



Labor and delivery

Definition

- Series of events that takes place in the genital organ in an effort to expel the viable products of conception out of the womb through the vagina into the outer world is called labour.
- It may occur prior to 37 completed weeks, when it is called preterm labour.
- Delivery is the expulsion or extraction of viable fetus out of the womb.

Normal labour (Eutocia)

Labour is called normal if it fulfills the following criteria:

- Spontaneous in onset and at term.
- With vertex presentation
- Without undue prolongation
- Natural termination with minimal aids
- Without having any complications affecting the health of mother and/or baby.

Abnormal labour (Dystocia)

Any deviation from the definition of normal labour is called abnormal labour.

Causes of Onset of labour

1. Uterine distension
2. Feto-placental contribution
3. Oestrogen
4. Progesterone
5. Prostaglandins
6. Oxytocin
7. Neurological factors

Oestrogen

- Increase the release of oxytocin from maternal pituitary.
- Promotes the synthesis of receptors for oxytocin in the myometrium and decidua.
- Accelerates lysosomal disintegration in amnion cells resulting in amnion cells resulting in increased prostaglandin synthesis.
- Stimulates the synthesis of myometrial contractile protein ---actinomyosin through cAMP.
- Increases the excitability of the myometrial cell membranes.

Progesterone

- Increased fetal production of dehydroepiandrosterone sulphate (DHEA-S) and cortisol inhibits the conversion of fetal pregnenolone to progesterone. Progesterone levels therefore fall before labour.
- It is the alteration in the oestrogen:progesterone ratio rather than the fall in the absolute concentration of progesterone which is linked with the prostaglandin synthesis.

Prostaglandins

- Prostaglandins are the important factor which initiate and maintain labour.
- The major sites of synthesis of prostaglandins are --- amnion, chorion, decidual cells and myometrium.
- Synthesis is triggered by -rise in oestrogen level, glucocorticoids, mechanical stretching in the late pregnancy, increase in cytokines, infection, vaginal examination, separation or rupture of membranes

False labour pain

Features

1. Dull in nature and usually confined to the lower abdomen and groin.
2. Continuous and unrelated with hardening of the uterus
3. Without any effect on dilatation of the cervix.
4. Usually relieved by medications.

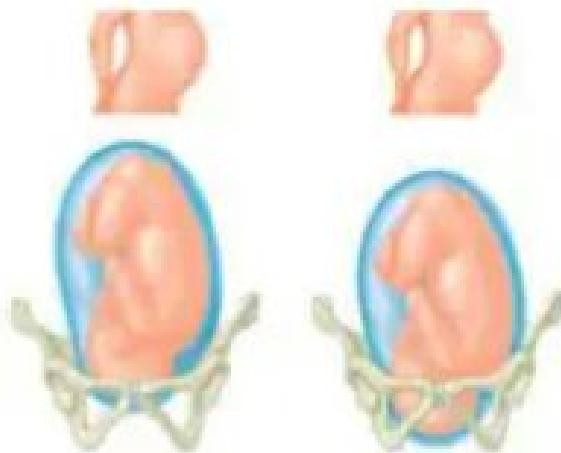
Pre labour (premonitory stage)

Begins:

- **Primigravida:** 2 or 3 weeks before the onset of true labour.
- **Multigravida:** few days prior.

Features of prelabour

- **Lightening**



- **Cervical changes**
- **Appearance of false pain**

Oxytocin

- Oxytocin receptors are increased in the uterus with the onset of labour.
- Oxytocin promotes the release of prostaglandins from the decidua.
- Oxytocin synthesis is increased in the decidua and in the placenta.
- Vaginal examination and amniotomy cause rise in maternal plasma oxytocin level (Ferguson reflex).

True labour pain

Features of true labour pain:

- Painful uterine contractions (labour pain) at regular intervals
- Contraction with increasing intensity and duration
- Show
- Progressive effacement and dilatation of the cervix
- Formation of the “bag of waters”.