MALPRESENTATIONS

FACE & BROW 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

Face Presentation

- **Definition:** Cephalic malpresentation in which presenting part is face, denominator is mentum (chin) & head is extended.
- **Incidence:** 1/300: 1/400 of deliveries.

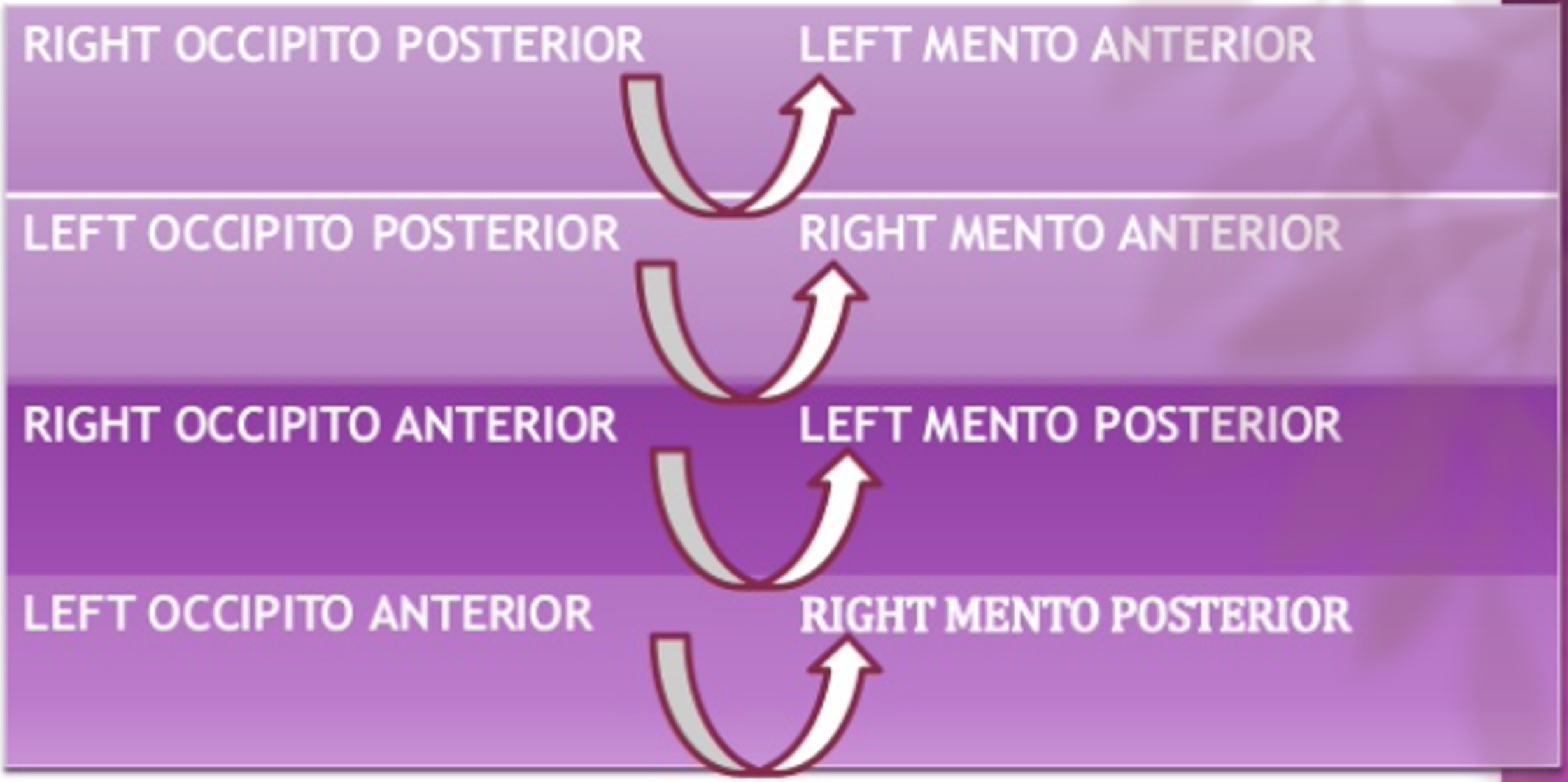
Face Presentation: Positions

There are 4 classical positions:

1) **Rt mentoposterior (RMP): <--**1st position (back is Lt anterior).
2) * **Lt mentoposterior (LMP): <--**2nd position (back is Rt anterior).
3) **Lt mentoanterior (LMA): <--**3rd position (back is Rt posterior).
4) **Rt mentoanterior (RMA): <--**4th position (back is Lt posterior).

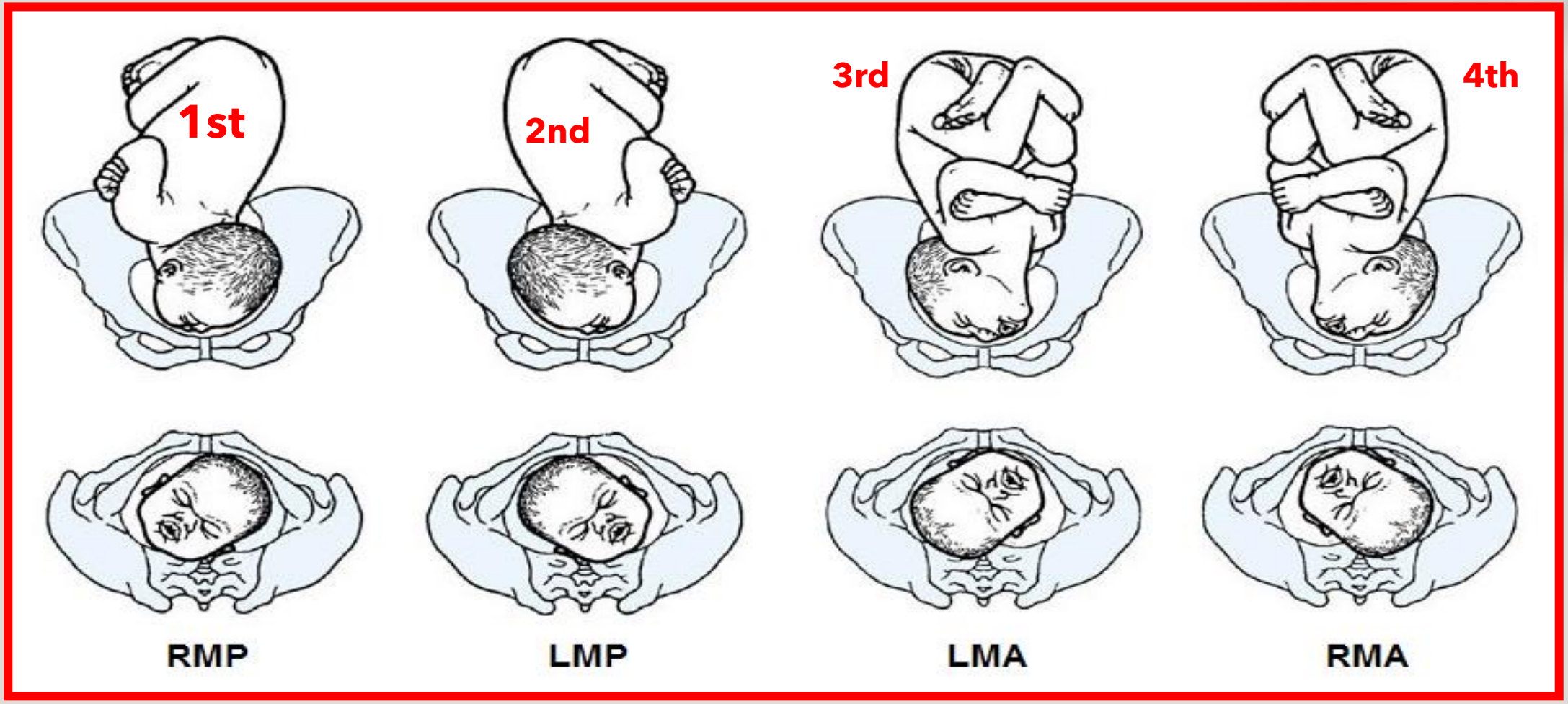
- MA positions (70%) are more common than MP positions (30%) because face presentation is the result of extension of deflexed head in OP position (ROP extends to LMA while LOP extends to RMA). Commonest position is LMA

POSITION



THE MOST COMMON POSITION IS left mento anterior

Face Presentation: Positions



Face Presentation: Etiology

A) 1ry face: Occurs during pregnancy before onset of labor (***rare***) & may be due to:

1- Congenital anomalies:

a) Anencephaly: Commonest. b) Dolico-cephaly: Head with long A-P diameters.

2- Abnormalities of neck that prevent flexion of head:

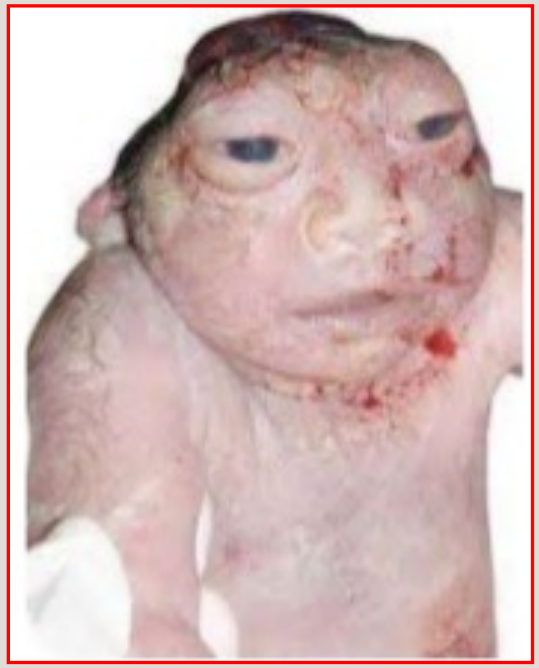
a) Abnormal tone of extensor muscles of neck.

b) Multiple coils of cord around neck.

c) Tumors of neck (as cystic hygroma & goiter).

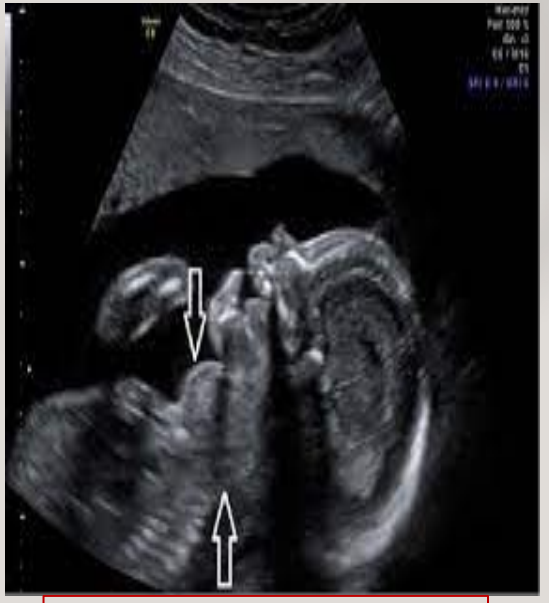
3- Idiopathic.

Face Presentation: Etiology



Anencephaly

Cord coils around neck



Fetal goiter

Face Presentation: Etiology

B) 2ry face: Develops during labor (common) & occurs in cases of OP positions associated with any condition which retards descent of occiput & encourages descent of sinciput as in the following conditions:

1- Contracted pelvis: Specially flat pelvis.

2- Pendulous abdomen.

3- Large sized fetus.

ETIOLOGY:

Primary- during pregnancy

Fetal :

1. congenital malformations
   - a) anencephaly
   - b) goitre
   - c) dolichocephalic head
   - d) bronchocoele
2. Twist of cord round the neck
3. Hypertonicity of extensor

Secondary- onset of labor

Maternal:

1. Multiparity with pendulous abdomen
2. Lateral obliquity of uterus
3. Contracted pelvis
4. Flat pelvis
5. Pelvic tumours

Face Presentation: Mechanism of Labor

A) Mentoanterior positions:

1- Descent: Slow. 2- **Engagement:** Engaging longitudinal diameter is SMB (9.5 cm).

3) ↑↑ extension: Chin becomes the lower most part of head.

4) Internal rotation: Chin reaches pelvic floor 1st → rotates anteriorly 1/8 circle → becomes direct mento-anterior (DMA).

5) Flexion: Submental region impinges under symphysis pubis & head is delivered by flexion.

6) Restitution: Chin rotates 1/8 circle in opposite direction of internal rotation.

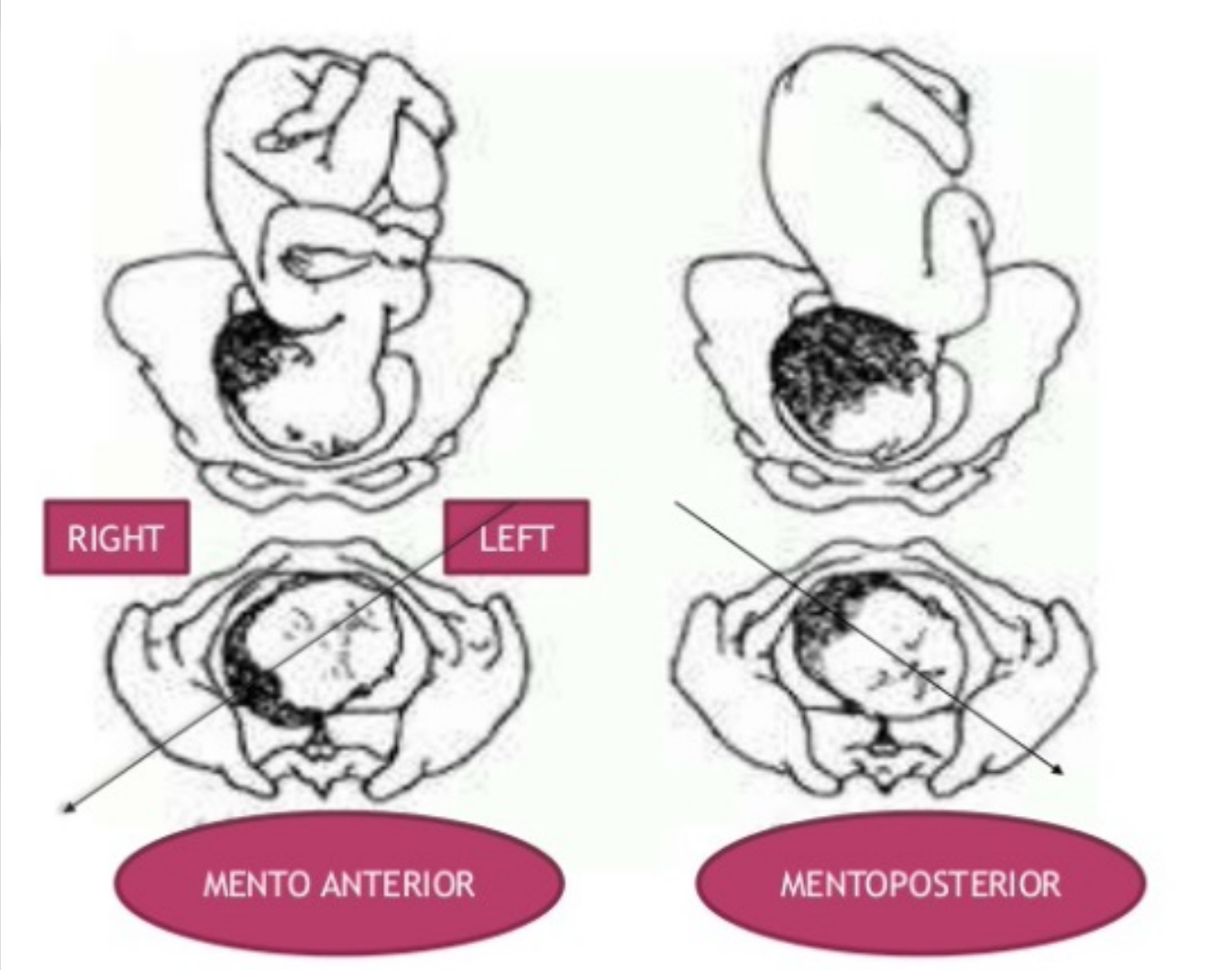
7) External rotation: Chin rotates 1/8 circle in the same direction of restitution due to internal rotation of anterior shoulder from oblique diameter to A-P diameter.

8) Delivery of shoulders, trunk & the rest of body: As normal labor.

Face Presentation: Mechanism of Labor

THE PRINCIPLE DIFFERENCES BETWEEN OCCIPITOANTERIOR AND MENTOANTERIOR ARE:

OCCIPITO ANTERIOR	MENTO ANTERIOR
Engagement	Engagement
Descent	Descent
Flexion	**Extension**
Internal rotation	Internal rotation
Extension	**Flexion**
Restitution	Restitution
External rotation	External rotation
Expulsion by lateral flexion	Expulsion by lateral flexion

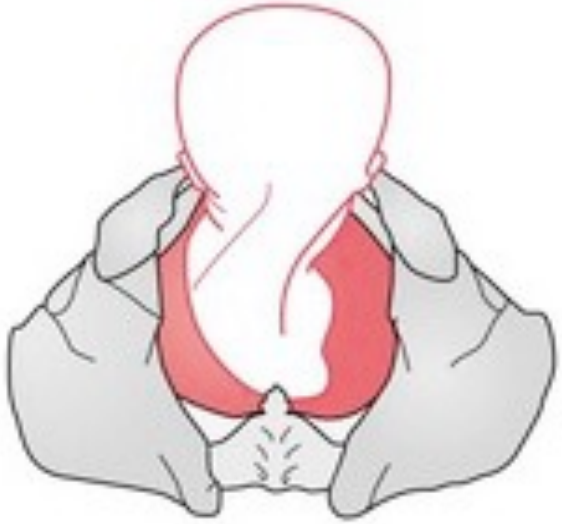


Face Presentation: Mechanism of Labor

LMA: onset of labour

Extension and descent

Internal rotation: LMA to MA



Flexion

Extension

External rotation: LMA to LMT

Mechanism of labor-face mento-anterior.

DELIVERY OF HEAD

- HEAD IS BORN BY **FLEXION** DELIVERING →
  - •CHIN
  - •FACE
  - •BROW
  - •VERTEX
  - •OCCIPUT
  - •ANTERIOR
  - •SHOULDER
  - •POSTERIOR
  - •SHOULDER
  - •TRUNK BY
  - •LATERAL
  - •FLEXION
- Diameter distending the vulval outlet is submentovertical-11.5cm

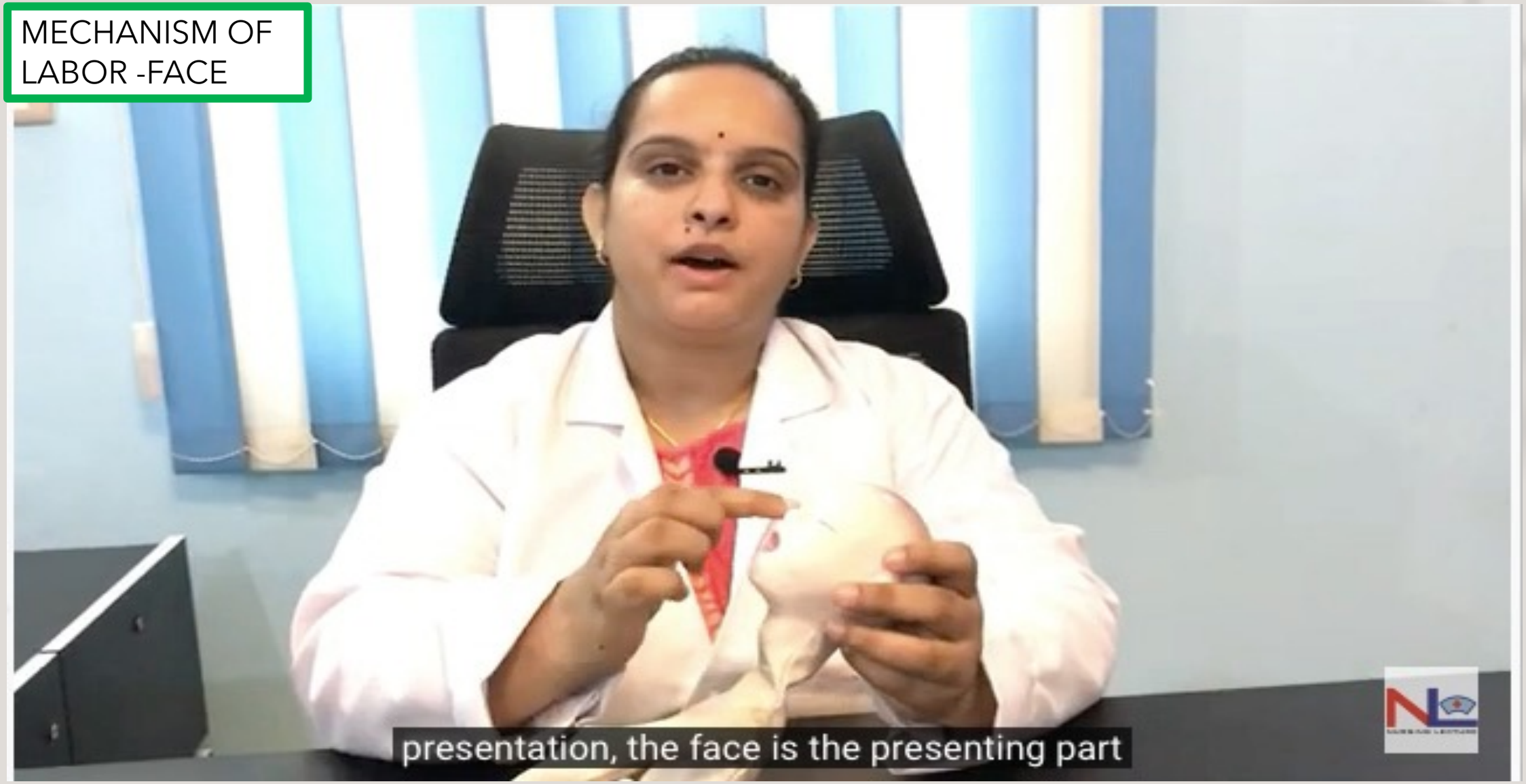
RESTITUTION: occurs through 1/8th of circle
Opposite to direction of internal rotation

EXTERNAL ROTATION: occurs further 1/8th of the circle to the same side of restitution so that face looks

left thigh in LMA

right thigh In RMA

MECHANISM OF LABOR -FACE



Face Presentation: Mechanism of Labor

B) Mentoposterior positions:

1) **Descent:** Slower.
2) **Engagement:** Engaging longitudinal diameter is SMB (9.5 cm).
3) **↑↑ extension:** Chin becomes the lower most part of head.
4) **Internal rotation:** **(see later)**

a) **Normal mechanism: anterior rotation 3/8 circle**

b) No mechanism as in OP. ((anterior rotation 1/8 circle, or No rotation, or posterior rotation 1/8 circle)

Face Presentation: Mechanism of Labor

a) Normal mechanism (long anterior rotation): 2/3 of cases.

In fully extended head + roomy pelvis & strong uterine contractions → chin reaches pelvic floor 1st → rotates anteriorly 3/8 circle → becomes DMA → delivered by flexion.

Restitution occurs (its degree depends on how shoulders follow head during internal rotation) then external rotation then delivery of shoulders, trunk & the rest of body.

Face Presentation: Mechanism of Labor

b) No mechanism (failed long anterior rotation): 1/3 of cases.

1- Short anterior rotation: Chin reaches pelvic floor 1st → rotates anteriorly 1/8 circle → becomes direct mentotransverse → arrest of rotation → deep transverse arrest (DTA).

In this condition, head can't be delivered spontaneously (undeliverable presentation) because longitudinal diameter of head isn't in A-P diameter of pelvic outlet.

2- No rotation: Chin & sinciput reach pelvic floor simultaneously → no rotation → persistent oblique MP.

In this condition, head can't be delivered spontaneously (undeliverable presentation) because longitudinal diameter of head isn't in A-P diameter of pelvic outlet.

Face Presentation: Mechanism of Labor

3- Posterior rotation:

Sinciput reaches pelvic floor 1st → rotates anteriorly 1/8 circle → chin rotates posteriorly 1/8 circle → becomes **direct mento-posterior (DMP)**.

In this condition (unlike DOP), head can't be delivered spontaneously (undeliverable presentation) because:

a- Head needs to be extended to be delivered & it is already maximally extended.

b- Length of sacrum is 10 cm & length of extended fetal neck is 5 cm so, neck can't hinge on sacrum to allow head to be delivered by flexion (this is also against power).

c- Shoulders enter pelvis at the same time with occiput → impaction → prevention of further descent.

Face Presentation: Diagnosis

A) During pregnancy:

Rarely diagnosed during pregnancy.

1) History: In MA positions, fetal movements are painful & felt on both sides of abdomen.

2) Abdominal examination: *(Summarized in the table in next slide)**NEXT*

- Inspection
- Palpation (obstetrical grips)
- Auscultation of the FHS

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

Face Presentation: Diagnosis

		MA positions	MP positions
Inspection		**Sub-umbilical flattening**	**Sub-umbilical transverse groove (neck) & suprapubic bulge (occiput)**
Palpation	Fundal level	**≥ period of amenorrhea (due to non engagement)**	
	Fundal grip	**Buttocks are felt**	
	Umbilical grip	**Back is felt posterior è difficulty**	**Back is felt anterior**
		Smooth curve of flexed fetal spines isn't felt (extended)	
	1st pelvic grip	**Head is felt smaller & chin is felt as a horse shoe shaped structure**	**Cephalic prominence (occiput) is felt at the same side of back (it is important diagnostic sign of extension attitude)**
	2nd pelvic grip	**Difficult to be done**	**Head isn't engaged & extended (occiput is felt at higher level than sinciput)**
Auscultation		**FHS is heard below umbilicus & more distinct on side of limbs being conducted through fetal chest**	

Face Presentation: Diagnosis

B) During labor:

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

2) **Vaginal examination:**

a) Confirmation of diagnosis:

1- Longitudinal axis of face is in oblique diameter of pelvis.

2- Palpation of supraorbital ridge, ala nasi, alveolar margins & chin (chin is directed anteriorly in MA positions & directed posteriorly in MP positions).

Face Presentation: Diagnosis

B) During labor (continued)

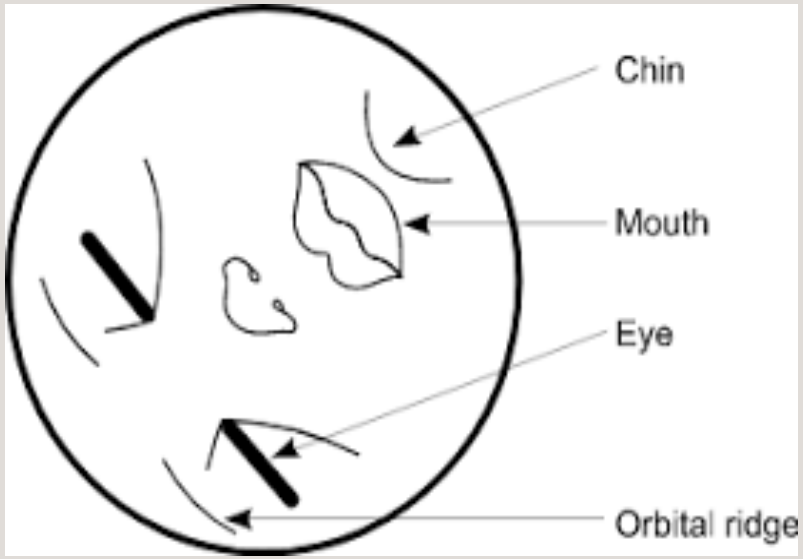
3- Presence of mouth with suckling of examining fingers.

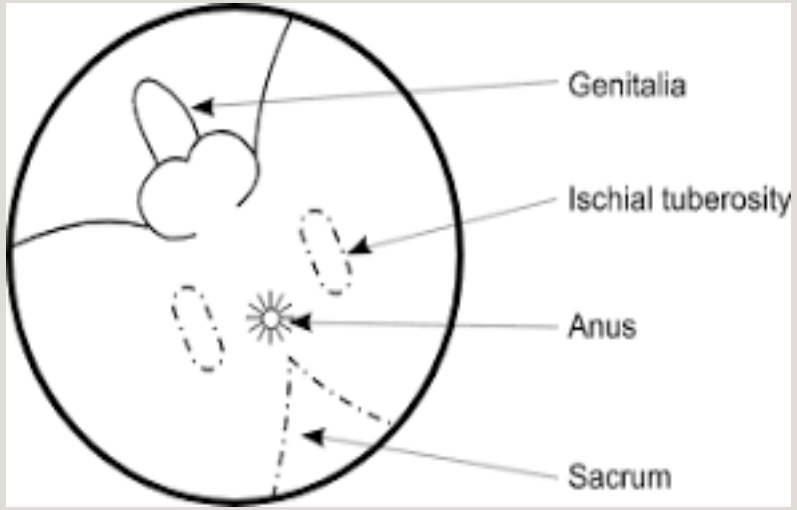
4- Late in labor, landmarks of face may be masked by edema (tumefaction of face) however, alveolar margins can be always felt as its venous supply isn't compressed.

b) Differentiation of face from brow: Neither chin nor mouth are felt in brow presentation.

c) Differentiation of face from frank breech: See breech presentation.

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



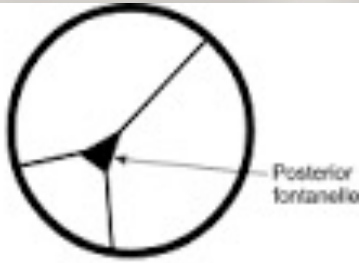


Diagnosis- vaginal examination

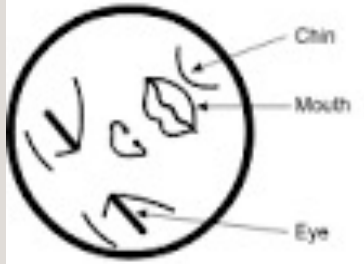
- chin, mouth, malar eminences, nose, glabella felt
- Mentum in anterior or posterior quadrant

Figure 31.25 Vaginal touch pictures of left mentoanterior position: (A) The mentum is felt to left and anteriorly. Orbital ridges in left oblique diameter of the pelvis. (B) Following increased extension of the head, the mouth can be felt. (C) The face has rotated 1/8 of a circle forwards. Orbital ridges in transverse diameter of the pelvis. Position direct mentoanterior.

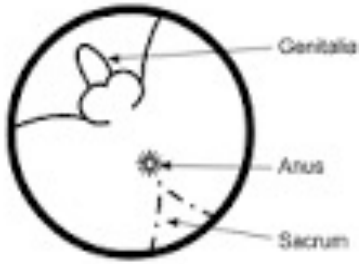
Left occipito-anterior (LOA)



Right occipito-posterior (ROP)



Left mento-anterior (LMA)



Left sacro-posterior (LSP)

Face Presentation: Management

A) During pregnancy:

1) **Anencephaly or other congenital anomalies:** termination of pregnancy [TOP].

2) **Normal fetus:**

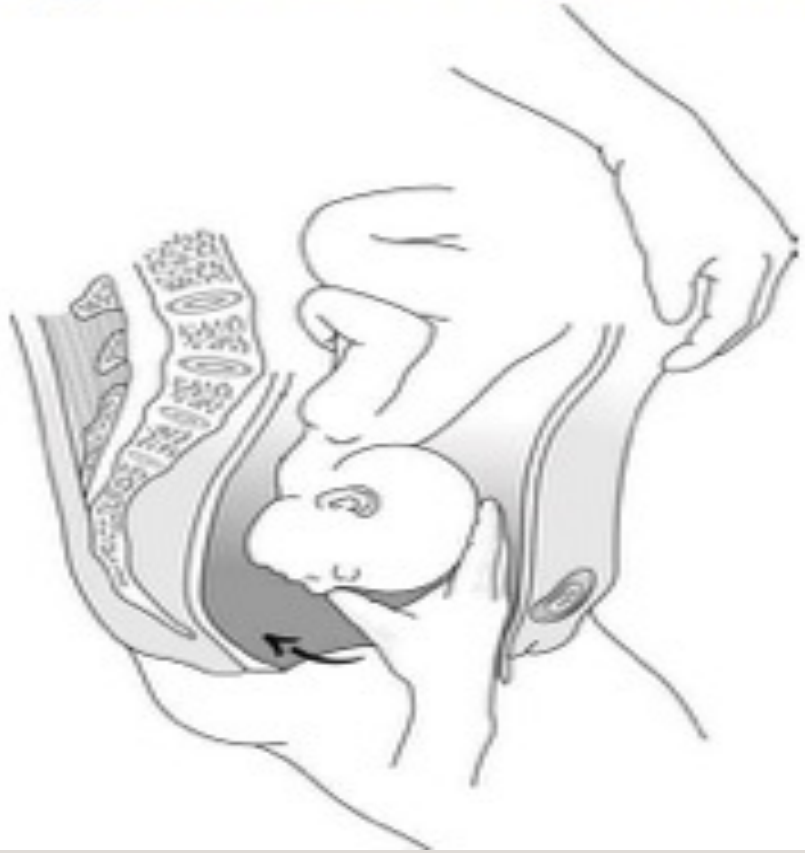
   a) Antenatal correction (Schatz's maneuver): To correct face to vertex.

   b) Trial labor: In small fetus + normal pelvis + young multipara with history of previous normal deliveries.

   c) Elective CS: If there is indication.

Face Presentation: Management

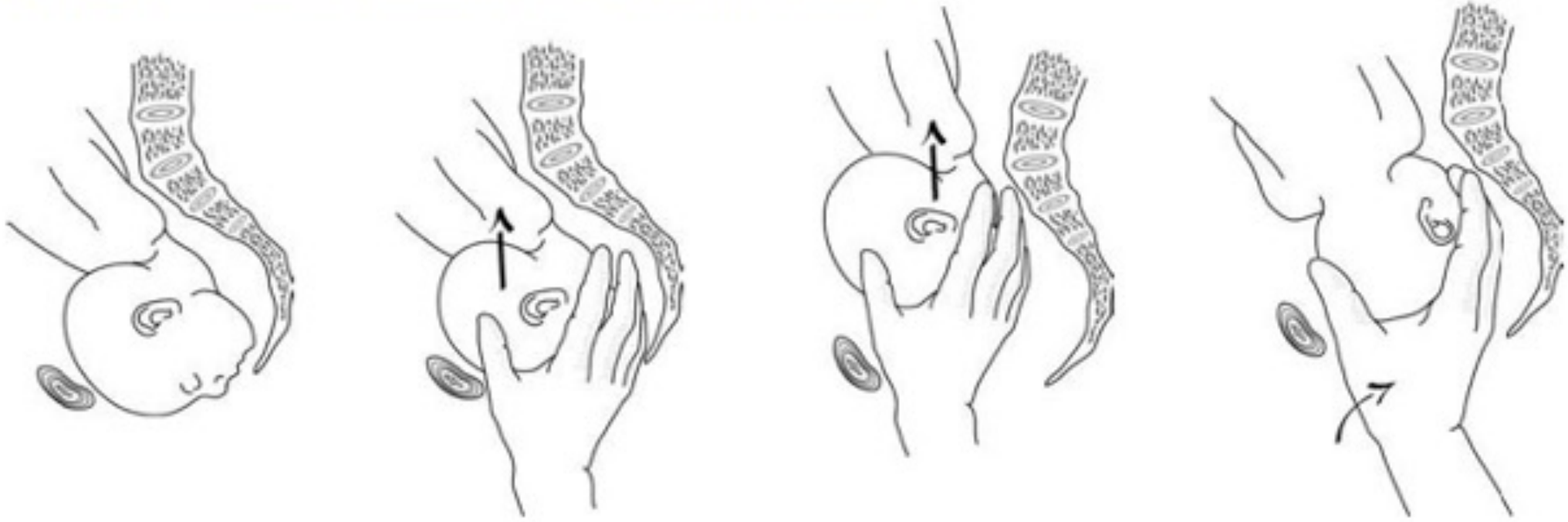
Figures 7.6 - Manoeuvre to convert face to vertex presentation



Schatz's maneuver

Face Presentation: Management

Figures 7.7 - Rotation manoeuvre to bring the chin anteriorly



Face Presentation: Management

B) During labor:

1) **1st stage:** As OP position (see before).

2) **2nd stage:**

a) Mento-Anterior (MA) positions:

1- Spontaneous vaginal delivery + episiotomy: In 90% of cases.

2- Low forceps extraction + episiotomy: If arrest occurs below pelvic brim.

3- Cesarean section: If arrest occurs above pelvic brim.

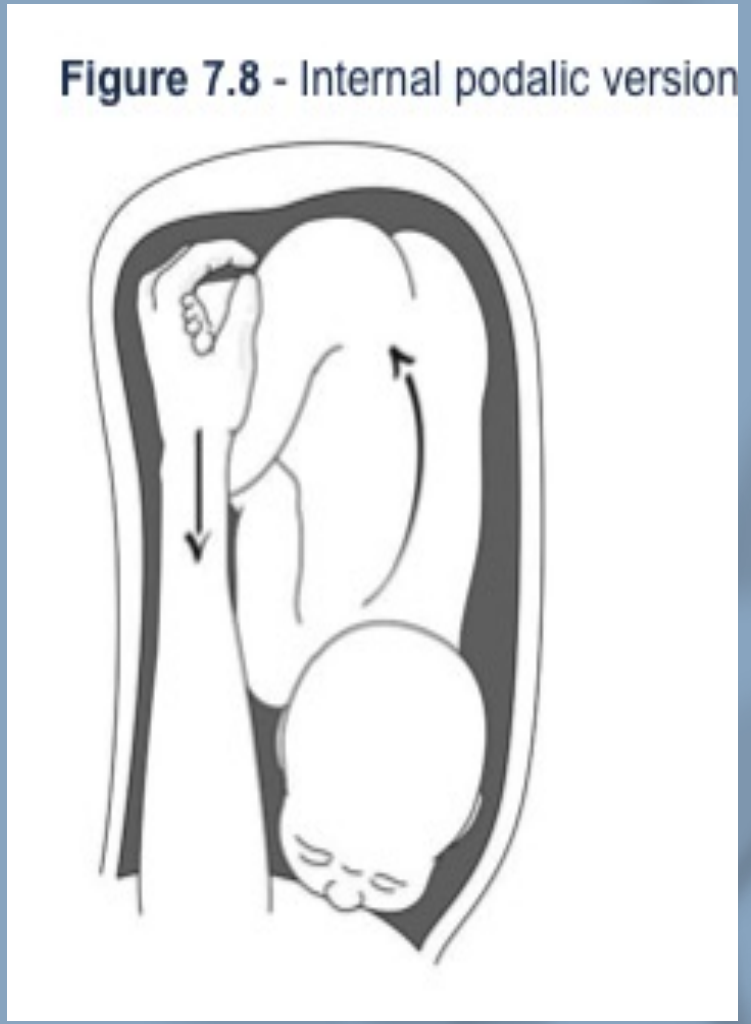
Face Presentation: Management

b) Mento-Posterior (MP) positions: **Wait for 2 hours + observe mother & fetus + give oxytocin drip to correct inertia (if there are no contraindications).**

1- If long anterior rotation occurred: **The rest of management is as MA.**

2- If long anterior rotation didn't occur: **Delivery is by one of the followings:**

- ***a- Manual rotation & forceps extraction.***
- ***b- Forceps rotation & extraction:*** **By Kielland's forceps.**
- ***c- Conversion of MP to OA (Thorn maneuver).***
- ***d- Internal podalic version & breech extraction.***



Face Presentation: **Management**

e- Cesarean section:

The best method & it is indicated in the following conditions:

1. Head isn't engaged.
2. Contracted outlet.
3. If the above measures are failed.
4. Other indications for CS.

NB. Craniotomy: If fetus is dead (was a method in the past, done in modern obstetrics).

Face Presentation: Management

3) 3rd stage: As OP position (see before).

Complications: General complications of malpresentations (see before) specially ***Perineal lacerations & tears*** which are more common in face deliveries due to:

1) Distension of posterior vaginal wall by bulky occiput giving maximum perineal stretch.

2) Distension of vulva by large SMV diameter (11.5 cm).

3) Absence of moulding (facial bones aren't compressible).

Face Presentation: Important Points

Q1: Why MA positions are favorable than MP positions?

A: because ; 1) Forward rotation of chin is much smaller (1/8 circle) than in MP positions.

2) Apposition of 2 convexities of fetal & maternal spines results in extension of fetal spines → promotes extension of head (normal mechanism of labor for this presentation).

Q2: Why Labor is usually prolonged in face presentation ?

A: Because: 1) Delayed engagement (face may be low in pelvis while BPD is still not passed pelvic inlet yet).

2) Absence of moulding (facial bones aren't compressible).

Face Presentation: Important Points

Q3: Fetal mortality in face presentation: 10% & is due to congenital anomalies, asphyxia & edema of glottis.

Q4: Deep transverse arrest (DTA):

Definition: Condition occurring late in labor in OP position & face presentation & it means "*arrest of rotation & descent of head deeply in mid-pelvis* in transverse position in which transverse diameter of pelvis is occupied by longitudinal diameter of head provided that there are good uterine contractions & fully dilated cervix".

Types: 2 : (a) DTA of OP (b). DTA of face presentation

ITEM	DTA-OP	DTA-FACE
Incidence	1% of OP position deliveries.	As a part of abnormal mechanism of labor of MP positions (1/3 of cases).
Mechanism	See OP	See Face presentation
Diagnosis	Sagittal suture is in transverse diameter of pelvis + posterior fontanel is directed to one side & anterior fontanel is directed to the other side.	Longitudinal axis of face is in transverse diameter of pelvis + chin is directed to one side & forehead is directed to the other side.
Management	See OP	See FACE presentation
Complications	OBSTRUCTED LABOR	OBSTRUCTED LABOR

BROW PRESENTATION

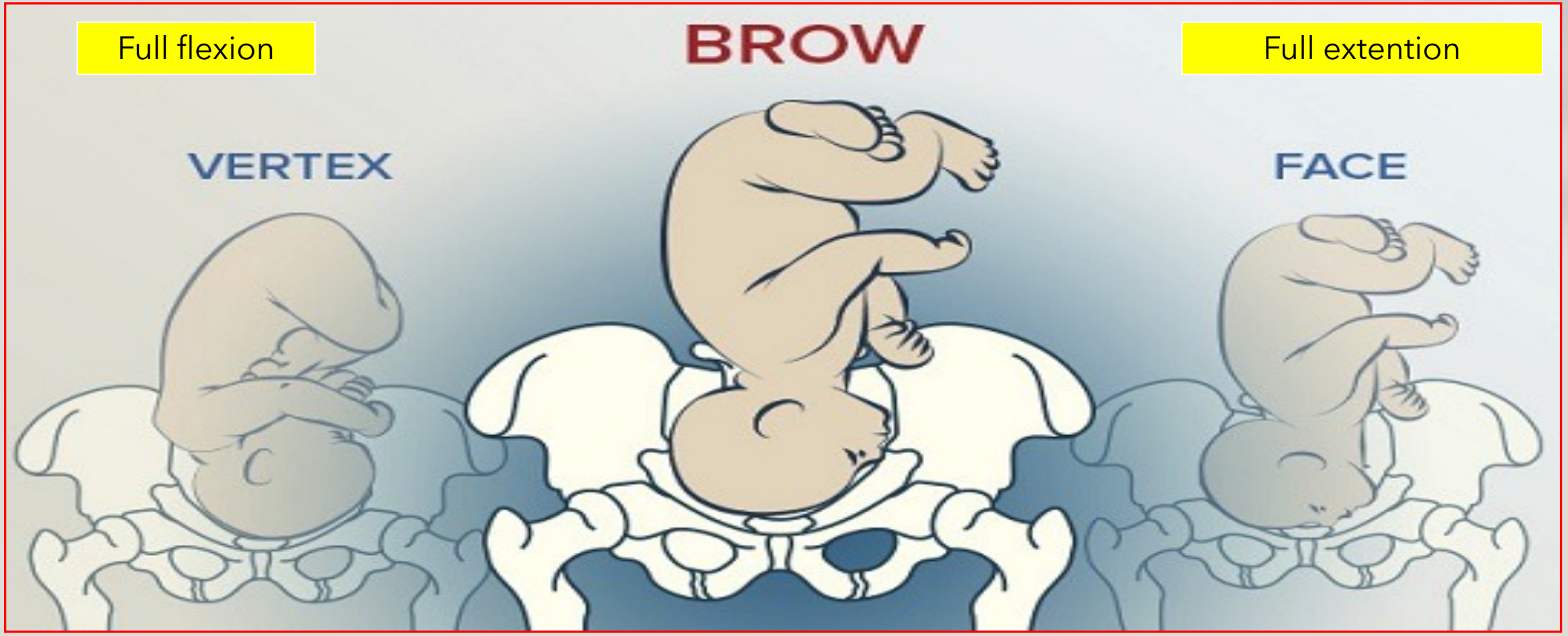
Definition: Cephalic malpresentation in which presenting part is brow, denominator is (*frontum*) i.e. forehead & head is midway between flexion & extension.

Incidence: 1/1000 of deliveries (rarest presentation).

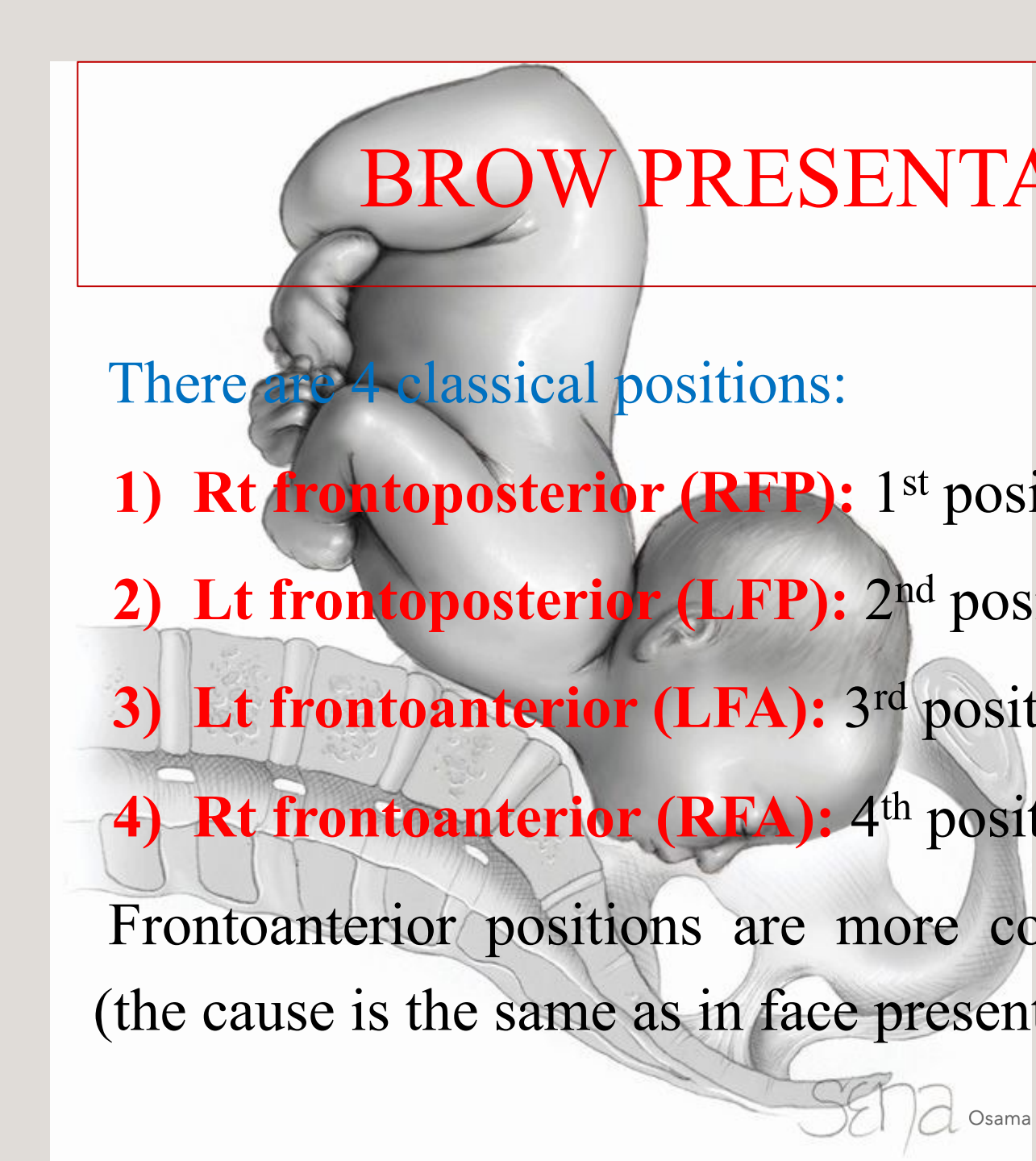
Presentation	Percent	Incidence
Cephalic	96.8	—
Breech	2.7	1:36
Transverse lie	0.3	1:335
Compound	0.1	1:1000
Face	0.05	1:2000
Brow	0.01	1:10,000

Source: William's Obstetrics 24th edition.

BROW PRESENTATION



BROW PRESENTATION- **Positions**



There are 4 classical positions:

1) **Rt frontoposterior (RFP):** 1st position (back is Lt anterior).
2) **Lt frontoposterior (LFP):** 2nd position (back is Rt anterior).
3) **Lt frontoanterior (LFA):** 3rd position (back is Rt posterior).
4) **Rt frontoanterior (RFA):** 4th position (back is Lt posterior).

Frontoanterior positions are more common than frontoposterior positions (the cause is the same as in face presentation).

BROW PRESENTATION

Types & Etiology:

A) 1ry brow: Occurs during pregnancy before onset of labor (rare) & its causes are the same causes of 1ry face.

B) 2ry brow: Develops during labor (common) & its causes are the same causes of 2ry face.

BROW PRESENTATION

Mechanism of labor: Depends on fetal size.

A) Normal sized fetus: No mechanism of labor because head enters pelvis by MV diameter (13.5 cm) which is longer than any diameter in pelvic inlet & so, there is no engagement.

B) Small sized fetus + roomy pelvis & strong uterine contractions: Delivery may occur by compression of head → ↓↓ MV diameter & ↑↑ OF diameter → descent of brow to pelvic floor & root of nose impinges below symphysis pubis → delivery of brow, vertex & occiput by flexion then head drops back over perineum leading to delivery of face & chin.

BROW PRESENTATION

Diagnosis:

A) During pregnancy: Rarely diagnosed during pregnancy.

1) **History:** In frontoanterior positions, fetal movements are painful & felt on both sides of abdomen.

2) **Abdominal examination:** Occiput & sinciput are felt at the same level.

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

B) During labor:

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

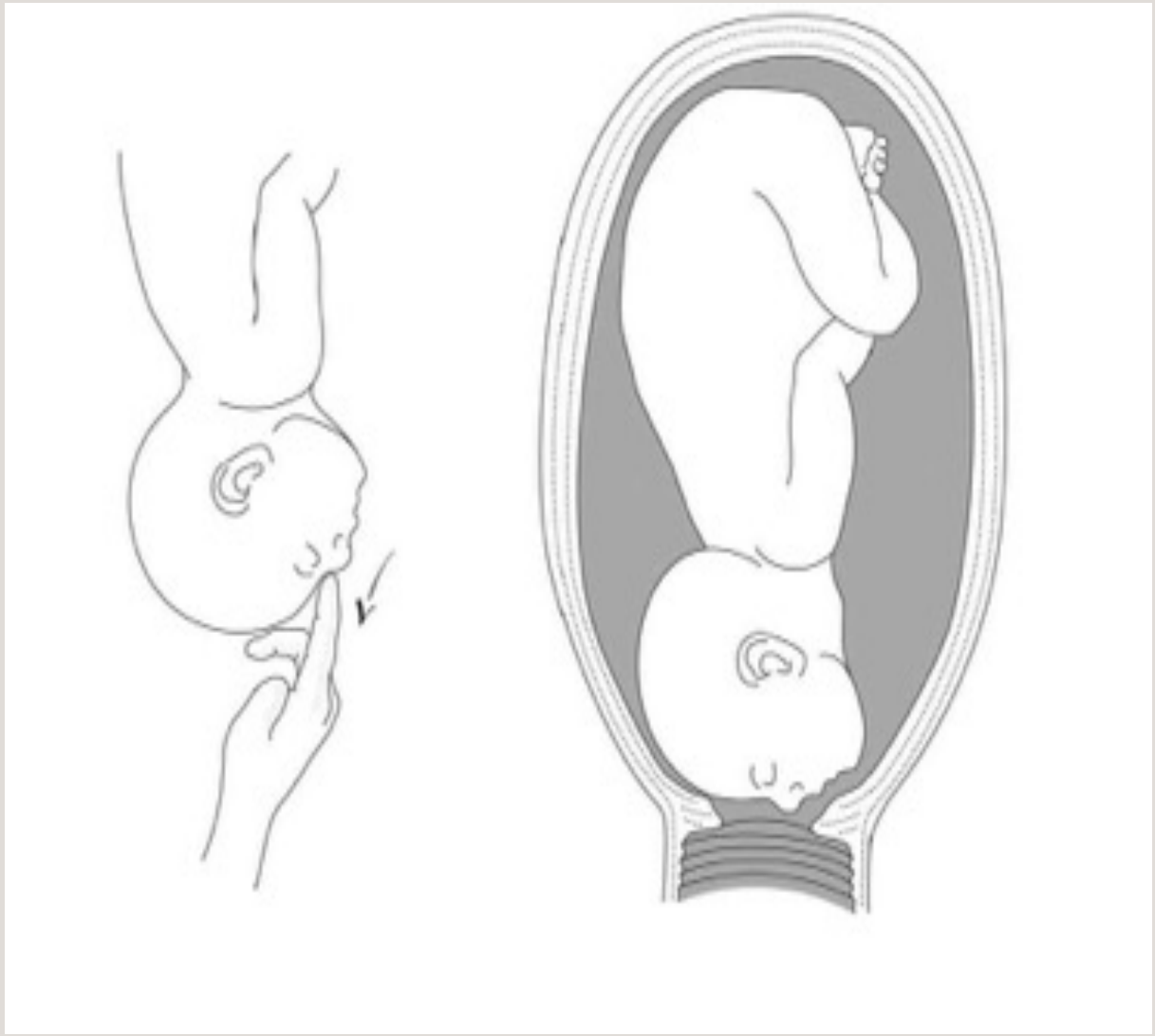
BROW PRESENTATION

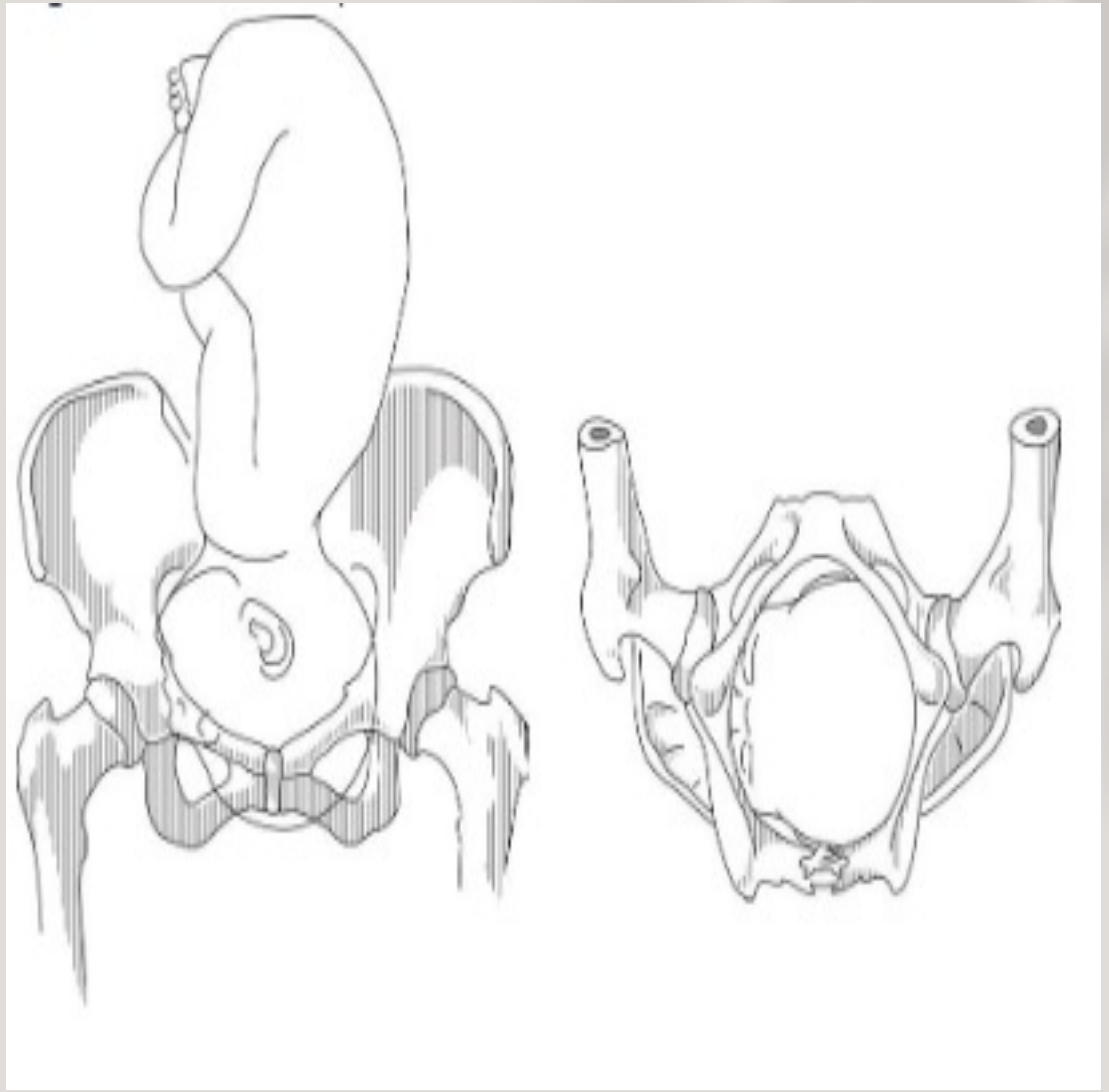
2) Vaginal examination:

a) Confirmation of diagnosis: Brow is diagnosed by presence of large anterior fontanelle, frontal suture, supraorbital ridge & root of nose.

b) Differentiation of brow from face: *Neither chin nor mouth are felt in brow presentation.*

3) Ultrasound: confirm diagnosis & exclude congenital anomalies.





BROW – VAGINAL EXAM

BROW PRESENTATION

Management:

A) During pregnancy: TOP in cases of anencephaly or other congenital anomalies.

B) During labor:

1) Early in 1st stage: Wait for **spontaneous conversion into face** (by ↑↑ extension) or vertex (by ↑↑ flexion) as majority of cases are **transient brow**.

2) Persistent brow in late 1st stage or in 2nd stage:

a) Cesarean section: If fetus is living.

b) Craniotomy: If fetus is dead (but CS is safer to mother).

c) Manual conversion to face or vertex followed by forceps extraction: Very difficult & not done now.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dakujem vám
ありがとう
ngiyabonga
dziękuję
merci
suksema
danke
thank
you
baie dankie
धन्यवाद
molte grazie
gracias
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