

ABNORMAL UTERINE ACTION

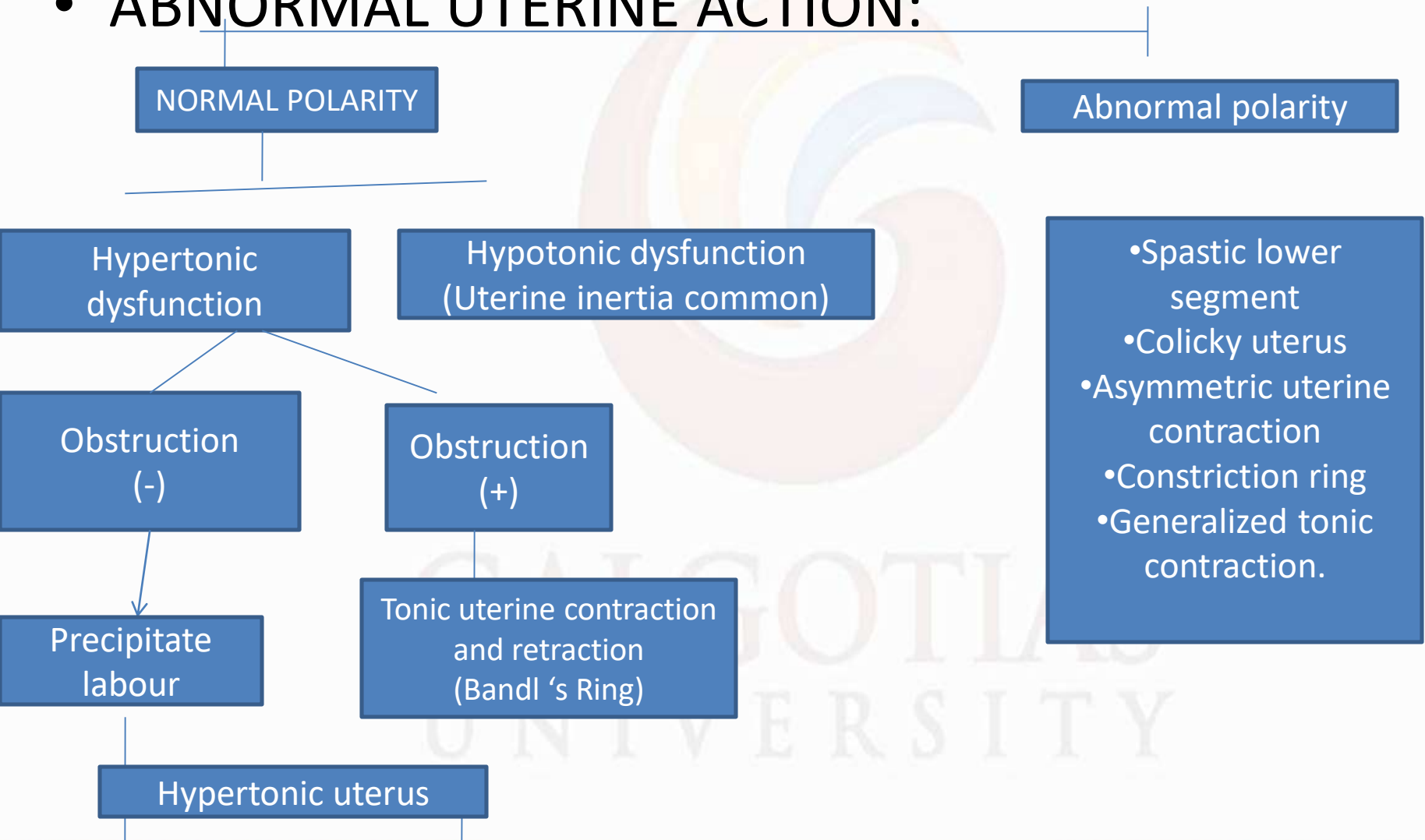
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- Abnormal uterine contraction – Any changes in normal pattern of uterine contractions that affect the course of labour.

Etiology :

- Elderly primigravida
- Over distended uterus – twin pregnancy, hydramnios and fibroids.
- Psychological factors
- Postdated pregnancy.
- Contracted pelvis, mal-presentation, deflexed head.
- Full bladder or loaded rectum
- Excessive sedation.

• ABNORMAL UTERINE ACTION:



- Normal polarity:
- Normal polarity means neuro muscular coordination between the dominant upper uterine segment on the other hand passive lower uterine segment and cervix.
- Upper uterine segment contract and lower relax which enable its muscle to drawn during first stage of labour and progressively dilate cervix.

- **Uterine hyper stimulation or hypertonic uterine dysfunction** is a potential complication of labor induction. It is defined as either a series of single contractions lasting 2 minutes or more or a contraction frequency of five or more in 10 minutes.
- Uterine hyper stimulation may result in fetal heart rate abnormalities, uterine rupture, or placental abruption. It is usually treated by administering terbutaline.

- The slowing or complete arrest of the progress of labor, caused by weak or infrequent contractions of the uterus.
- **Hypotonic uterine contraction** (inertia
Hypotonic labour is defined as less than **3 contractions** of mild to moderate intensity occurring in a 10 minute period during the active phase of labour. Cervical dilatation and descent of the fetus slow greatly or stop.

- **HYPOTONIC UTERINE INERTIA**
- **Definition**
- The uterine contractions are infrequent, weak and of short duration.
- **Aetiology**
- Unknown but the following factors may be incriminated:
- General factors:
 - Primigravida particularly elderly.
 - Anaemia and asthenia (abnormal physical weakness & lack of energy)
 - Nervous and emotional as anxiety and fear.
 - Hormonal due to deficient prostaglandins or oxytocin as in induced labour.
 - Improper use of analgesics.

- **Local factors:**
 - Over distension 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 Picture**
- 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:
 - Providing that;
 - vaginal delivery is amenable,
 - the cervix is more than 3 cm dilatation and
 - the presenting part occupying well the lower uterine segment.
 - 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:**
 - 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.
 - Caesarean section is indicated in:
 - failure of the previous methods.
 - contraindications to oxytocin infusion including disproportion.
 - foetal distress before full cervical dilatation.

- **HYPERTONIC UTERINE INERTIA (Uncoordinated Uterine Action)**
- **Types**
- Colicky uterus: in coordination of the different parts of the uterus in contractions.
- Hyperactive lower uterine segment: so the dominance of the upper segment is lost.
- **Clinical Picture**
- 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.
- **Aetiology**
- 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 preceded by colicky uterus.
- The exact diagnosis is achieved only by feeling the ring with a hand introduced 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).

- **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:
 - If the ring is relaxed, the foetus is delivered immediately by forceps.
 - If the ring does not relax, caesarean section is carried out with lower segment vertical incision to divide the ring.
- In the 3rd stage: Deep general anaesthesia and amyl nitrite inhalation are given followed by manual removal of the placenta.

- **CERVICAL DYSTOCIA**
- **Definition**
- Failure of the cervix to dilate within a reasonable time in spite of good regular uterine contractions.
- **Varieties**
- Organic (secondary) due to:
 - Cervical stances as a sequel to previous amputation, cone biopsy, extensive cauterisation or obstetric trauma.
 - Organic lesions as cervical myoma or carcinoma.
- Functional (primary):
 - In spite of the absence of any organic lesion and the well effacement of the cervix, the external os fails to dilate.
 - This may be due to lack of softening of the cervix during pregnancy or cervical spasm resulted from overactive sympathetic tone.

- **Complications**
- Annular detachment of the cervix: surprisingly the bleeding from the cervix is minimal because of fibrosis and avascular pressure necrosis leading to thrombosis of the vessels before detachment.
- Rupture uterus.
- Postpartum haemorrhage: particularly if cervical laceration extends upwards tearing the main uterine vessels.

- Management
- Organic dystocia:
 - Caesarean section is the management of choice.
- (II) Functional dystocia:
 - Pethidine and antispasmodics: may be effective.
 - Caesarean section: if
 - medical treatment fails or
 - foetal distress developed.

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