
بسم الله الرحمن الرحيم
السلام عليكم ورحمة الله وبركاته

Outlines

1- Stages of Labor

2- Clinical features of each stages

STAGES OF labor

labor is divided into four stages:

(I) First stage:

- It is the stage of cervical dilatation and effecement.
- Starts with the onset of true labor pain and ends with full dilatation of the cervix i.e. 10 cm in diameter.

- It takes about 10-14 hours in primigravida and about 6-8 hours in multipara.

It is characterised by:

(1) True labor pain.

(2) The show:

It is an expelled cervical mucus plug tinged with blood from ruptured small vessels as a result of separation of the membranes from the lower uterine segment. labor is usually starts several hours to few days after show.

(3) Dilatation of the cervix:

A closed cervix is a reliable sign that labor has not begun. In multigravidae the cervix may admit the tip of the finger before onset of labor.

(4) Formation of the bag of fore - waters:

Which bulges through the cervix and becomes tense during uterine contractions.

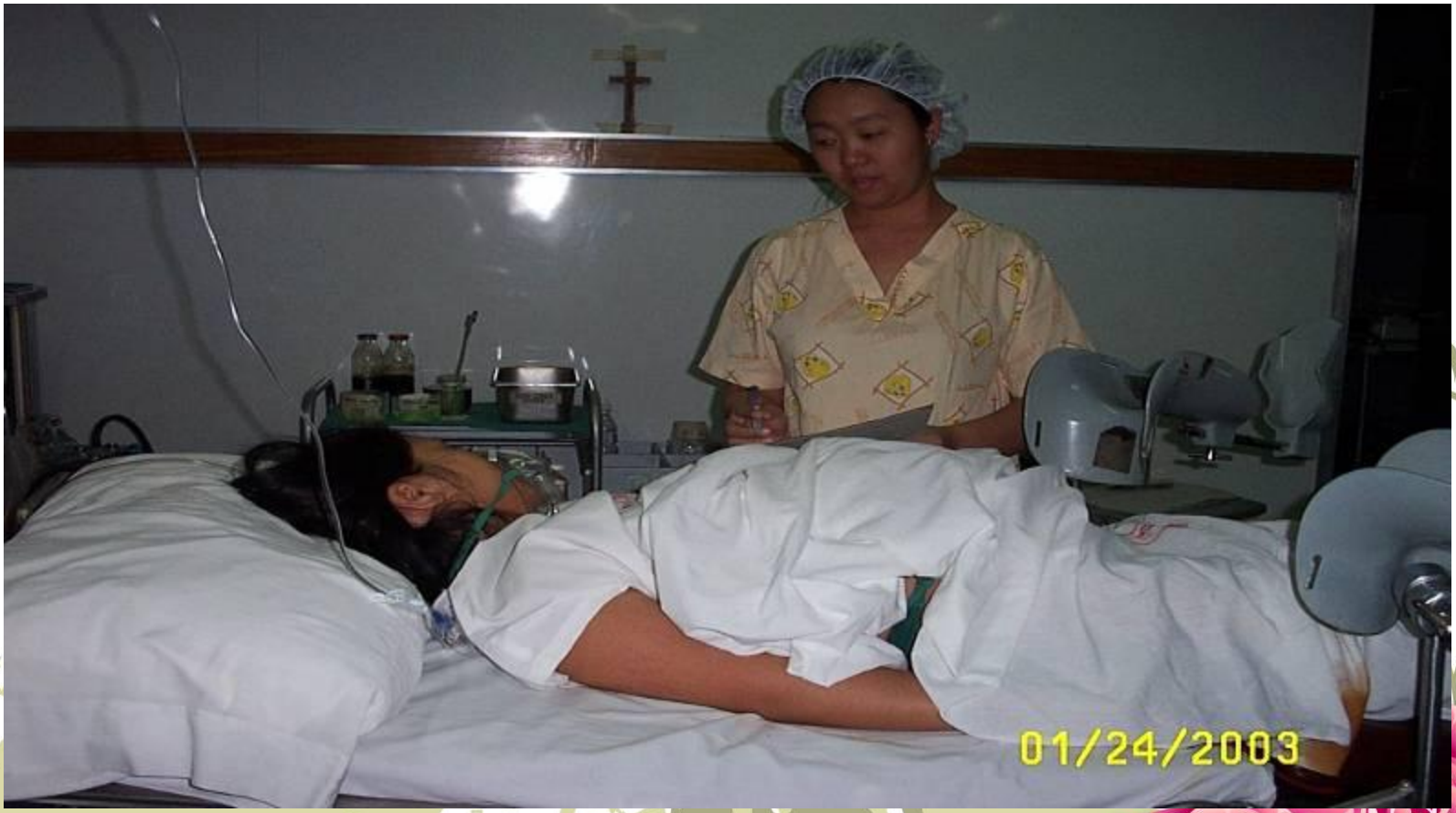
First stage of labor had 3 phases(latent, active and transitional)

(a) Latent phase: From the onset of labor until the cervix is about 3 cm dilated. Contractions occurs every 5 to 10 minutes, lasts 30 to 45 seconds and descried as mild. Effacement's of the cervix is from 0 to 40% for primiparous. it may lasts about 9 hours in nuliparous and 6 hours for multiparous..

(b) **Active phase**: cervical dilatation begins to occur more rapidly, CX dilatation from 3 to 7 cm , with effacement 40% to 80% it may lasts about 6 hours in nuliparous and 4.5 hours for multiparous.

(c) **Transitional phase**: this the last phase in 1^{st} stage(cervical dilatation 8-10 cm) , uterine contractions are stronger , longer, more painful and more frequent

- Assessment of the Laboring Woman



Assessment of the Laboring Woman

(I) History:

Personal, family, obstetrical and medical history as well as the estimated data of confinement (EDC).

2)History of present pregnancy: This may be obtained by interviewing the patient in labor or by reviewing her prenatal record;

- Medical disorders during this pregnancy.

- Complications during this pregnancy as ante partum hemorrhage.

- Labour pains : onset, frequency and duration.

-Passage of " show", fluid or blood per vagina.

- Sensation of foetal movement.

(II)Examination:

(1) General examination:

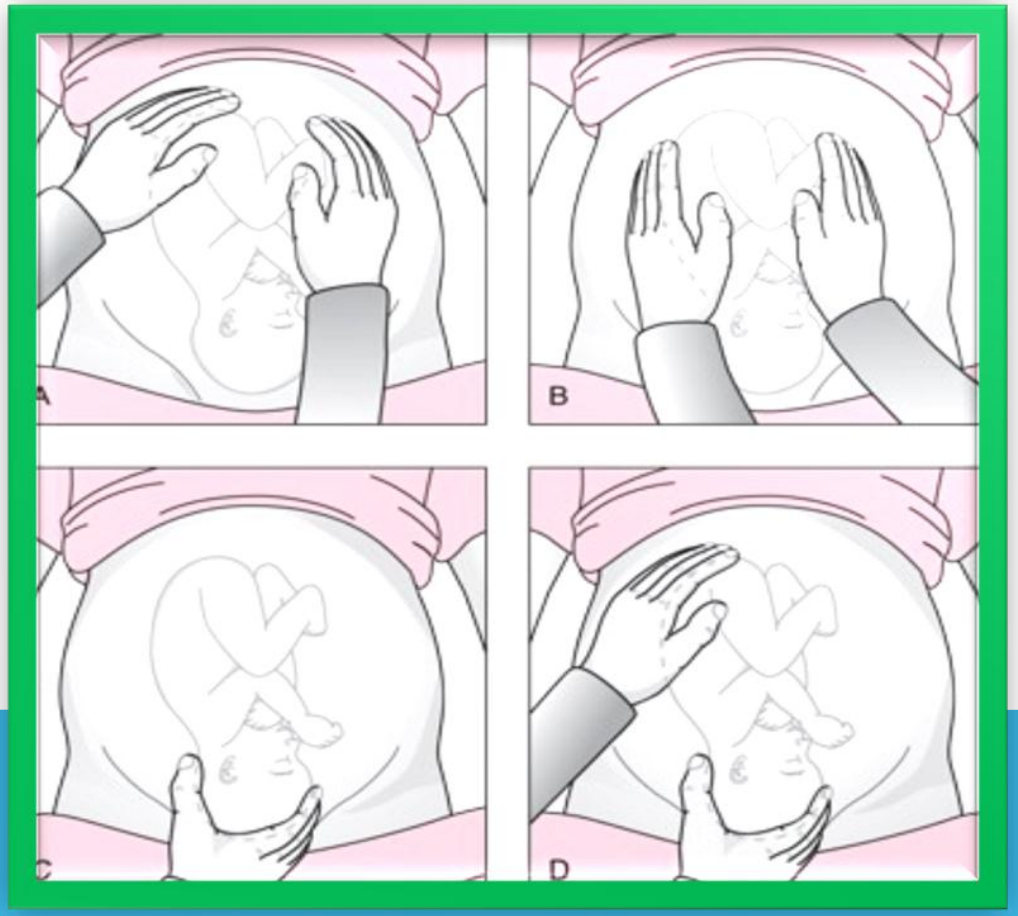
- Height and built.
- Maternal vital signs : pulse, temperature and blood pressure.
- Chest and heart examination.
- Lower limbs for oedema.

(2) Abdominal examination: **This is done to find out :**

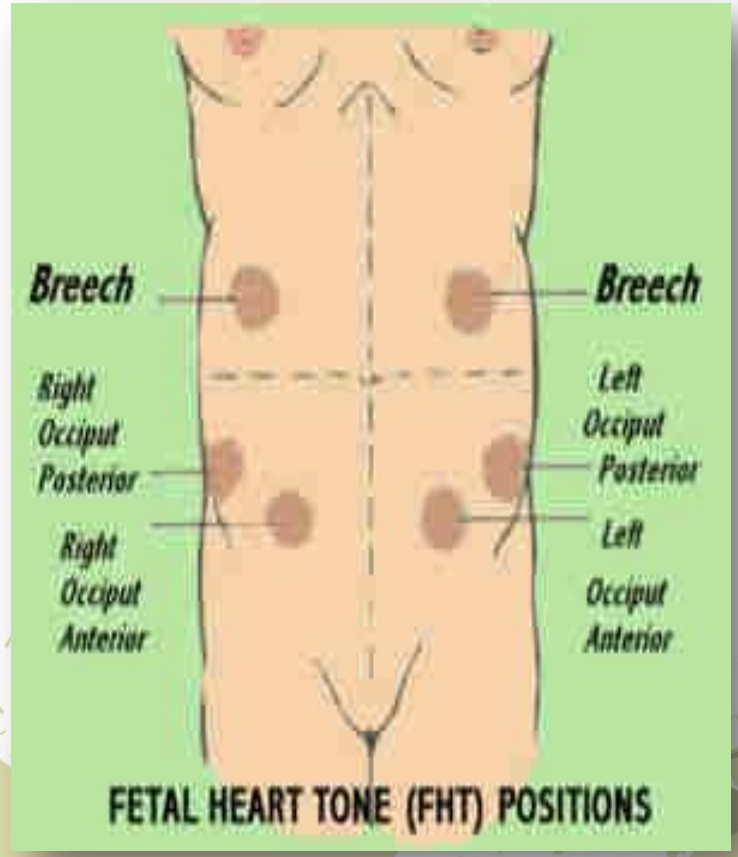
- ☆ **The duration of pregnancy**
- ☆ **The size of the fetus, FHS**
- ☆ **Lie, presentation, position of the fetus and engagement of the head.**
- ☆ **Scar of previous operations (e.g. C.S),**

LEOPOLD'S MANEUVERS:

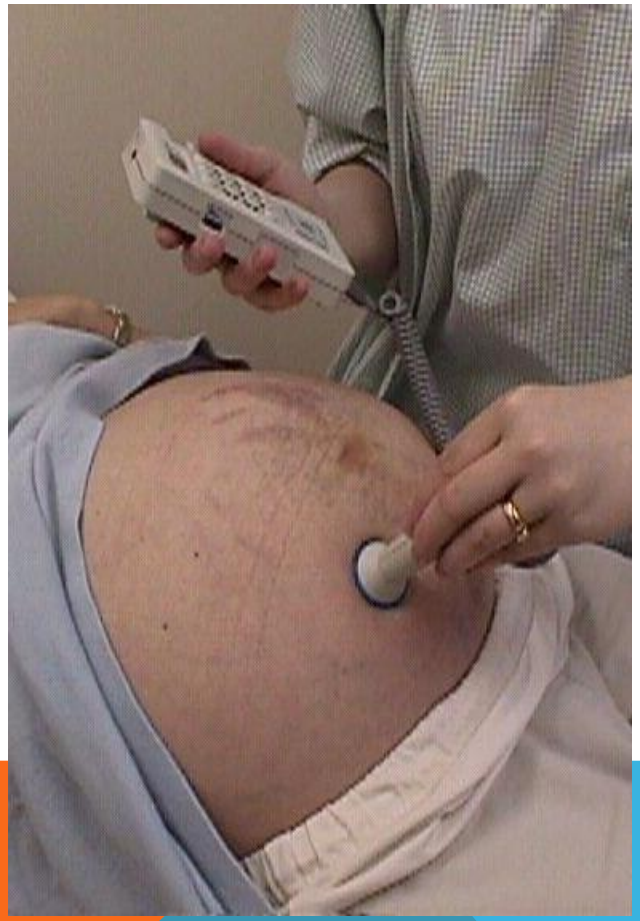
- Fundal level.
- Fundal grip
-Umbilical grip.
- Pelvic grips.
- Pawilk grip



-Monitor the Fetal Heart = FHS.



MONITOR THE FETAL HEART



During early labor, for low risk patients, note the fetal heart rate every 1-2 hours.

During active labor, evaluate the fetal heart every 30 minutes

Normal FHR is 120-160 BPM

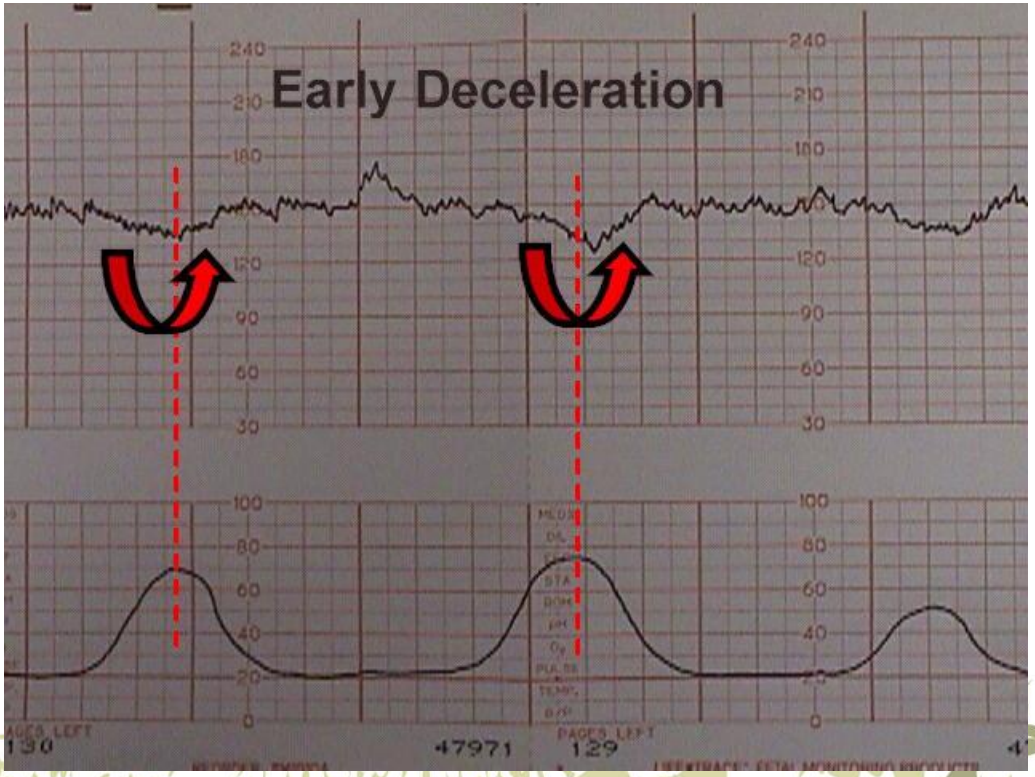
Persistent tachycardia (>160) or bradycardia (<120, particularly <100) is of concern

Listen at the end of contractions

Electronic Fetal Monitors

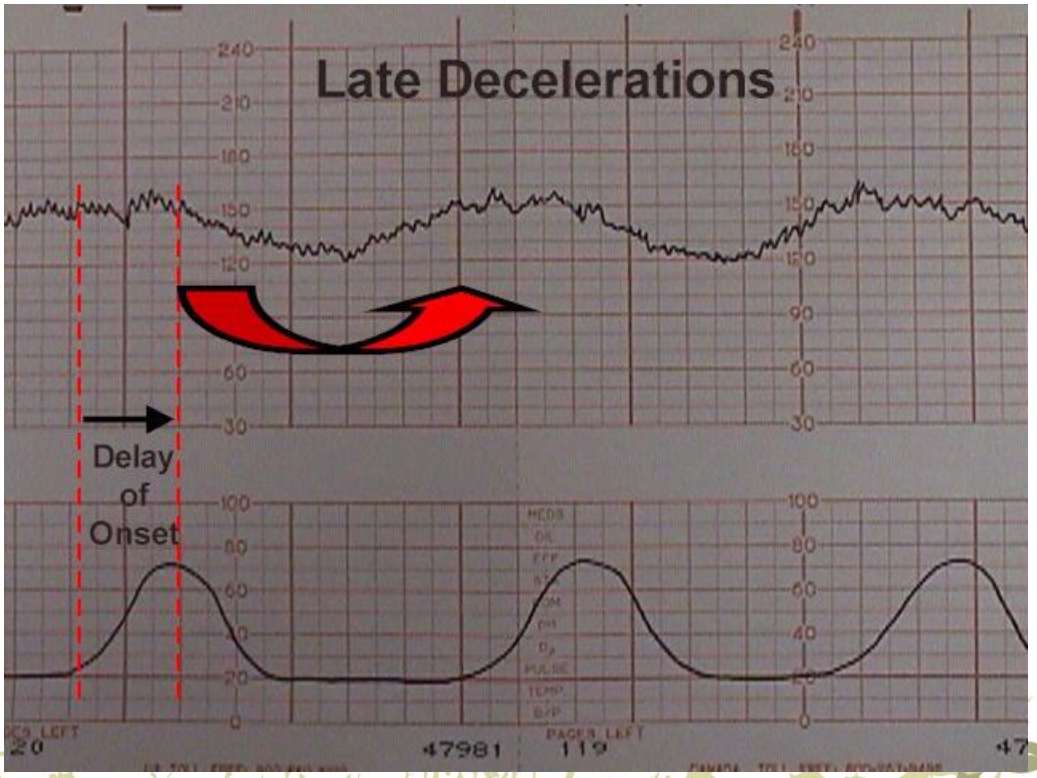
- Continuously recording of fetal heart rate and uterine contractions
- Patterns are of clinical significance.
- Use in high-risk patients.
- Use in low-risk patients optional

Early Decelerations



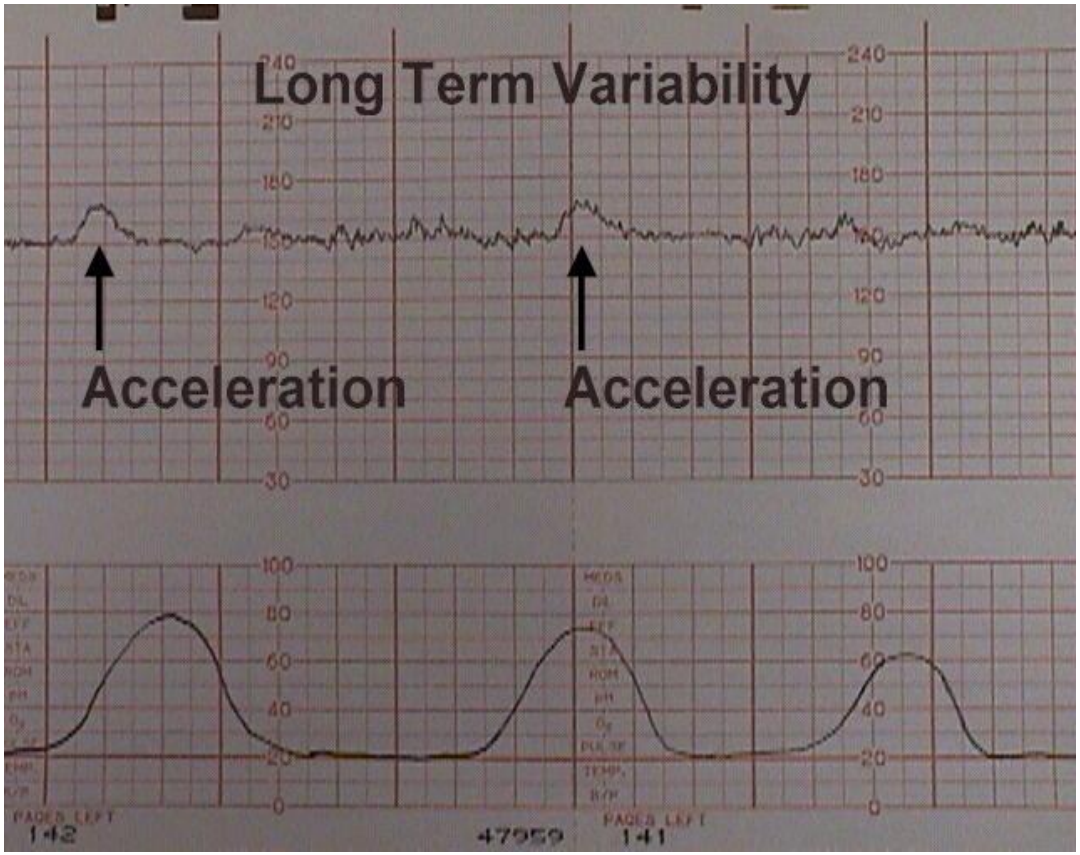
- Periodic slowing of the FHR, synchronized with contractions (onset and end of deceleration coincide with the onset and end of contraction)
- Associated with fetal head compression

Late Decelerations



- End of deceleration is delayed after end of contraction
- Reflect utero-placental insufficiency and fetal hypoxia

Acceleration



- Increase in fetal heart rate at least 15bpm lasting 15-20 second in response to fetal movement.

➘ Other sound may be heard during auscultation of FHS. These are:

- **Funic (umbilical) soufflé** , which is synchronous with fetal heart rate. It is caused by **gushing of blood through the umbilical arteries**

Uterine (maternal) soufflé , the same as maternal pulse. It is caused by **gushing of the blood through the large blood vessels of the uterus .**

- **Failure to hear the FHS may result from one of the following conditions :-**

✓ Fetal death.

✓ Maternal obesity.

✓ Loud maternal souffle .

✓ Polyhydraminous.

✓ Posterior position of the occiput.

✓ An excessive noise in the room.

(3) Local "Pelvic examination":

a-Cervix:

- ✓ Dilatation :
- ✓ Effacement.
- ✓ Position (posterior, midway , central).

b- Membranes: ruptured or intact. If ruptured exclude cord prolapse and meconium stained liquor.

c- Presenting part and its position.

d- Station : of the presenting part.

e- Pelvic capacity.

(4) Investigations:

- Urine should be tested for glucose, protein and ketones.
- Blood should be taken for hemoglobin and blood group (if not already known).
- Blood tests e.g. C B C, serological test for syphilis.
- Special laboratory tests should be ordered as required for specific physical findings, disease or complications..

Active procedures for 1st stage of labor:

(1) The partogram:

It is the graphic recording of the course of labour

- **Observations and recordings are explained in the following sequence:**

A. The progress of labor:

1. Cervical dilation ,
2. Descent of head
3. Uterine contractions (frequency / 10 min , duration - shown by differential shading

B-The fetal condition

1. Fetal heart rate.

2. Color and amount of liquor.

3. Moulding of the fetal skull.

C-The maternal condition

1. Pulse, blood pressure and temperature.

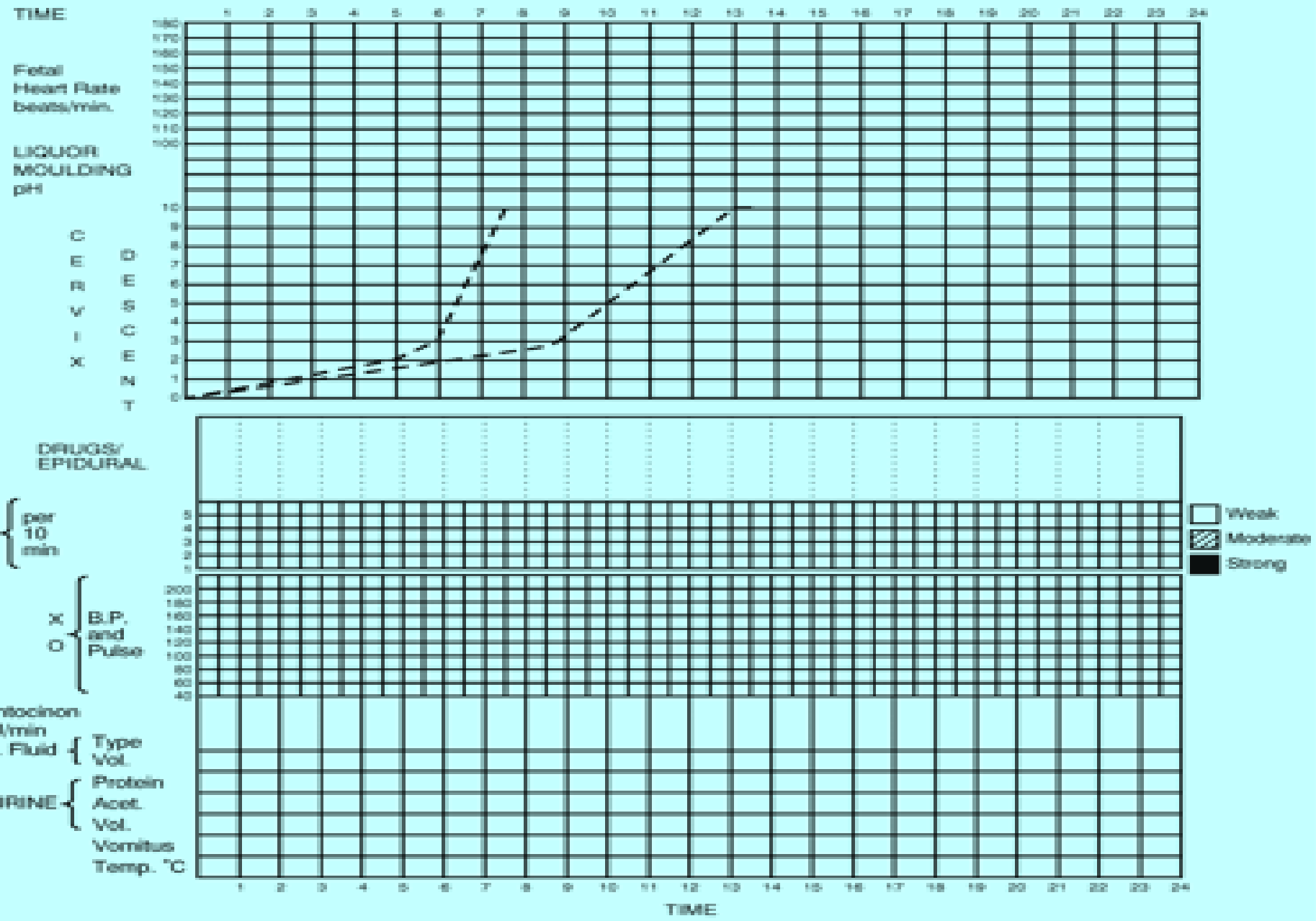
2. Urine-volume ,protein ,acetone.

3. Drugs and IV fluids.

4. Oxytocin regime.

PARTOGRAM

OBSTETRIC	SPECIAL INSTRUCTIONS	ANAESTHETIC	NAME LABEL
	1. 2. 3.	1. 2. 3.	



(A)The progress of labor

(1)Cervical dilatation

The first stage is divided into:

1. The latent phase is from 0 - 3 cm dilatation and is accompanied by gradual shortening of the cervix. It should normally not last longer than 8 hours.
2. The active phase is from 3-10 cm and dilatation should be at the rate of at least 1 cm / hour.

Alert line

It represents the rate of cervical dilation and drawn from 3 cm to 10 cm (i.e. rate at least 1 cm / hour). If cervical dilatation moves to the right of the alert line, it is slow and indicates delay in labor.

Action Line

Is drawn 4 hours to the right of the alert line. If cervical dilatation reaches this line, action should be taken to ensure labor progress safely.

- When labor progresses well the dilatation should not cross to the right of the alert line.

Uterine Contractions:

- Contractions are observed for frequency and duration.
- The number of contractions in 10 minutes is recorded / 30 min.

The 3 ways of shading in duration of contractions•*

- ✓ Up to 20 seconds.
- ✓ **20 - 40 .**
- ✓ More than 40 seconds.
- ✓ It measured by manual palpation or better by tocography if available,

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- **(II)The fetal condition**

- **(1) Fetal heart rate**

- Listen to the FHR immediately after the peak of a contraction with woman in the lateral position. Record it half hourly at the top of the partograph

- (2) **Descent of the fetal head**

- Assessing descent of the head assists in detecting progress in labor
- The station of the head in relation to the ischial spines on vaginal examination is recorded in cm. plus or minus .

2) Membranes and liquor

- There are four observations which are recorded on the partograph immediately below- the F. H. R recordings ,these are :

✓ If the membranes are intact Record (I)

✓ **If** membranes are ruptured :

- Liquor is clear Record (C)
- Liquor is meconium stained Record (M)
- Liquor is absent Record (A)
- The observations are made at each vaginal examination.
- If there is thick meconium at any time or absent liquor at the time of membrane ruptured listen to the fetal heart more frequently as these may be signs of fetal distress.

Sometimes the liquor is milky or contains white specks, this is only due to vernix caseosa . Golden liquor is seen in some cases when the fetus is suffering from Rh hemolytic disease. If the membranes have been ruptured early, the amniotic fluid may become infected and will have an odor. This is dangerous because the fetus may inhale some of the fluid with resultant pneumonia.

- **Moulding of the fetal skull bones**
- Recording are made immediately beneath those of the state of liquor.
- O = bones are separated and the sutures can be felt easily
- + = bones are just touching each other
- + + = bones are overlapping
- + + + = bones are severely overlapping

(C) The maternal condition

All the recordings for the maternal condition are done at the end of the partograph below the recording of uterine contractions .

Temperature, 4 hourly, or more frequently if indicated

pulse - half hourly

Blood pressure - 4 hourly, or more frequently if indicated

1. Urine - volume , protein and acetone.
2. Drugs and IV fluids.
3. Oxytocin regime

The advantages of the partogram:

1. Allows right intervention in the proper time e.g. oxytocin usage, instrumental delivery or C.S.
2. Allows different staff shifts to manage the case successively.
3. A document for labour events.

- ***No Partograph is used for the following cases:***

1. 9 cm -10 cm cervical dilatation on admission.
2. Elective C.S.
3. Emergency C.S immediately on admission.
4. Female less than 30 weeks of gestation.

Sings that denote maternal distress

- Increased pulse rate over 100b/min.,Decreased blood pressure.
- Elevated temperature more than 38C.
- Sweating and pale face + Signs of dehydration.
- Dark vomitus.
- Ketone bodies in urine.
- Irritability , restlessness, anxious and depression

*** Signs of fetal distress

1. Excessive fetal movements.
2. Passage of meconium in cephalic presentation.
3. Excessive moulding of the head.
4. Excessive formation of caput succedaneum.
5. Changes in FHR or fetal pH .

(2)Personal cleanliness &Measures of infection control:

- Follow the aseptic techniques in each procedure to prevent infection.
- Provide dry and clean clothes and bed linen for the woman.
- Trimming of hair to clean and disinfect the vulva to prevent infection. While shaving is not advisable for fear of lacerations and infection.
- Bath is given following an enema and then instruct the woman to wear a clean night dress or gown.
- Cut and clean nails.
- Swab the perineum on admission then every six hours before and after vaginal examination and before delivery

(3)Care of bowel and bladder:

- Early in labor a disposable enema or suppository is given. This cleans the rectum, allows more room for the decent of the fetus, thus improve the quality of uterine contractions and prevent the soiling of the sterile field during the birth of the baby.

- **Don’t give enema if:**

☒ Membrane have ruptured.

☒ Patient has preeclampsia or eclampsia, or heart disease.

☒ Patient has antepartum hemorrhage.

☒ Delivery is imminent.

- Encourage woman to pass urine every 2 to 3 hours or whenever the bladder is seen or felt supra publically

- **Over distension of the bladder may:**

☒ Impede engagement of the head.

☒ Retard progress in; the first and second stage due to its inhibition effect on the uterine contraction.

☒ Delay delivery of the placenta and lead to postpartum hemorrhage and may lead to stress incontinence later on.

4) POSITION :

- **Patient is allowed to walk during the early first stage particularly with intact membranes.**
- **If rest is needed the patient lies on her left lateral position to :**

✓ Improves uterine contractions.

✓ Facilitates kidney function.

✓ prevents supine hypotensive syndrome.

✓ Prevents placental insufficiency and fetal hypoxia.

✓ Facilitates rotation of the occiput posterior position.

- **Woman in labor should not be out of bed in the following cases**:

✓ When the membranes have ruptured because the risk of cord prolapse. –

✓ When she is medicated with any drug which might make her dizzy or unsteady on her feet.

✓ Rapidly progressive labor or late first stage in multipara

✓ Obstetrical complications e.g. antepartum hemorrhage, severe preeclampsia.

(5)Diet ??????????

- The emptying time of the stomach is delayed during labor, and food or fluids may remain therefore several hours. If for any reason a general anesthesia is given there will be a risk of vomit being inhaled and the acid contents of the stomach may cause bronchial spasm (Mendelson's syndrome). Alkali given by mouth may reduce the risk of this complication.

- Intravenous fluids are administered to replace the large insensible fluid losses that occur during labor because oral intake usually is limited to sips of water.(The infused fluid is usually Ringer's lactate or % normal saline with or without 5% dextrose.)

6)Promotion of sleep, comfort and relief of pain:

☆Keep up the woman's psych by frequent reassurance, encouragement and supportive care.

☆Discourage the woman to bear down until she is in the second stage. Explain to her that this is very dangerous and will not speed up labor. In fact, it will slow it down by causing edema of the cervix ,exhausts the patient and predisposes to genital prolapse.

☆Administer prescribed medication for the relief of pain:

☆drugs used to promote sleep, hypnotics;

☆drugs used to allay anxiety; sedatives and tranquilizers e.g. phenergan;

- ☆ -drugs used to relieve pain systematically; analgesics e.g. pethidine 50-100 mg IM given with promethazine 25mgto prevent nausea.
- ☆ However, it should be noted that using such drugs can cause:
- ✓ depression of the respiratory center of the fetus,
- ✓ increased incidence of operative delivery; atonic postpartum hemorrhage.


THANK
YOU!