



MANAGEMENT OF THE FIRST STAGE OF LABOR

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INTRODUCTION

- **LABOR CONSISTS OF 3 STAGES:**

1. **FIRST STAGE** :Which is the stage of cervical effacement and dilation . It starts from the onset of true labor pain and ends by full cervical dilation
2. **SECOND STAGE** :Which is the stage of delivery of the fetus. It starts from full cervical dilation and ends by delivery of the fetus.
3. **THIRD STAGE** :Which is the stage of delivery of the placenta and membranes. It starts after delivery of the fetus and ends by delivery of the placenta and membranes.
4. Some authors give the first hour after delivery of the placenta and membranes the name “ **FOURTH STAGE** “ of labor and attribute its importance from observation of the neonate and the postpartum hemorrhage.

INTRODUCTION

Duration of stages of labor

Stage of labor	Primigravida	Multipara
FIRST STAGE	10-16 hours	6-8 hours
SECOND STAGE	1-2 hours	0.5-1 hours
THIRD STAGE	10-30 minutes	10-30 minutes

PHYSIOLOGY OF THE FIRST STAGE OF LABOR

Definition: it is the stage of cervical dilatation from zero up to 10 cm.

Onset/end: start with true uterine contraction and ends with full cervical dilatation (10 cm).

Duration: 10-16 hours in nullipara and 6-8 hours in multipara.

Forces: the only force is uterine contractions [clinically, these are true labor pains].

PHYSIOLOGY OF THE FIRST STAGE OF LABOR

Criteria of contraction:

1. It starts in the pacemaker of the uterus which is present at the right cornu in most of cases.
2. It is propagated from up down to involve the whole upper segment as one mass but not involving the lower segment or the cervix.
3. It is increasing in frequency and duration with the progress of labor due to Ferguson's reflex.
4. It is followed by retraction NO relaxation.
5. These contractions are associated with cervical dilatation and effacement [fruitful contractions].

PHYSIOLOGY OF THE FIRST STAGE OF LABOR

Effects of contraction:

1. Cervical dilatation: due to increased intra-amniotic pressure. Dilatation occurs from above downwards; the internal os dilates first, then the cervical canal and finally the external os.
2. Cervical effacement: it is the process of taking up and merge of the internal os and cervix into the lower uterine segment.

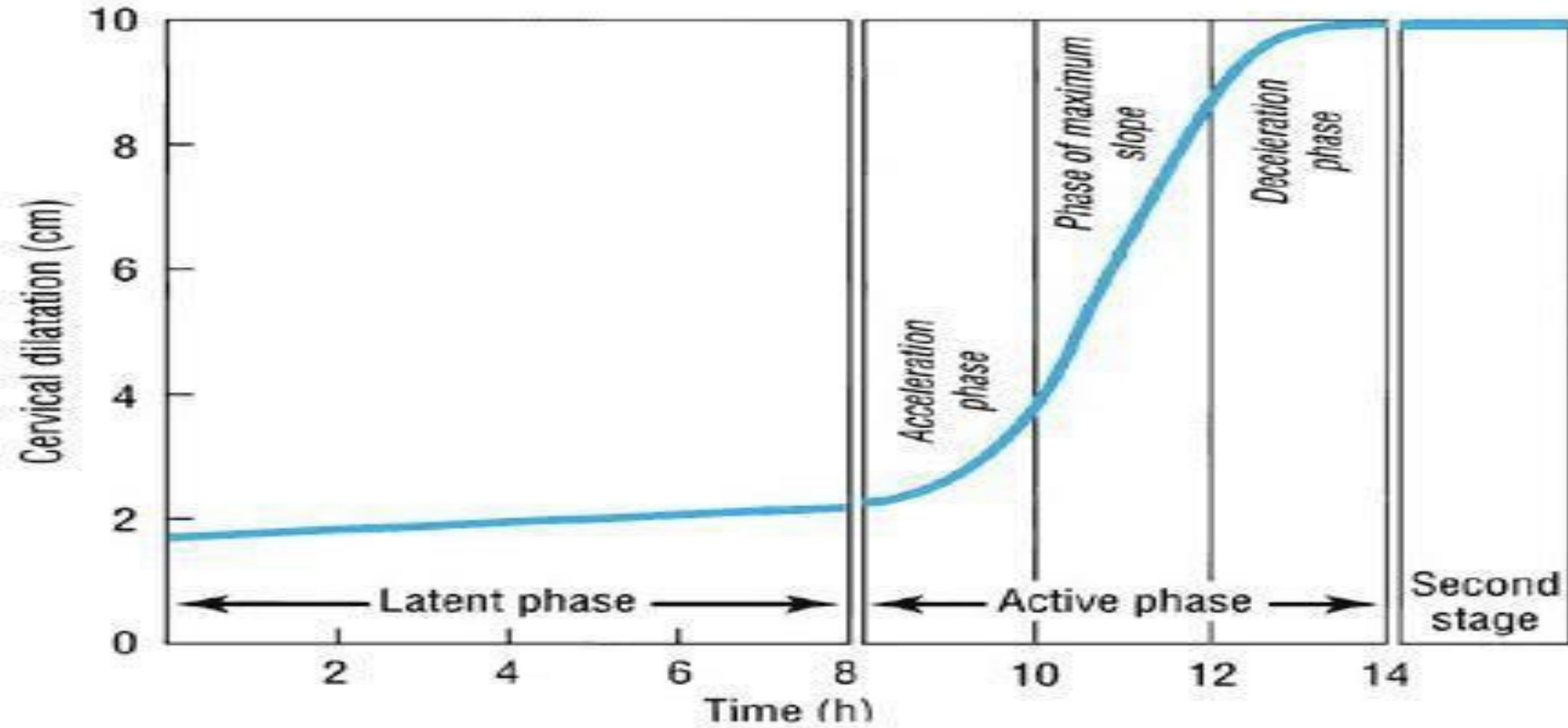
Phases: according Friedman's curve

A. Latent phase: occupies most of first stage (>8 hours) and dilatation is very slow (up to 3 cm).

B. Active phase: which it is composed of:
1. Acceleration phase. 2. Maximum sloping phase.
3. Deceleration phase.

- The average rate of cervical dilatation in the active phase is 1.5 cm/hour in multipara and 1.2 cm / hour in nullipara.
- In Nullipara; effacement occurs at first followed by dilatation.
- In Multipara; both effacement and dilatation occur simultaneously.

PHYSIOLOGY OF THE FIRST STAGE OF LABOR



Friedman cervicograph for nulliparous labor

MANAGEMENT OF THE FIRST STAGE OF LABOR

- 1- **Ensure the patient in labor or not** and then advise for hospital delivery as it is safer than home delivery.
- 2- **General care** as warm bath, shave the vulva and gentle manipulation of the patient.
- 3- **Rest in bed:**
 - a. If the head is engaged, the patient is allowed to walk.
 - b. If the head is not engaged, avoid walking to avoid EROM & risk of cord prolapse.
- 4- **No bearing down** as it is useless and to avoid exhaustion.

MANAGEMENT OF THE FIRST STAGE OF LABOR

5-Care of the bowel:

a. **Diet:** avoid oral food during the active phase to avoid delayed gastric emptying and vomiting.

b. **Bladder and rectum must be empty.** Bladder must be empty to avoid non-engagement, uterine inertia and postpartum hemorrhage.

Rectum must be empty to avoid soiling of the delivery field.

6-Analgesia: narcotic analgesic as Morphine or Pethidine

MANAGEMENT OF THE FIRST STAGE OF LABOR

- 7-Vaginal examination:** asepsis is a must before any vaginal examination and done at:
- Early in labor to ensure the onset of labor, evaluate the cervix for consistency, dilatation, and degree of effacement, condition of the fetal membranes and station of the presenting part.
 - After rupture of membranes to exclude cord prolapse.

8-Follow up for maternal and fetal conditions (Partograph = "Friedman's cervico-gram"):

- It is a diagrammatic follow up of the course of labor and formed of 3 parts:

Part 1: fetal condition (at top).

Part 2: progress of labor (at middle).

Part 3: maternal condition (at bottom)

The partogram

Definition:

Partogram is a simple and useful tool in monitoring the progress of labor and graphically recording it.

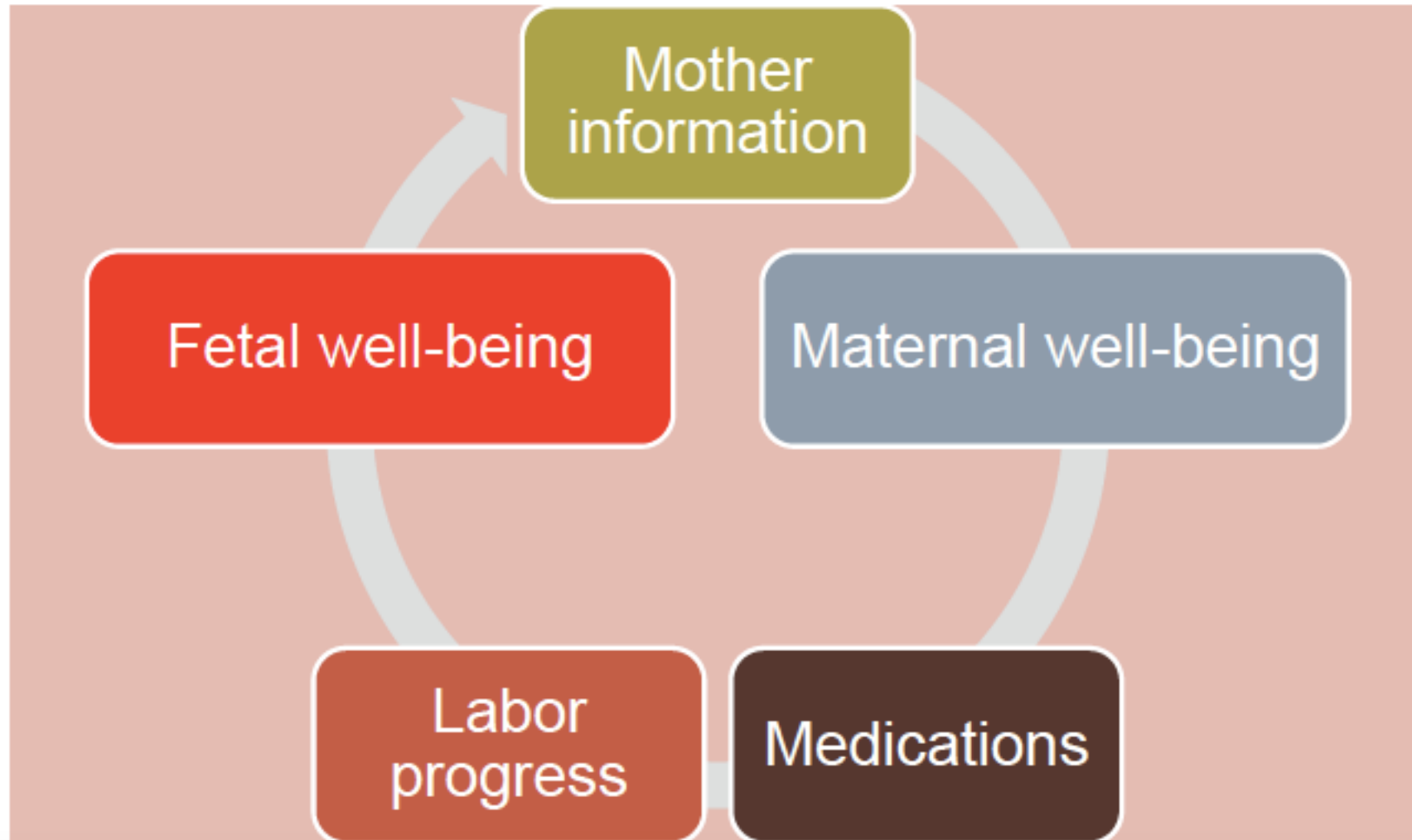
- It is used to distinguish normal labor from abnormal one
- The condition of the mother, the condition of the fetus, and the progress of labor are recorded on the partogram.

Partogram

Why we are using partogram?

- Peripartum fetal **mortality** and **morbidity** is directly related to the labor abnormalities (e.g asphyxia, birth injuries).
- About 97 % of all reported neonatal deaths occur in less developed countries. The majority of deaths are a direct consequence of labor complications.
- Partogram is a simple tool and has shown its utility in detecting labor abnormalities and in directing timely interventions.

Component of partogram



THE COMPONENTS OF THE PARTOGRAM

Labor progress

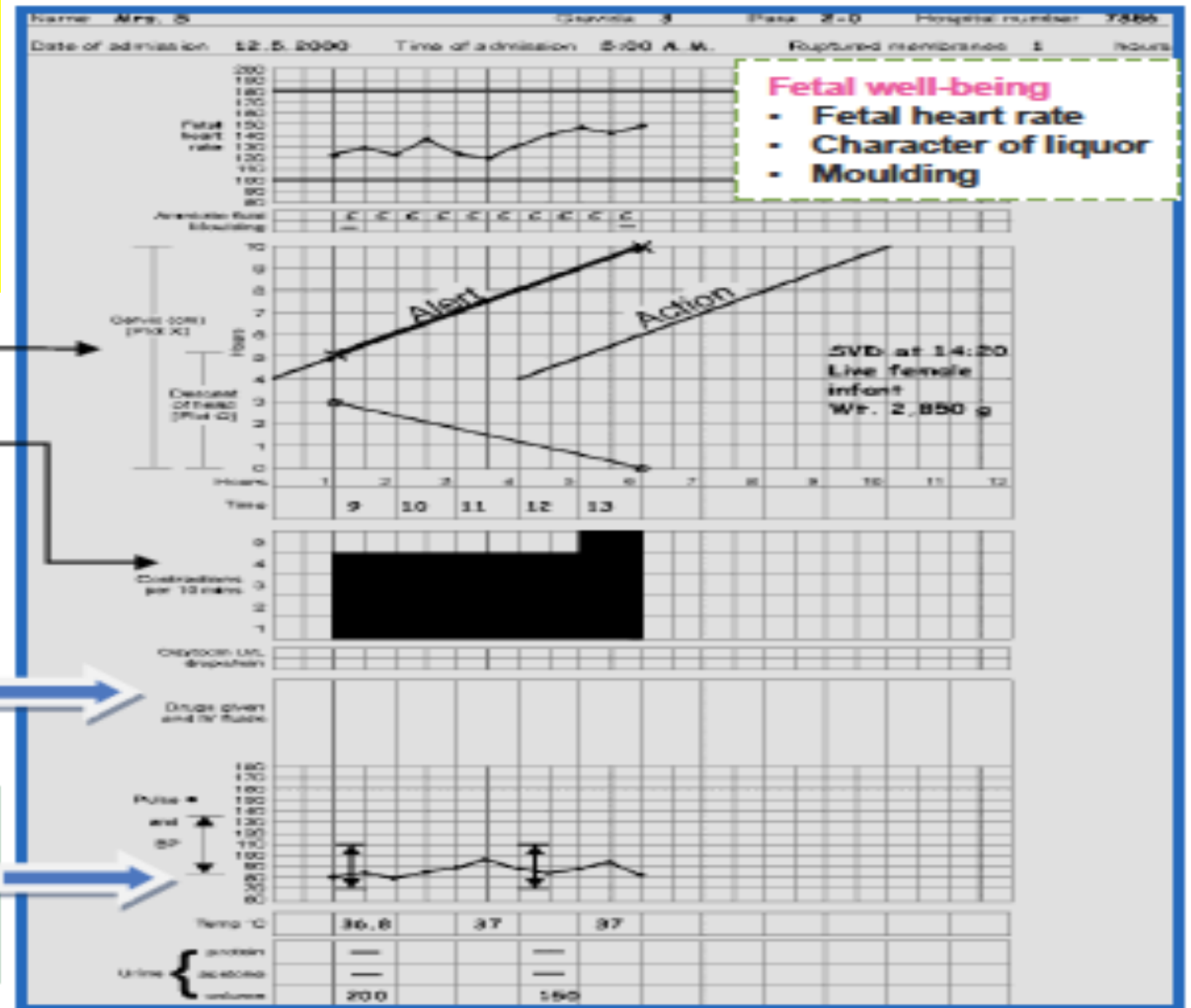
- Dilatation
- Descent
- Uterine contraction

Medications

- Oxytocin, drugs, fluids, ..
- Pain relief (e.g., pethidine)

Maternal well-being

- BP, Pulse, Temperature
- Urine for albumin, glucose, acetone,
- Urine output



Thanks

