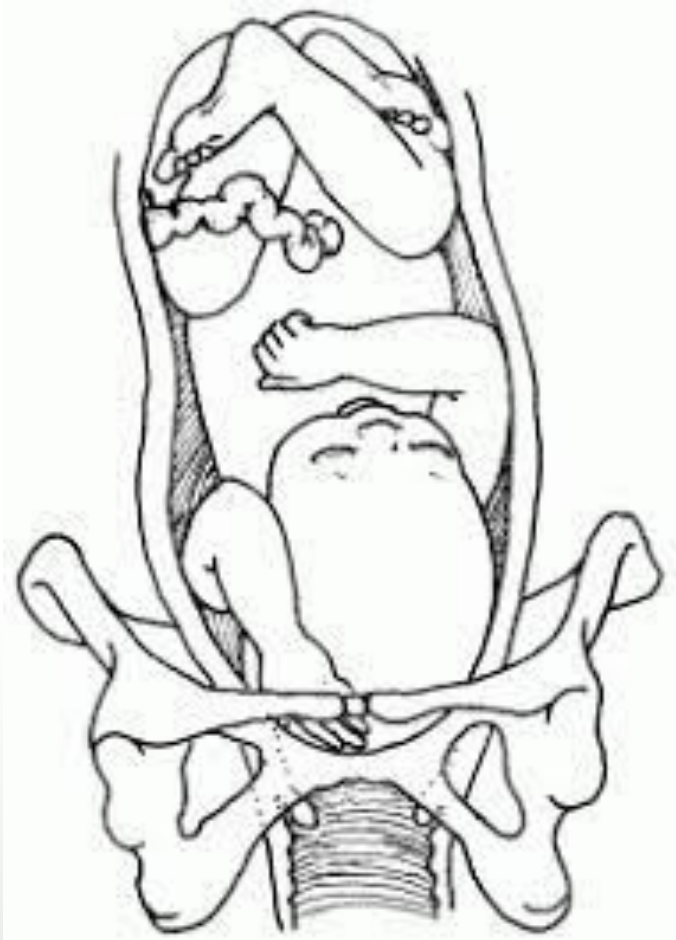
Types: The commonest is combination of head & hand.

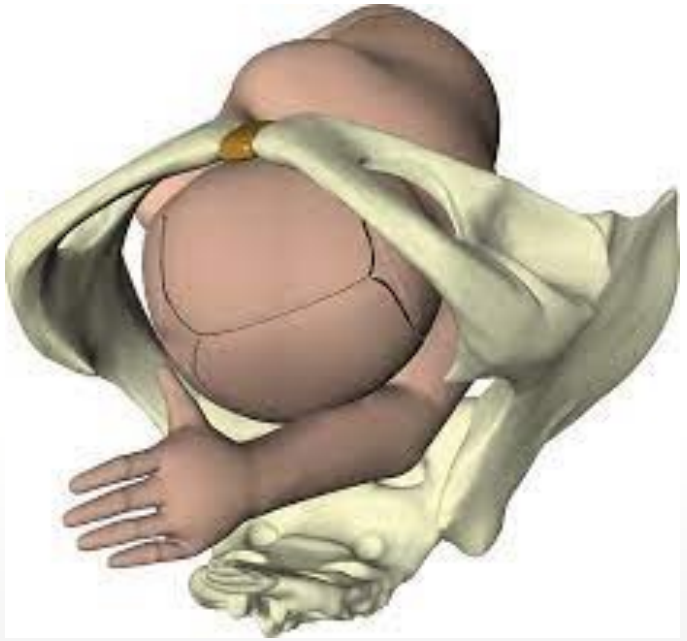
A) Cephalic presentation with prolapse of:

- 1) One or both upper limbs (arm-hand): Some authors call it complex.
- 2) One or both lower limbs (leg-foot): Some authors call it compound.
- 3) Arm & leg together.

B) Breech presentation with prolapse of arm or hand.


Compound
(extremity
together
with head)





Complex (compound) presentation

Etiology: General causes of malpresentations (see before).

Diagnosis:

A) Suspicion: In the following conditions:

1) Delayed progress in active phase of labor.
2) Failure of engagement.
3) Fetal head remains high & deviated from midline during labor (specially after ROM).

B) Vaginal examination: Condition is only diagnosed on vaginal examination (limb is present beside head or breech).

Complex (compound) presentation

Management: Depends on:

1) Presentation.
2) Presence or absence of cord prolapse (occurs in 15-20% of cases).
3) Condition of cervix (effacement & dilatation).
4) Condition of membranes.
5) Condition & size of fetus & presence of twins.

Complex (compound) presentation

A) If labor is progressing: Don't interfere (the best treatment for complex presentation in absence of complications is masterful inactivity).

B) If progress of labor is arrested:

1) **Reposition of prolapsed limb:** In normal pelvis, it is done under anesthesia & head is pushed into pelvis.
2) **Forceps extraction:** Done (with or without reposition of prolapsed limb) if head is engaged & cervix is fully dilated (but take care not to include limb in forceps).
3) **CS:** Done if head isn't engaged, reposition isn't feasible or is unsuccessful or if there is other obstetric indication for CS.
4) **IPV followed by breech extraction:** Has no role in modem obstetrics as it carries high risk of rupture uterus & fetal death.

Cord presentation & prolapse

Definition: Presence of umbilical cord below or beside presenting part.

Incidence:

In vertex: 1/1500.

In breech: 0.5% in frank breech, 5% in complete breech & 15% in footling.

In transverse lie: 20%.

Cord presentation & prolapse

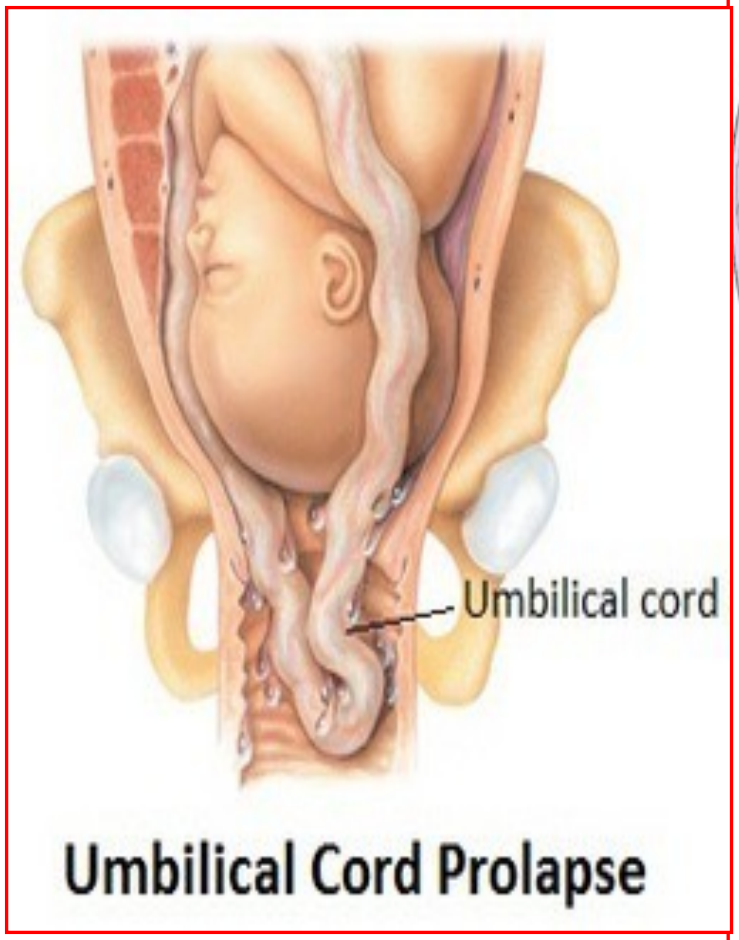
Types:

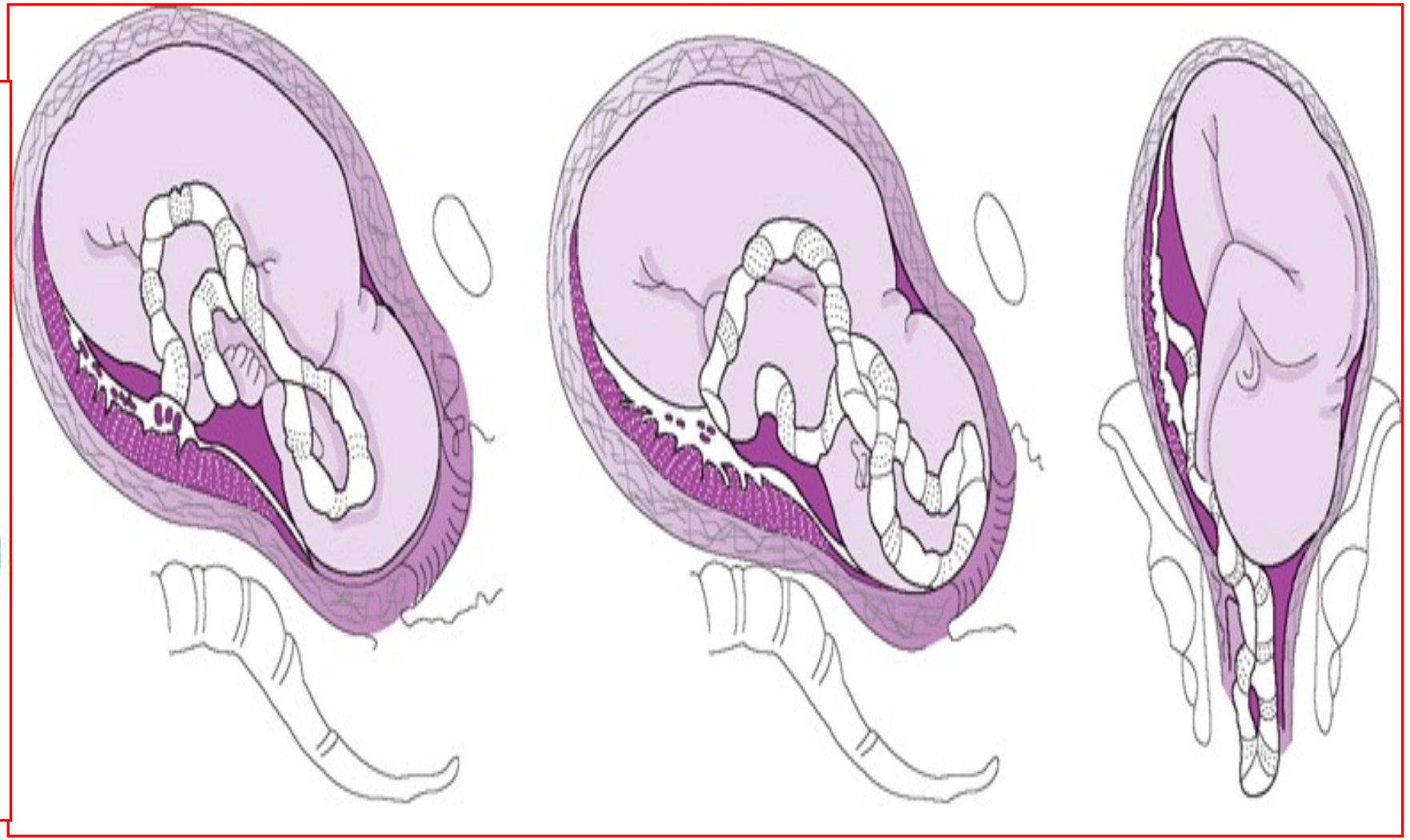
A) Cord presentation: **Presence of umbilical cord below presenting part with intact membranes.**

B) Overt cord prolapse: **Presence of umbilical cord below presenting part with ruptured membranes (umbilical cord descends though cervix into vagina).**

C) Occult cord prolapse: **Umbilical cord is palpable only beside presenting part with ruptured membranes.**

D) Cord expression: **Umbilical cord is visible outside vulva**





Occult prolapse **Cord presentation** **overt prolapse**

Cord presentation & prolapse

Etiology: All factors that prevent complete filling & occlusion of pelvic inlet by presenting part.

A) Faults in passages: Contracted pelvis & pelvic tumors.

B) Faults in passengers:

- 1) Fetus: Prematurity, multifetal pregnancy, malpresentation & high presenting part (floating head).

2) Placenta: Placenta previa & low lying placenta.

3) Umbilical cord: Long umbilical cord. 4) Amniotic fluid: Polyhydramnios.

C) Iatrogenic causes:

1) AROM with high head or malpresentation + polyhydramnios.

2) Version & extraction. 3) Disengagement of head.

Cord presentation & prolapse

Diagnosis

A) Suspicion: **By presence of unusual & unexplained fetal distress (diagnosed by changes in FHR after uterine contractions, prolonged bradycardia or meconium stained liquor).**

B) Vaginal examination:

1) **Cord is felt as a rope below or beside presenting part or visualized outside vulva.**
2) **Detect condition of membranes (intact or ruptured): To determine whether it is cord presentation or prolapse.**
3) **Detect cord pulsations.**

Cord presentation & prolapse

Management:

A) Overt cord prolapse or cord expression:

Depends on:

a) Pulsations in cord.

b) Degree of cervical dilatation.

c) Presentation.

d) Station of presenting part in pelvis.

Cord presentation & prolapse

1) **Non pulsating cord (dead fetus):** Deal with condition regardless cord prolapse.

2) **Pulsating cord (living fetus): Immediate delivery**

a) Incompletely dilated cervix:

1- Immediate CS: The method of choice & the following temporary measures should be done while preparing for operation:

a- Positional treatment: Put patient in Trendlenberg's or knee chest position or Sims'.

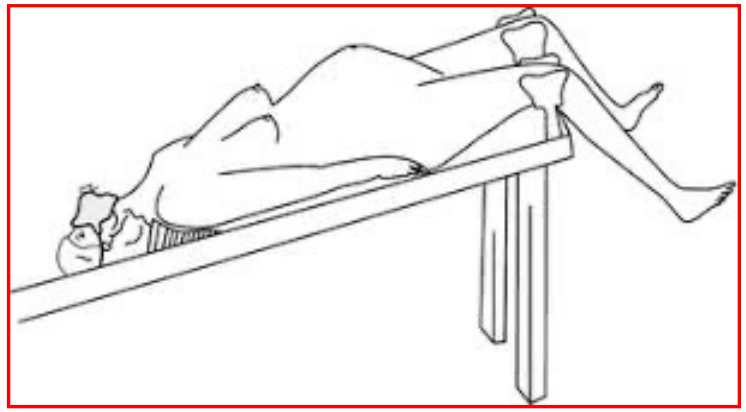
b- O_2 mask.

c- Push presenting part up & away from cord.

d) Minimal PV

2- Reposition of cord: If facilities for CS aren't available.

Cord presentation & prolapse



b) Fully dilated cervix:

1- Cephalic presentation:

a- Non engaged head: CS.

b- Engaged head: Forceps extraction or CS.

2- Breech presentation: Breech extraction or CS.

3- Transverse lie: IPV followed by breech extraction or CS.

Cord presentation & prolapse

B) Management of cord presentation:

1) **Non pulsating cord (dead fetus):** As in overt cord prolapse.
2) **Pulsating cord (living fetus):**

a) Incompletely dilated cervix: Put patient in Trendlenberg's position & avoid ROM & observe FHR → if fetal distress occurs at any time → do CS.

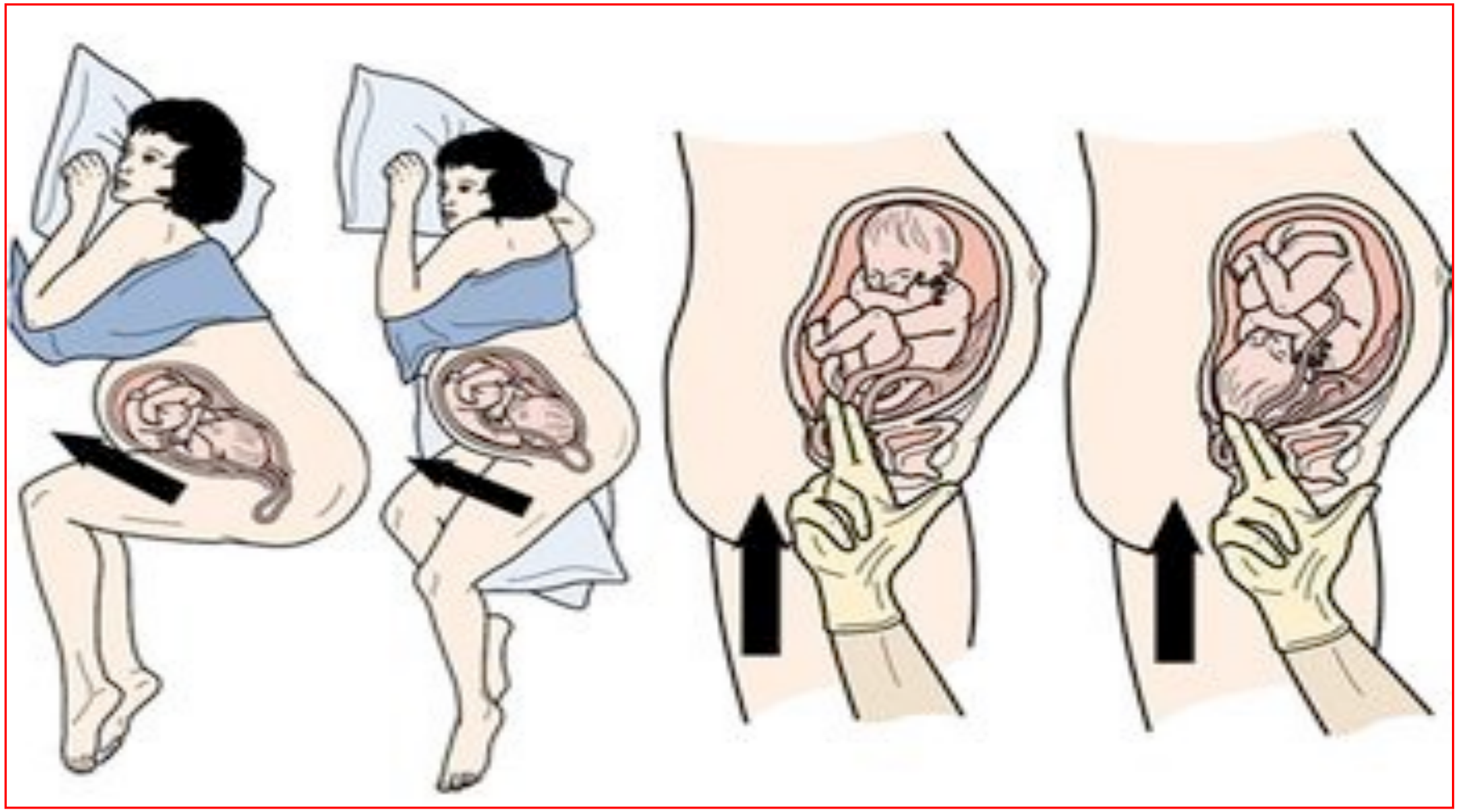
b) Fully dilated cervix: Do AROM then manage as in overt cord prolapse.

Cord presentation & prolapse

C) Management of occult cord prolapse:

Put patient in exaggerated lateral Sim's or Trendlenberg's positions & give O_2 & observe FHR:

1) **If FHR becomes normal:** Continue vaginal delivery.
2) **If FHR deceleration persists or recurs:** Do CS.



Cord presentation & prolapse

Complications

A) Maternal: Complications of operative interference (as Hge & infection).

B) Fetal: High fetal morbidity & mortality rates due to:

1) Cord compression:

2) Vasospasm of umbilical blood vessels: Due to exposure of cord to cold if cord is prolapsed outside vagina.

Cord presentation & prolapse

PROGNOSIS

Prognostic factors: Prognosis is **worse in:**

1) Prolapse than presentation (as long as membranes are intact, there is no immediate danger to fetus).

2) Primigravida than multipara (specially elderly primigravida).

3) Generally contracted pelvis than flat pelvis (less chance of cord compression in flat pelvis).

4) Partially dilated than fully dilated cervix (most important prognostic factor).

5) Cephalic than non cephalic presentation (less chance of cord compression in non cephalic presentations).

Cord presentation & prolapse

PROGNOSIS

Prognostic factors: Prognosis is **worse in:**

6) Anterior than posterior position of cord (less chance of compression in posterior compartment of pelvis).

7) Long loop than short loop of cord prolapse (short loop of cord can be replaced & kept up easily).

8) Time between cord prolapse & delivery:

   a) If < 5 minutes: Good prognosis.

   b) If > 5 minutes: Bad prognosis.

9) Premature than mature fetus (mature fetus can withstand asphyxia).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