An anatomical diagram showing a fetus in the uterus. A surgical instrument, possibly a forceps or a similar tool, is shown inserted into the uterus, positioned near the fetus. The diagram is a cross-section, showing the fetus, the uterine wall, and the surrounding pelvic structures. The fetus is depicted in a curled position, and the instrument is shown in a way that suggests it is being used to perform a procedure. The overall style is that of a medical illustration.

ABNORMAL UTERINE ACTION

Presented by :-
Bhagawati Ray

DEFINITION

- Any deviation of the normal pattern of **uterine** contractions affecting the course of labour is designated as disordered or **abnormal uterine action**.

CLASSIFICATION

a. Over-efficient uterine action

- > Precipitate labour: in absence of obstruction
- > Excessive contraction and retraction: in presence of obstruction

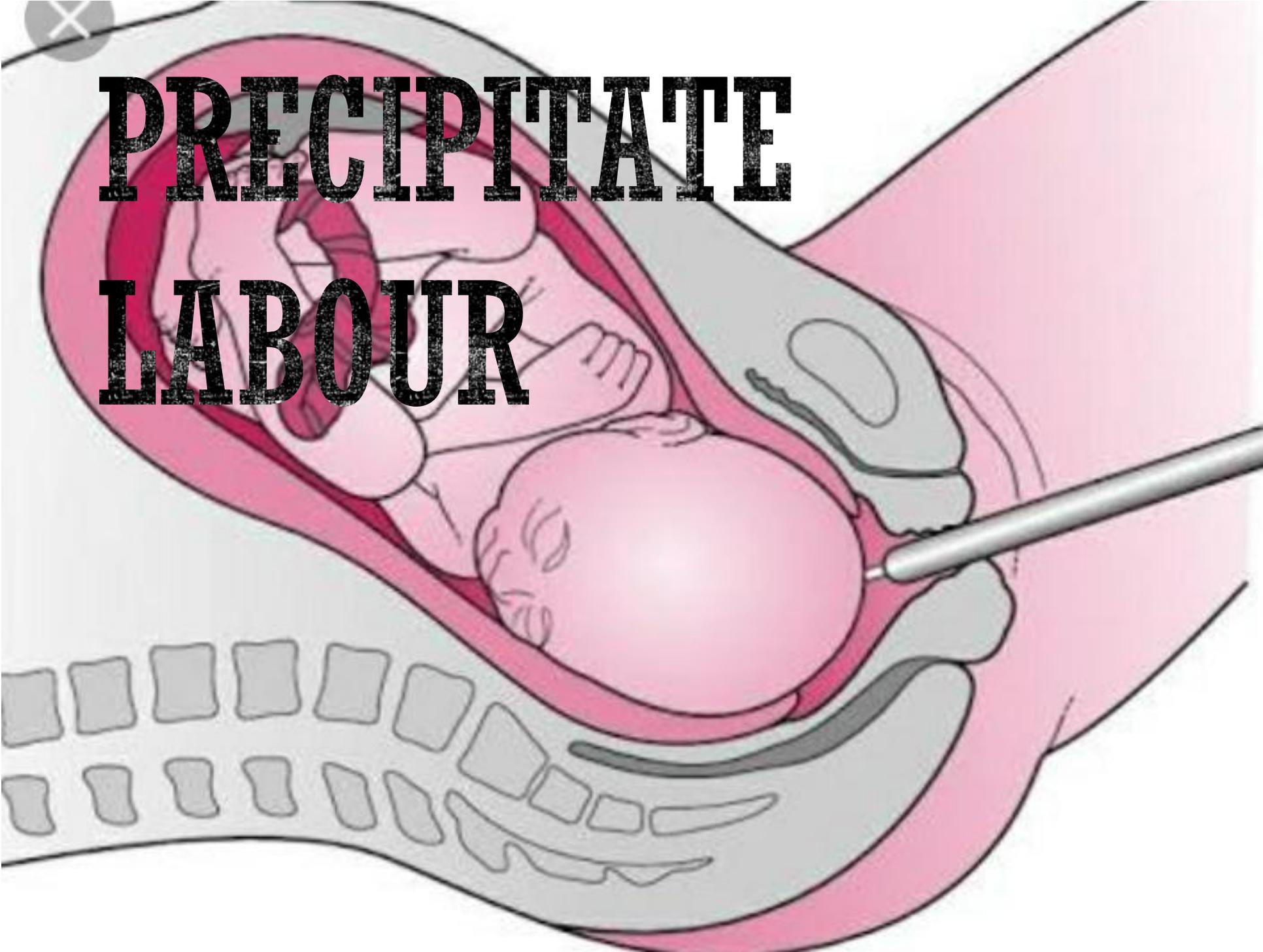
b. Inefficient uterine action

- > Hypotonic inertia
- > Hypertonic inertia
 - * Colicky uterus
 - * Hyperactive lower uterine segment
- > Constriction (contraction) ring

c. Cervical dystocia

PRECIPITATE

LABOUR



PRECIPITATE LABOUR

- **Definition**

Precipitous labor is defined as expulsion of the fetus within less than 3 hours of commencement of regular contractions.

ETIOLOGY

- It is more common in multiparas when there are:
 - * strong uterine contractions,
 - * small sized baby,
 - * roomy pelvis,
 - * minimal soft tissue resistance.

COMPLICATIONS

- Maternal:
 - * Lacerations of the cervix, vagina and perineum.
 - * Shock.
 - * Inversion of the uterus.
 - * Postpartum haemorrhage:
 - > no time for retraction,
 - > lacerations.
 - * Sepsis due to:
 - > lacerations,
 - > inappropriate surroundings.

COMPLICATIONS

Foetal:

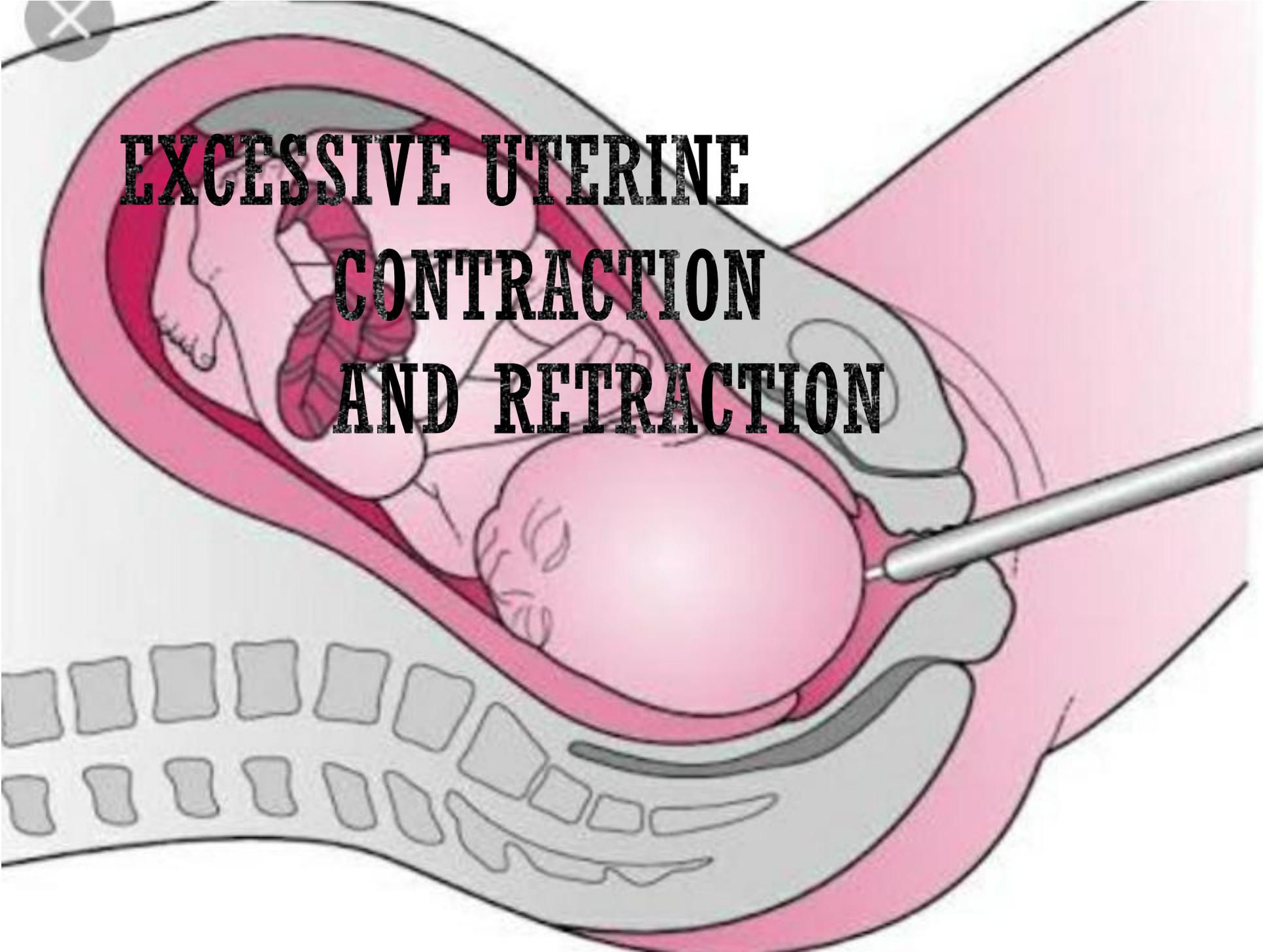
- >Intracranial haemorrhage due to sudden compression and decompression of the head.
- >Foetal asphyxia due to:
 - *strong frequent uterine contractions reducing placental perfusion,
 - *lack of immediate resuscitation.
- >Avulsion of the umbilical cord.
- >Foetal injury due to falling down.

MANAGEMENT

- Before delivery:

Patient who had previous precipitate labour should be hospitalized before expected date of delivery as she is more prone to repeated precipitate labour.

- During delivery:
 - * Inhalation anaesthesia: as nitrous oxide and oxygen is given to slow the course of labour.
 - * Tocolytic agents: as ritodrine (Yutopar) may be effective.
 - * Episiotomy: to avoid perineal lacerations and intracranial haemorrhage.

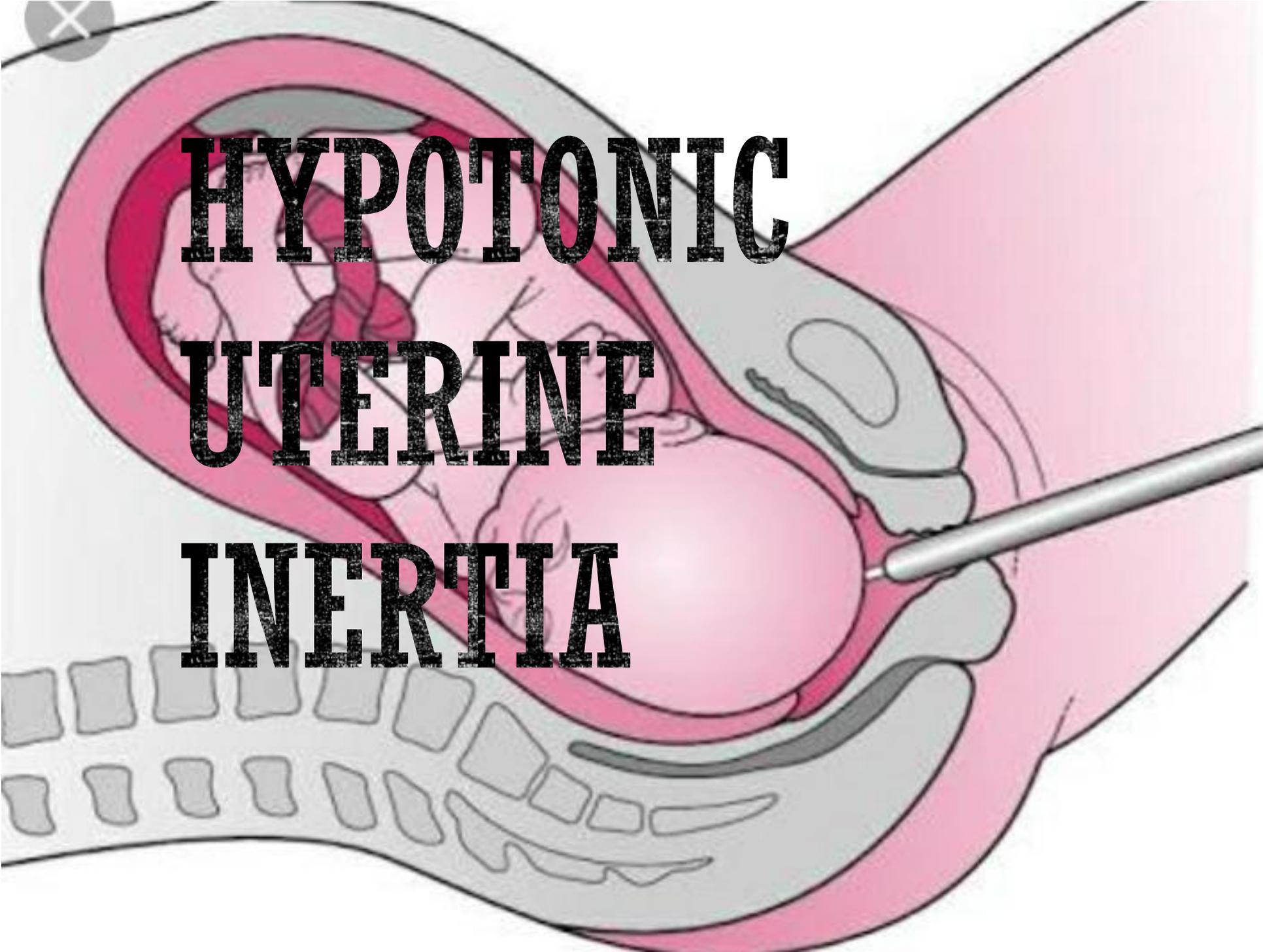
An anatomical diagram showing a fetus in the uterus. The fetus is positioned in a head-down orientation. A fetal probe is inserted into the fetus's back. The diagram illustrates the relationship between the fetus, the uterus, and the spine. The text "EXCESSIVE UTERINE CONTRACTION AND RETRACTION" is overlaid on the image.

**EXCESSIVE UTERINE
CONTRACTION
AND RETRACTION**

Physiological Retraction Ring

- It is a line of demarcation between the upper and lower uterine segment present during normal labour and cannot usually be felt abdominally.

- Pathological Retraction Ring (Bandl's ring)
 - * It is the rising up retraction ring during obstructed labour due to marked retraction and thickening of the upper uterine segment while the relatively passive lower segment is markedly stretched and thinned to accommodate the foetus.
 - * The Bandl's ring is seen and felt abdominally as a transverse groove that may rise to or above the umbilicus.
 - * Clinical picture: is that of obstructed labour with impending rupture uterus (see later).
 - * Obstructed labour should be properly treated otherwise the thinned lower uterine segment will rupture.



**HYPOTONIC
UTERINE
INERTIA**

HYPOTONIC UTERINE INERTIA

- Definition
- The uterine contractions are infrequent, weak and of short duration.

ETIOLOGY

- Unknown but the following factors may be incriminated:
- General factors:
 - > Primigravida particularly elderly.
 - > Anaemia and asthenia.
 - > Nervous and emotional as anxiety and fear.
 - > Hormonal due to deficient prostaglandins or oxytocin as in induced labour.
 - > Improper use of analgesics.

Local factors

- > Overdistension of the uterus.
- > Developmental anomalies of the uterus e.g. hypoplasia.
- > Myomas of the uterus interfering mechanically with contractions.
- > Malpresentations, malpositions and cephalopelvic disproportion. The presenting part is not fitting in the lower uterine segment leading to absence of reflex uterine contractions.
- > Full bladder and rectum.

TYPES

- Primary inertia: weak uterine contractions from the start.
- Secondary inertia: inertia developed after a period of good uterine contractions when it failed to overcome an obstruction so the uterus is exhausted.

CLINICAL FEATURE

- * Labour is prolonged.
- * Uterine contractions are infrequent, weak and of short duration.
- * Slow cervical dilatation.
- * Membranes are usually intact.
- * The foetus and mother are usually not affected apart from maternal anxiety due to prolonged labour.
- * More susceptibility for retained placenta and postpartum haemorrhage due to persistent inertia.
- * Tocography: shows infrequent waves of contractions with low amplitude.

MANAGEMENT

- General measures
 - > Examination to detect disproportion, malpresentation or malposition and manage according to the case.
 - > Proper management of the first stage (see normal labour).
 - > Prophylactic antibiotics in prolonged labour particularly if the membranes are ruptured.

- Amniotomy:
 - a. Providing that;
 - > vaginal delivery is amenable,
 - > the cervix is more than 3 cm dilatation and
 - > the presenting part occupying well the lower uterine segment

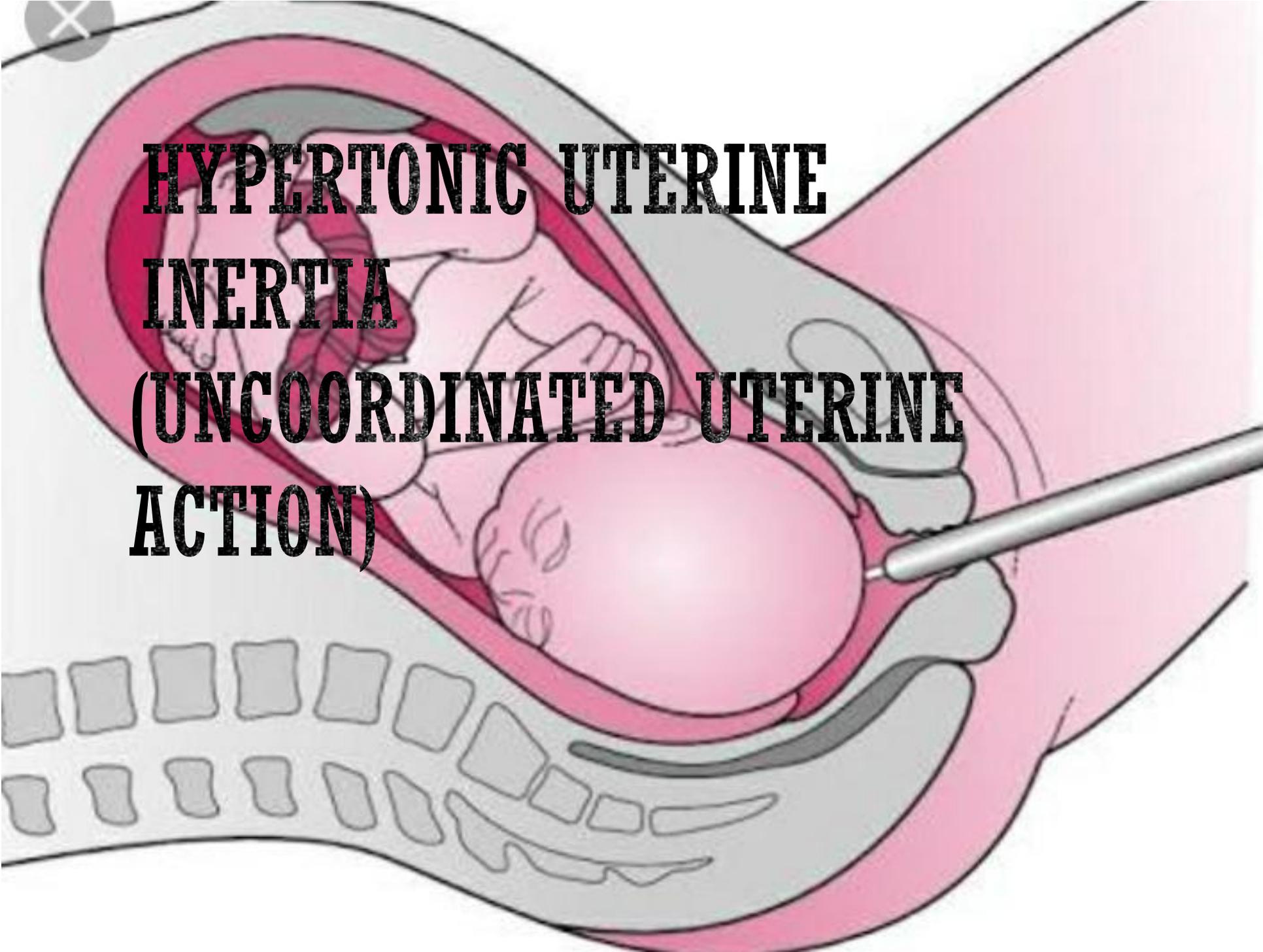
b. Artificial rupture of membranes augments the uterine contractions by:

>release of prostaglandins.

> reflex stimulation of uterine contractions when the presenting part is brought closer to the lower uterine segment.

- Oxytocin: Providing that there is no contraindication for it, 5 units of oxytocin (syntocinon) in 500 c.c glucose 5% is given by IV infusion starting with 10 drops per minute and increasing gradually to get a uterine contraction rate of 3 per 10 minutes.

- Operative delivery
 - a. Vaginal delivery: by forceps, vacuum or breech extraction according to the presenting part and its level providing that,
 - > cervix is fully dilated.
 - > vaginal delivery is amenable.
 - b. Caesarean section is indicated in:
 - > failure of the previous methods.
 - > contraindications to oxytocin infusion including disproportion.
 - > foetal distress before full cervical dilatation.

An anatomical diagram of a fetus in the uterus. The fetus is shown in a curled position, with its head and limbs visible. A medical instrument, possibly a forceps or a similar tool, is shown inserted into the birth canal, positioned near the fetus's head. The diagram uses various shades of pink and red to represent the fetus, the amniotic sac, and the uterine wall. The background is a light gray, suggesting the pelvic region. The text is overlaid on the left side of the diagram.

**HYPERTONIC UTERINE
INERTIA
(UNCOORDINATED UTERINE
ACTION)**

TYPES

- * Colicky uterus: incoordination of the different parts of the uterus in contractions.
- * Hyperactive lower uterine segment: so the dominance of the upper segment is lost.

CLINICAL FEATURE

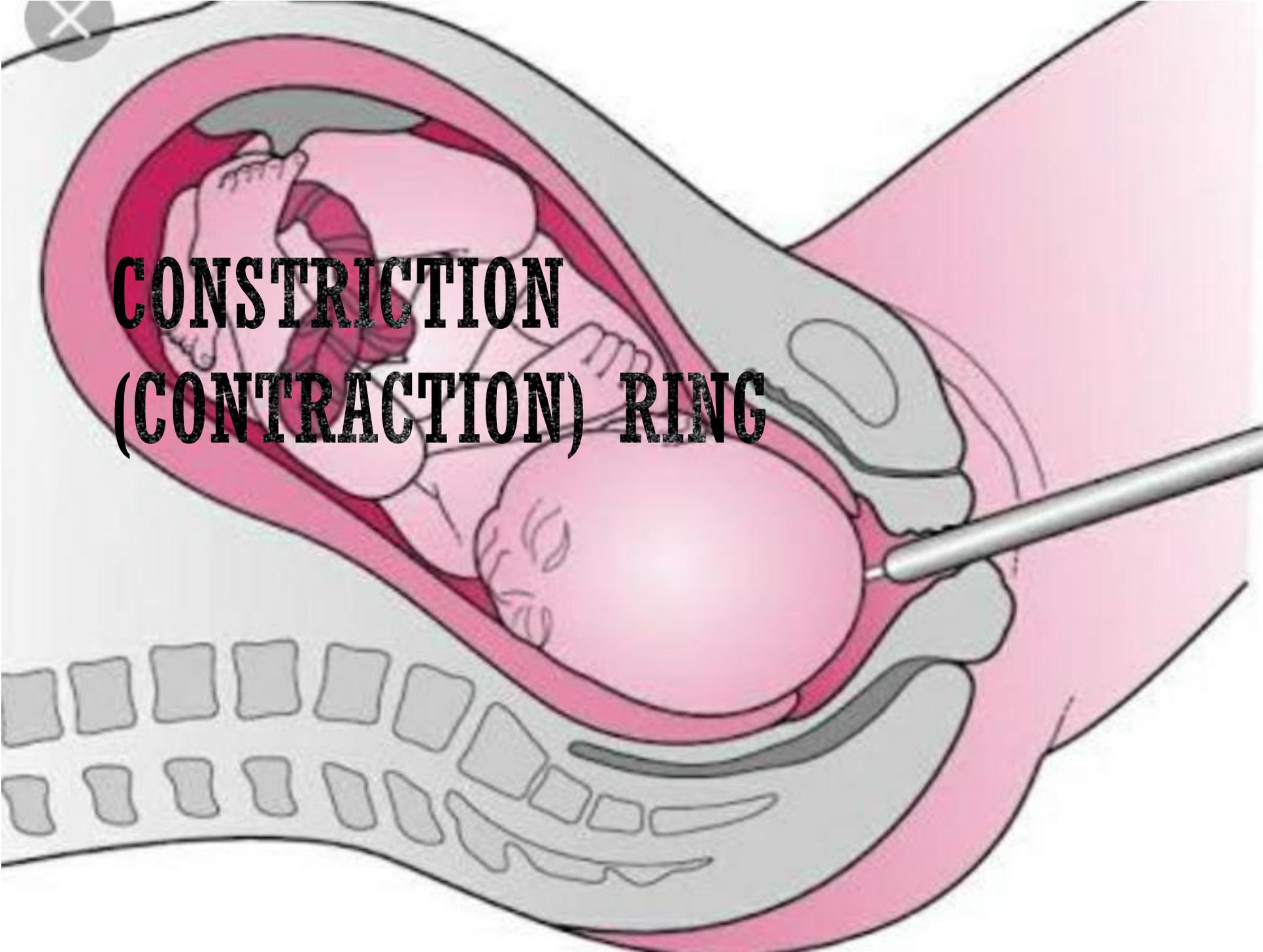
The condition is more common in primigravidae and characterised by:

- * Labour is prolonged.
- * Uterine contractions are irregular and more painful. The pain is felt before and throughout the contractions with marked low backache often in occipito-posterior position.
- * High resting intrauterine pressure in between uterine contractions detected by tocography (normal value is 5-10 mmHg).
- * Slow cervical dilatation .
- * Premature rupture of membranes.
- * Foetal and maternal distress.

MANAGEMENT

- > General measures: as hypotonic inertia.
- > Medical measures:
 - Analgesic and antispasmodic as pethidine.
 - Epidural analgesia may be of good benefit.
- > Caesarean section is indicated in:
 - Failure of the previous methods.
 - Disproportion.
 - Foetal distress before full cervical dilatation.

**CONstriction
(CONTRACTION) RING**



DEFINITION

- * It is a persistent localised annular spasm of the circular uterine muscles.
- * It occurs at any part of the uterus but usually at junction of the upper and lower uterine segments.
- * It can occur at the 1st, 2nd or 3rd stage of labour.

ETIOLOGY

Unknown but the predisposing factors are:

- * Malpresentations and malpositions.
- * Clumsy intrauterine manipulations under light anaesthesia.
- * Improper use of oxytocin e.g.
 - > use of oxytocin in hypertonic inertia.
 - >IM injection of oxytocin.

DIAGNOSIS

- * The condition is more common in primigravidae and frequently presents as a colicky uterus.
- * The exact diagnosis is achieved only by feeling the ring with a hand into the uterine cavity.

COMPLICATIONS

- Prolonged 1st stage: if the ring occurs at the level of the internal os.
- Prolonged 2nd stage: if the ring occurs around the foetal neck.
- Retained placenta and postpartum haemorrhage: if the ring occurs in the 3rd stage (hour-glass contraction).

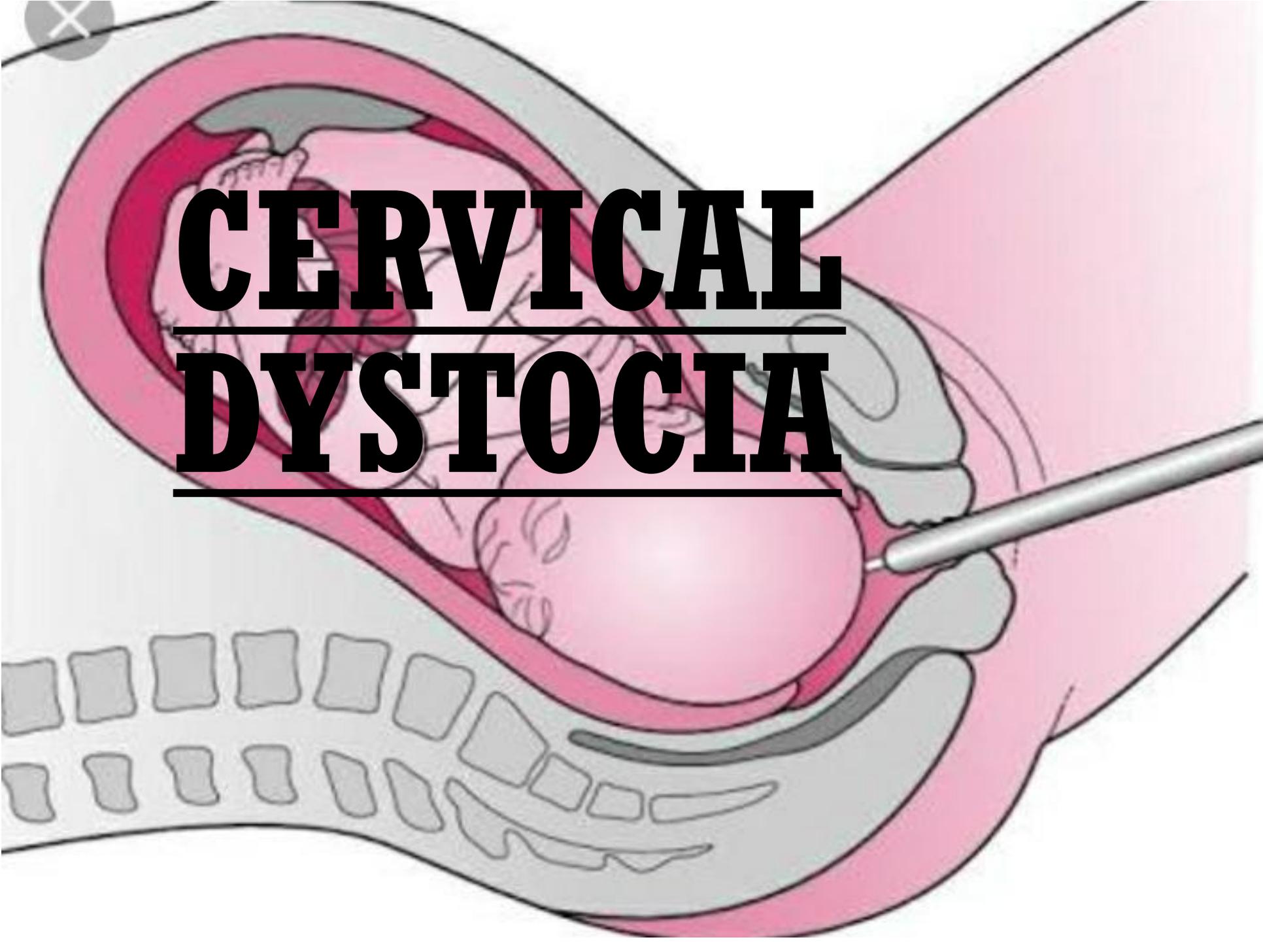
Difference between pathological retraction ring and constriction ring

Pathological Retraction Ring	Constriction Ring
Occurs in prolonged 2nd stage.	Occurs in the 1st, 2nd or 3rd stage.
Always between upper and lower uterine segments.	At any level of the uterus.
Rises up.	Does not change its position.
Felt and seen abdominally.	Felt only vaginally.
The uterus is tonically retracted, tender and the foetal parts cannot be felt.	The uterus is not tonically retracted and the foetal parts can be felt.
Maternal distress and foetal distress or death.	Maternal and foetal distress may not be present.
Relieved only by delivery of the foetus.	May be relieved by anaesthetics or antispasmodics.

MANAGEMENT

Exclude malpresentations, malposition and disproportion.

- In the 1st stage: Pethidine may be of benefit.
- In the 2nd stage: Deep general anaesthesia and amyl nitrite inhalation are given to relax the constriction ring:
- In the 3rd stage: Deep general anaesthesia and amyl nitrite inhalation are given followed by manual removal of the placenta.

An anatomical diagram showing a fetus in the birth canal. The fetus is positioned with its head down, and a forceps instrument is shown grasping the fetal head. The diagram illustrates the pelvic region, including the uterus, cervix, and the bony pelvis. The text "CERVICAL DYSTOCIA" is overlaid on the diagram.

CERVICAL DYSTOCIA

DEFINITION

- Failure of the cervix to dilate within a reasonable time in spite of good regular uterine contractions is called as Cervical Dystocia.

CAUSES

1. Primary or functional cause:-

- Lack of softening of cervix
- Cervical spasm
- Overactive sympathetic tone

2. Secondary or organic cause:-

- previous amputation
- Come biopsy
- Extensive cauterisation
- Obstetric trauma

COMPLICATIONS

- Rupture of uterus
- Postpartum hemorrhage
- Annular detachment of cervix :- suddenly bleeding from cervix will be minimal

MANAGEMENT

1. Organic Dystocia:-

- caesarean section is done.

2. Functional Dystocia:-

- pethidine and antispasmodic drugs are administered.
- If medications are not effective caesarean section is done.