- Blood pressure is checked hourly.
- Vaginal examination is performed after an hour.
- Frequency of contractions are monitored half hourly.

### Episiotomy

- It should not be performed routinely.
- It is performed selectively, in cases with prematurity, fetal distress, breech presentation, occipito-posterior position, large baby, twin pregnancy or when a perineal tear is anticipated. It is also performed in all cases of instrumental delivery.
- In Sri Lanka, an episiotomy is performed in all primipara.
- A mediolateral episiotomy is performed at 45–60° from the midline directed to the right side, beginning at the vaginal fourchette. This is carried out at crowning of the head. Two fingers of the left hand are inserted into the vagina between the fetus and the vaginal wall to prevent injury to the fetus. Special care should be taken to prevent genital injury in a breech presentation.
- Perineal infiltration with 10 cc of 1% lignocaine is used to provide analgesia, for performing and suturing an episiotomy, in women who are not under epidural analgesia.

### Delivery of the Baby

- Allow the head to descend while encouraging the patient to bear down.
- When the head is about to crown place the patient in the dorsal or lithotomy position.
- As crowning occurs, exert gentle finger pressure superiorly against the occiput. With the other hand, exert perineal pressure with the aid of a pad. The latter manoeuvre will support the perineum. Both manoeuvres will prevent early extension of the head.
- An episiotomy is performed at this stage.
- As labour progresses, head will pass under the pubic arch and will begin to extend. Stop exerting pressure on the occiput and gently hold the head and maintain perineal support to prevent tears. Deliver the head in-between contractions.
- Next the head will undergo restitution and external rotation and the anterior shoulder will be visible. Deliver the anterior shoulder by depressing the head.
- Next elevate the baby to deliver the posterior shoulder. Complete the delivery of the body.
- Clamp the cord after 1 minute in healthy babies to enhance the blood volume and to improve the circulation. The cord is clamped immediately, if the baby needs resuscitation.
- Baby should be given to the mother soon after delivery before being taken for cleaning.

## ACTIVE MANAGEMENT OF THE THIRD STAGE

1. Oxytocin 5 units is administered intravenously, with the delivery of the anterior shoulder.
2. Once the delivery of the baby is completed, an abdominal examination is performed to confirm whether the uterus is well contracted.
3. If the uterus is well contracted, gentle controlled cord traction is applied to deliver the placenta. The cord is clamped and cut close to the introitus. The ulnar border of the left hand is placed above the symphysis pubis to stabilize the uterus by applying countertraction to prevent uterine inversion. The uterus can be massaged during the procedure to facilitate uterine contraction.

1, 2 and 3 prevent inversion of the uterus, but the most important step is to make sure that the uterus is well contracted before applying controlled cord traction.

- Strong uterine contractions caused by the oxytocic drug, administered intravenously with the delivery of the anterior shoulder, cause a normal placenta to separate soon after delivery of the baby. Therefore, it is not essential to wait for signs of placental separation.

stillbirths, thereby excluding the risk of amniotic fluid embolism.
- Vaginal examination should be avoided till delivery is imminent, because of the risk of introducing infection.
- In the presence of a uterine scar, the risk of uterine rupture is high especially in the third trimester. Close observation is required and the dose of prostaglandin should be reduced. Expectant management is preferred and the decision to induce labour should be taken by a consultant.

## FETAL DISTRESS IN LABOUR

In normal labour, the placental blood flow is reduced during uterine contractions. A normal fetus in normal labour can withstand this temporary reduction without developing hypoxia.

**The following conditions can cause hypoxia during labour in a normal fetus:**

- Prolonged labour/obstructed labour.
- Strong uterine contractions due to over stimulation with oxytocin or precipitate labour.
- Cord complications—cord compression, cord round the neck, cord prolapse.
- Placental abruption.
- Uterine rupture.
- Maternal hypotension/maternal collapse

**An already compromised fetus in normal labour can develop fetal distress:**

- **Prematurity:** Premature fetuses are more sensitive to oxygen deprivation.
- **Post-maturity:** Placental function is reduced in post-mature fetuses.
- Hypertensive disorders
- Intrauterine growth restriction
- Abnormal fetuses.

### Diagnosis of Fetal Distress in Labour

#### *Procedure used to Diagnose Fetal Distress in Labour*

- Fetal heart sounds are checked every 15 minutes for 1 minute with a hand-held Doppler machine. This is done soon after a contraction to detect type 2 decelerations and to avoid detecting type 1 decelerations which are not pathological.
- If there is fetal bradycardia less than 110 beats per minute or tachycardia more than 160 beats per minute or decelerations or meconium staining of liquor, the next step in the management is to perform a cardiotocograph.
- If the CTG is abnormal, the next step is to confirm fetal distress by fetal scalp blood sampling.

CTG is regarded as a screening test, while scalp blood sampling is the diagnostic test.

**The characteristics which are used in the interpretation of a CTG:**

- Heart rate
- Baseline variability
- Presence/absence of decelerations
- Presence/absence of accelerations.

**The characteristics of a normal (reassuring) CTG:**

- *Fetal heart rate:* Between 110 and 160 beats per minute
- *Baseline variability:* 5–25 beats per minute
- *Decelerations:* None or early or variable decelerations with no concerning characteristics for less than 90 minutes.

A normal CTG should have all the above features.

**Features which are regarded as abnormal when interpreting a CTG:**

- Fetal tachycardia more than 160 beats per minute.
- Fetal bradycardia less than 110 beats per minute.
- Occurrence of recurrent type 2 decelerations.
- Occurrence of recurrent variable decelerations.
- A sinusoidal pattern
- A single prolonged deceleration lasting for more than 3 minutes.

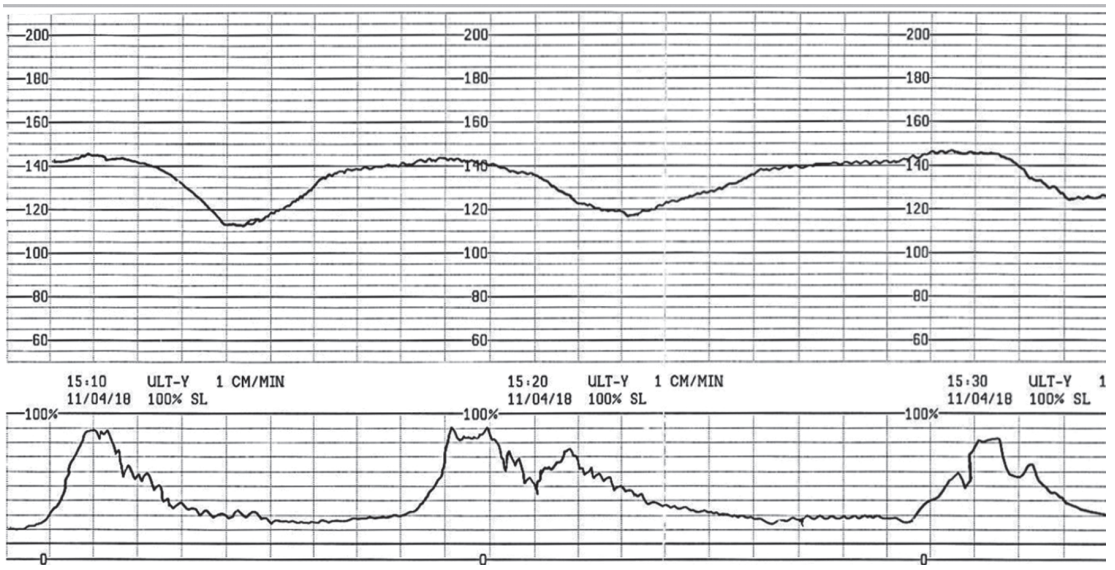


**Fig. 1.18:** Type 2 decelerations

**Prolonged decelerations** (Figs 1.19 and 1.20): Decelerations which last for more than 3 minutes are defined as prolonged decelerations. They may indicate fetal hypoxaemia due to prolonged contractions, uterine hyperstimulation, supine hypotension, post-epidural hypotension, cord prolapse, placental abruption or a ruptured uterus. They need elimination of the aetiological factor, if possible, and immediate delivery.

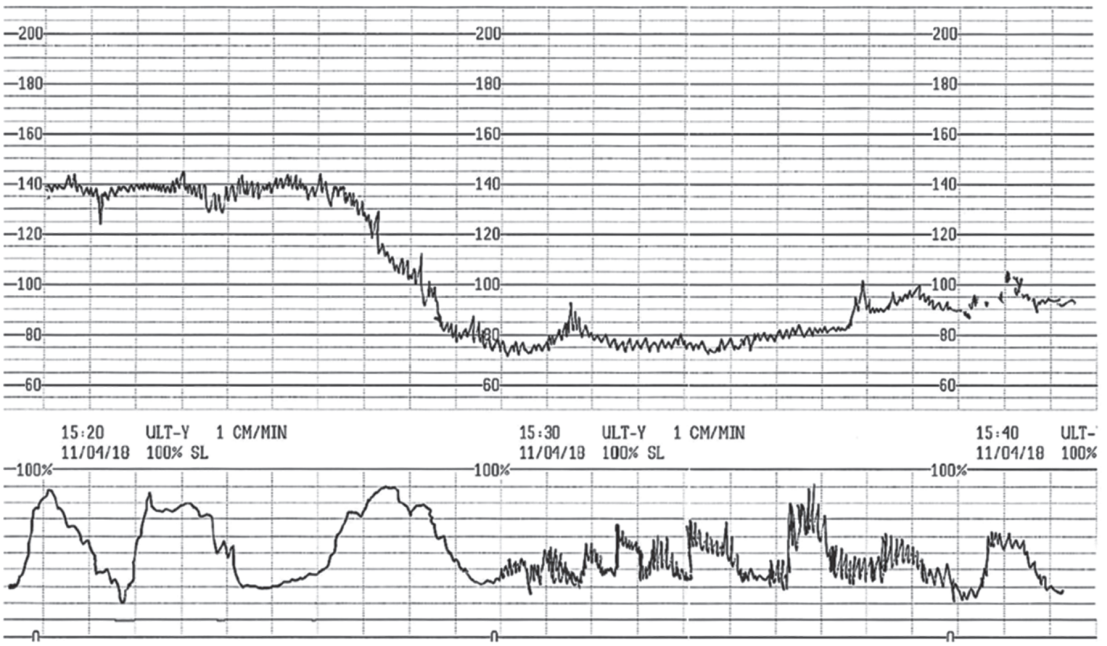


**Fig. 1.19:** Prolonged deceleration

**32. A secondpara, whose first pregnancy had ended in an uncomplicated lower segment caesarean section, is admitted at a POA of 42 weeks. The fetus is in the cephalic presentation. The head is engaged. There are no uterine contractions. The cervix is about 2 cm long, posterior and the os admits the tip of the finger. The fetal heart rate is 140 beats per minute. She has no other pregnancy complications.**

**What is the most appropriate management?**

A. Await spontaneous onset of labour.
B. Insert a Foley catheter to ripen the cervix.
C. Insert vaginal prostaglandin.
D. Perform a caesarean section.
E. Perform an amniotomy and commence an infusion of oxytocin after 2 hours.

**33. A secondpara, whose first pregnancy had ended in an uncomplicated lower segment caesarean section, is admitted at a POA of 42 weeks. The fetus is in the cephalic presentation. The head is engaged. There are no uterine contractions. The cervix is 75% effaced, anterior and the os is dilated to 3 cm. There are no uterine contractions. The fetal heart rate is 140 beats per minute. She has no other pregnancy complications.**

**What is the most appropriate next step in the management?**

A. Await spontaneous onset of labour.
B. Insert a Foley catheter to ripen the cervix.
C. Perform an amniotomy and observe for 4 hours.
D. Perform a caesarean section.
E. Perform an amniotomy and commence an infusion of oxytocin after 2 hours.

**34. A secondpara complains of absence of fetal movements for one week. Her POA is 27 weeks. The fetal heart sounds are absent. Her previous pregnancy had ended in an uncomplicated normal vaginal delivery**

**Which of the following is the best management option?**

A. Await spontaneous onset of labour.
B. Commence an oxytocin infusion.
C. Insert 100 µg of misoprostol into the vagina.
D. Insert 25 µg of misoprostol into the vagina.
E. Insert a 3 mg $PGE_2$ tablet into the vagina.

**35. A secondpara, who has previously had a LSCS, is allowed to undergo normal labour. Kiwi cup vacuum is applied as the active second stage is longer than one hour.**

**Which of the following is the best method to observe her during the postpartum period?**

A. Maintain the MEWS chart in the labour ward by a nurse for 4 hours.
B. Maintain the MEWS chart in the labour ward by a nurse for 2 hours.
C. Maintain the MEWS chart in the labour ward by a doctor for 2 hours.
D. Admit to the ICU for 24 hours.
E. Maintain a pulse, blood pressure and blood loss chart every 15 minutes for 4 hours.

**36. Which of the following is the correct sequence of the cardinal movements of the fetus in the mechanism of normal labour?**

A. Engagement, flexion, descent, internal rotation, extension, restitution
B. Engagement, descent, internal rotation, flexion, extension, restitution
C. Engagement, flexion, descent, internal rotation, extension, external rotation, restitution
D. Engagement, descent, flexion, internal rotation, external rotation, extension, restitution
E. Engagement, flexion, external rotation, extension, delivery, restitution