
UNIT 15 PROLONGED LABOUR, OBSTRUCTED LABOUR AND RUPTURE UTERUS

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15.0 OBJECTIVES

After learning this unit, you should be able to:

- identify those women who may develop prolonged or obstructed labour from the plottings on a partograph;
- Manage abnormal progress of labour appropriately;
- identify causes of obstructed labour and prevent it;
- diagnose obstructed labour and institute appropriate management; and
- diagnose rupture uterus, start primary treatment and refer.

15.1 INTRODUCTION

From the previous units you have learnt about normal labour and delivery. You must read the practical Unit 3 and practice plotting and interpretation of various recordings on partograph to understand the section on abnormal progress of labour. Normal labour, as you already know, is dependent on co-ordination between uterine contractions, cervical effacement and dilatation and descent of the foetus through the birth canal. When there is perfect co-ordination, labour is normal in duration and outcome, both foetal as well as maternal. But in few (approx. 15%), co-ordination may be disturbed due to various reasons resulting in abnormal labour, a broad term which includes prolonged labour and obstructed labour. Antenatal care can detect many of the causes and high risk factors for obstructed labour and these women can be referred for institutional delivery/operative delivery in a FRU, District Hospital or any other well equipped hospital. Preventing obstructed labour may also decrease rupture uterus following obstructed labour. All these

15.2 ABNORMAL PROGRESS OF LABOUR

Abnormal progress if not detected early can lead to prolonged labour, obstructed labour and rupture uterus. Prolonged labour is commonly due to cephalopelvic disproportion which may result in obstructed labour, maternal dehydration, maternal exhaustion, uterine rupture and vesico vaginal fistula. Protracted labour (slow progress of labour) is more common in primigravida and if the maternal and foetal conditions are satisfactory may ultimately end in successful vaginal delivery. The complications and effects of CPD differ between primi and multigravida. Abnormal progress of labour causing prolonged labour could also be due to inefficient uterine action and result in maternal sepsis, postpartum haemorrhage and neonatal infection.

Early detection and prevention of prolonged labour would significantly reduce the risk of postpartum haemorrhage and sepsis and eliminate obstructed labour, rupture uterus and its sequelae.

The partograph, a graphic recording of progress of labour and salient features in the mother and the foetus help us to decide that labour is progressing normally or deviating from normal. It serves as a “early warning system” to help us in deciding to transfer the patient to higher health facility to augment labour and terminate labour. In addition, it helps us to increase the quality and regularity of observations made on the mother and the foetus, thus aiding in early recognition of problem in both.

Diagnosis of normal progress is made when latent phase lasts less than 8 hours, plotting of cervical dilation is on the alert line or to its left, descent of head takes place along with dilatation of cervix (but most often significant descent occurs after the cervical dilatation has reached 7 cms) with progressive increase in frequency and duration of contractions.

15.2.1 Diagnosis of Abnormal Progress of Labour

Diagnosis of abnormal progress is made when deviation occurs from the normal progress described in the above paragraph. They are identified from the following:

- i) ***Prolonged latent phase:*** When the woman is admitted in the latent phase and remains in the latent phase for next 8 hours, progress is abnormal and from the health centre she should be transferred to a referral hospital for a decision about further action.
- ii) ***Moving to the right of the alert line:*** When plotting of cervical dilatation cross to the right of the alert line, it warns that labour may be prolonged. When the plotting of dilatation of cervix crosses the alert line and if adequate facilities are not available to deal with obstetric emergencies, the woman must be transferred to a hospital with such facilities unless she is near delivery. By transferring her at the time, it allows time for the woman to be adequately assessed for appropriate intervention if she reaches the action line.
- iii) ***At the action line:*** As you know, the action line is 4 hours to the right of the alert line. If the cervical dilatation reaches this line, a decision must be made about the cause of slow progress and appropriate action taken. This decision and action must be taken in a hospital with facilities to deal with obstetric emergencies.
- iv) ***Non descent of head inspite of good uterine contractions and satisfactory cervical dilatation:*** This indicates CPD. If in a health centre, she should be transferred to a hospital equipped for operative delivery. A careful reassessment and a decision for further management (i.e. operative delivery) is made.
- v) ***Excessive moulding and a large caput with a high head in the pelvis:*** It denotes CPD. Management is done as above (iv).
- vi) ***Uterine contractions not increasing in frequency and duration:*** This will reflect in the cervical dilatation as prolonged latent phase or crossing the alert line.

Abnormal Labour and Puerperium 15.2.2 Management of Abnormal Progress of Labour

While the use of partograph demands a response from the midwife or medical officer, the management of labour when it departs from the normal will be laid down by the obstetrician in charge of the unit. Hence these are only intended as guidelines.

- 1) **When cervical dilatation moves to the right of the alert line:**
 - a) ***In a health centre:*** The women must be transferred to the hospital immediately unless the cervix is near full dilatation (patient is likely to deliver soon).
 - b) ***In a hospital equipped for operative delivery:*** A careful reassessment of labour and frequent monitoring is done. A decision on further management is made when plotting of cervical dilatation reaches action line.
- 2) **When the cervical dilatation reaches the action line:** (Decision is made at the hospital equipped for operative delivery) When the action line is reached, decision has to be made for further management. There are 3 options:
 - a) Terminate the labour
 - b) Augment labour
 - c) Observe the woman with supportive therapy

Termination of labour is by caesarean section.

Augmentation of labour

If the membranes are intact, ARM is done before starting oxytocin infusion

- a) ***The primigravida with inefficient uterine contractions.***
 - Adequate hydration (chart in the column for IV fluids on the partograph)
 - Appropriate analgesia (chart in the column for drugs on the partograph)
 - Oxytocin infusion: It should be titrated against uterine contractions and increased half-hourly until contractions are 3 or 4 in 10 minutes lasting 40-50 seconds. The infusion should be maintained at that rate throughout the second and third stage of labour. (Chart dosage and rate at the appropriate box on the partograph.)
 - More frequent assessment of labour, foetal and maternal condition.
 - A time limit to terminate labour: 6-8 hours after oxytocin augmentation is recommended.

Note: If there is evidence of uterine hyperactivity and/or foetal distress, the oxytocin infusion should be reduced or stopped.

- b) ***The multipara with inefficient uterine contractions***
 - Adequate hydration
 - Appropriate analgesia
 - If oxytocin infusion should ever be used in a multipara, the decision should be made by an experienced clinician.
- 3) **The membranes:** If membranes have been ruptured for more than 12 hours and if delivery is not close, antibiotics should be administered.
- 4) **If head remains high inspite of good uterine contractions and satisfactory cervical dilatation—** If the woman is in health centre, she should be transferred to the hospital immediately.

In the hospital equipped for operative delivery, a careful assessment of labour and a decision for further management is made.

5) **Foetal distress**

- a) ***In a peripheral health unit:*** A woman with evidence of foetal distress should be transferred to a facility equipped for obstetric interventions.
- b) ***In hospital-immediate management***
 - i) If on oxytocin infusions, stop the drip
 - ii) Turn the woman on her left side
 - iii) Do a vaginal examination to exclude cord presentation/prolapse and observe colour of liquor
 - iv) Adequate hydration
 - v) Give oxygen, if available

6) **Prolonged latent phase**

If the latent phase is longer than 8 hours, a decision about management has to be made by the physician in charge. Possible action is similar to that suggested in the active phase when the action line is reached. If she is in a health centre, she is transferred to the hospital immediately to make decision for further management.

Check Your Progress 1

- 1) List the clinical conditions that may develop if abnormal labour progress is not detected early.

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- 2) Fill in the blanks:

- i) Prolonged labour is commonly due to
- ii) In normal progress of labour, the plotting of cervical dilatation is on the or to its left.
- iii) Diagnosis of prolonged latent phase is made when the women is admitted in the phase and remains in the latent phase for the next.....

- 3) What are the management options available when cervical dilatation reaches the action line?

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- 4) When do you prescribe antibiotics to a woman in labour?

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15.3 OBSTRUCTED LABOUR

Obstructed labour is defined as the condition when the foetus cannot pass through the pelvis inspite of good uterine contractions due to mechanical obstruction. You have already learnt that the complications of obstructed labour can be prevented if those women progressing to obstructed labour are identified early and appropriate action is taken. Prolonged labour may precede obstructed labour especially in a primigravida and this can be identified by monitoring labour progress on a partograph.

15.3.1 Causes of Obstructed Labour

Causes of obstructed labour are enumerated below:

- ***Cephalopelvic disproportion (CPO)***

Safe passage of fetal head through the pelvis is difficult or impossible. CPD cannot be diagnosed before 37 weeks as head would not have reached birth size before that period. CPD could be due to

- Fetal head is large in comparison to pelvis
- Pelvis is small with normal size fetus
- Combination of small pelvis and large fetus.

With borderline CPD, the problem could be overcome during labour. Moulding of fetal head (skull) and “give of pelvis” (relaxation of pelvic joints) enable vaginal delivery.

With moderate CPD, about 50% will need operative delivery.

With severe CPD, all will need operative delivery (100%).

- ***Abnormal presentations and position***

- Occipito posterior position (10% cases) and deep transverse arrest
- shoulder
- brow
- face—mento posterior position
- breech—large fetus

- ***Fetal causes***

- hydrocephalus
- fetal ascitis, sacrococcygeal tumours, conjoined twins
- locked twins

- ***Abnormalities of soft tissues of pelvis***

- pelvic tumours such as fibroid, ovarian tumours
- undilatable stenosis of cervix, vagina.

Risk Factors for obstructed labour

Risk factors are:

- Young age < 17 years
(pelvis is not fully developed) .
- Grandmultigravida

(abnormal presentations common, large babies with increasing parity, subluxation of sacroiliac joints pushing the sacral promontory forwards affecting the AP diameter of pelvic inlet)

- Short height < 145 cms
(usually associated with malnutrition and small pelvis)
- Previous caesarean section, still births and previous prolonged labour .
- Diseases
 - Rickets
 - Osteomalacia
 - Poliomyelitis
 - Tuberculosis of hip in childhood
 - Injuries of hips, pelvis, lower limbs affecting pelvis
- Community risk factors
 - No antenatal care—causes not diagnosed antenatally
 - Staff untrained to recognise obstructed labour (Partogram not used).
 - Long distance involved in obtaining skilled help
 - Lack of transport and communication
 - Traditional beliefs and practices regarding prolonged/obstructed labour
 - Custom of early marriage
 - Failure to act on risk factors
 - Delay in referral to higher level of care for caesarean sections
 - Community distrust of health care personnel.

You will be learning about assessment of pelvis (clinical pelvimetry) and CPD in the practical Block Unit 3.

Course of Labour

1) Early Developing Stage:

- There is misfit of presenting part to the brim and this hinders the descent of the presenting part
- Membranes rupture early
- The presenting part is not well applied to the cervix and cervix dilates slowly or there is no further cervical dilatation.
- Even when cervix is well dilated, it is not closely applied to presenting part and hangs loose like a thick curtain. Cervix becomes edematous as woman is trying to push down.
- In vertex presentation, a large caput succedenum is formed and moulding is excessive. Sometime, the large caput with excessive moulding elongates the head and it may be visible at or just above introitus while most of the head is well above the brim. The head is not filling the pelvic cavity.

If the diagnosis is not made at this stage and early intervention instituted to deliver the woman, she will progress to late fully developed obstructed labour.

2) Late Fully Developed Stage

- The woman looks exhausted and shows signs of maternal exhaustion. She is dehydrated, pulse is rapid, temperature may be raised, respiratory rate may be increased.
- There is edema of vulva.

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- Abdominal examination will reveal distended guts (due to electrolyte imbalance). The upper part of uterus (upper segment) is hard, uterine wall is closely applied to the fetus as all liquor amnii has drained out. The foetal parts mobility is restricted and fetal outline becomes obscure. Bands' ring become visible (junction of thick upper segment and thin lower segment is well demarcated and seen as a groove between the two segments) and may rise to the level of umbilicus. The stretched round ligaments may be felt.

These findings develop since upper segment is contracting and retracting. There is no full relaxation between uterine contractions. Due to obstruction, the presenting part cannot be pushed down so the passive lower segment gets gradually stretched to accommodate the body of fetus. At this stage, lower segment becomes tender and is likely to rupture. However uterine exhaustion may occur and contractions become weaker. This is more likely in primigravida. If intervention is not made at this stage, after a lapse of time, strong uterine contractions resume and uterine rupture occurs.

15.3.2 Clinical features and diagnosis

Many women may report to you after developing obstructed labour. You should learn the clinical features to diagnose obstructed labour. Diagnosis is made by the following findings:

i) History

History may reveal the following points :

- Age
- Primigravida
- History of previous caesarean section, difficult forceps delivery with still birth
- Previous still birth/still births, prolonged labour
- Early rupture of membranes
- Pains may have been good at first and stopped now

ii) Clinical findings

In early cases:

Abdominal exam will reveal stretching of lower uterine segment and edematous drawn up bladder. Contractions are hypertonic. The presenting part is not engaged. There may be fetal distress.

In vertex presentation, a large caput and excessive moulding may be seen. Though the scalp may be seen at the introitus, both poles of head are felt on abdominal palpation.

In late cases:

- *General examination*
 - Woman looks exhausted
 - Dehydration—tongue dry, fast pulse, ketonuria
 - Fever
 - Vulval edema
- *Abdominal examination*
 - Head felt above brim (major part) or abnormal presentation.
 - Frequent strong uterine contractions (but if woman has been in labour for a long time, contractions may have stopped due to uterine exhaustion).

- Uterus is tonically contracted and moulded over the fetus (no relaxation of uterus felt)
- Bands' ring may be seen near umbilicus and can be palpated (normally the junction between upper segment and lower segment is not felt/seen during labour. In normal labour it is called retraction ring).
- Gut is distended
- Bladder is distended (the woman is unable to pass urine)
- *Vaginal examination*
 - No liquor is present
 - Foul smelling meconium may be present
 - Catheterisation is difficult. (Finger has to press the presenting part and catheter guided along the finger) urine is concentrated.
 - Edema of vulva and vagina
 - Vagina is hot and dry
 - Edema of cervix, it is not well applied over presenting part and may hang loose like a thick curtain.
 - Cervix may be partially or fully dilated
 - A large caput succedenum is felt
 - The cause of obstruction is felt
 - CPD (Severely moulded head with large caput succedenum)
 - Shoulder presentation with or without arm prolapse.
 - Brow
 - Face (Mentoposterior)
 - Breech (Large baby)

iii) **Partograph Readings**

- A prolonged first stage of labour with secondary arrest
- A prolonged second stage
- Poor cervical dilation inspite of strong contractions
- Fetal distress FHR < 120/minute
- Meconium +(? Foul smelling)

15.3.3 Management

Management includes preventive measures and management after diagnosis

- **Prevention**

1) *Antenatal*

- Risk factors mentioned earlier should be identified during antenatal care.
- Contracted pelvis and CPD and abnormal presentations are detected (you may recollect that in the essential antenatal care, one visit is scheduled between 36-40 weeks to detect abnormal presentations).

Such cases are referred to a hospital with operating facility for delivery.

Abnormal Labour and Puerperium 2) *Partograph*

- Prolonged active phase—Deviation from normal are detected at an early stage and appropriate management can be instituted (see previous section of this unit).
- Non descent of head with good uterine action and satisfactory cervical dilatation indicates CPD and requires referral.

● **Management after diagnosis**

i) Rehydrate the patient—Prevent and treat dehydration and ketosis.

- Start an IV line .
- Use a large needle (No. 18) or canula
- Give Ringer lactate or dextrose saline.

ii) Start antibiotics

The aim is to prevent sepsis.

- Select broad spectrum antibiotic. Infection is due to multiple bacteria and flora— Gram +ve, gram -ve and anaerobic
- Add metrogyl
(Penicillin with Gentamycin and metrogyl)
- Give IV or IM every 6 hours

iii) Deliver the baby

Refer immediately after starting IV drip and antibiotics for termination of labour. Health care personnel should accompany with delivery pack (to be used if required on the way), fluids, drugs etc.

- Referral slip should be given with all details.
- FRU/Referral hospital should be well equipped to deal with the patient.

15.3.4 Complications of Obstructed Labour

Complication are listed as maternal and fetal.

Maternal

- Increase in operative delivery (caeserean section, forceps and vacuum deliveries)
- Rupture uterus
- PPH - atonic and traumatic
- Puerperal sepsis
- Urinary fistula

Fetal

- Increase in still births and neonatal deaths
- Asphyxia
- Intracranial hemorrhage
- Delayed complications—delayed milestones, convulsive disorders, mental retardation etc.

Check Your Progress 2

1) Define obstructed labour.

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2) List 3 causes of obstructed labour.

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3) List 2 interventions that prevent obstructed labour.

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15.4 RUPTURE UTERUS

After learning about obstructed labour, you will be learning about rupture uterus in this section.

The term rupture uterus means a tear or dehiscence in the wall of the uterus after 20 weeks of gestation or during labour. You have already learnt about causes of obstructed labour. When the woman in obstructed labour is not delivered, the labour ends by rupture of the uterus.

15.4.1 Etiology of Rupture Uterus

The causes of rupture uterus are given below:

- 1) Obstructed labour as mentioned earlier in the late fully developed stage of obstructed labour ends in rupture if not intervened at this stage. The rupture is transverse or oblique and may extend downwards to the bladder, cervix and vaginal vault. Ureters may be involved. The tear may extend upwards to the body of the uterus.
- 2) Spontaneous rupture also occurs in a grand multipara because the elastic and muscle fibres in the uterine wall are replaced by fibrous tissue due to repeated child birth. Again the rupture occurs in the lower uterine segment.
- 3) Scarred uterus— The commonest scar is lower segment caesarean section scar. Rarely upper segment caesarean section (classical C.S) is done these days. Classical CS scar rupture more often as compared to LSCS scar (0.4%) classical CS scar can rupture during pregnancy and labour whereas LSCS scar ruptures occur during labour. Besides, dehiscence is more common. Dehiscence means insidious stretching and giving way of a portion of the scar without bursting and expelling the fetus through the scar. Bleeding is less and fetal and maternal mortality is low.

Myomectomy, metroplasty and other operations scar seldom rupture as the healing is good because there is no post-operative contraction and retraction of the uterus.

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- 4) Oxytocic drugs - Strong uterine contraction due to hyperstimulation by oxytocin infusion and prostaglandins. Occasionally 1M injections of oxytocin and ergometrine given by quack practitioners during first stage of labour may result in rupture of lower uterine segment.
 - 5) Scar due to uterine perforations following MTP, dilatation and curettage and manual removal of placenta may leave a weak spot which gives way during pregnancy and labour. Many times these perforations are unrecognized at the time of operation.
 - 6) Operative and manipulative delivery like craniotomy, decapitation, high forceps, internal podalic version and manual removal of placenta may result in rupture of the uterus.

Cervical tear following a normal vaginal delivery or operative delivery may extend vertically upwards causing rupture of lower segment. You have read about this in traumatic PPH in Unit 1.

- 7) Fall and road side accidents may cause injury and rupture.

15.4.2 Clinical Features and Diagnosis

Clinical features depend on the

- Type of rupture
- Time elapsed after rupture
- Speed with which bleeding occurs
- Amount of bleeding
- Predisposing cause

- 1) Spontaneous rupture following obstructed labour

The woman gives history of sudden cessation of strong uterine contractions. She feels a sense of release from pain. This is followed by fainting attack and marked weakness.

— ***On general examination***

Patient is exhausted, dehydrated and in shock (tachycardia with low pulse volume, fall in BP and cold clammy extremities) Respiration is rapid and vaginal bleeding is present.

— ***Abdominal examination***

- Abdomen is distended and tender.
- Gaurding may be felt in lower abdomen.
- Uterine outline is not made out.
- Uterine contractions are not felt.
- Fetal parts are felt superficially.
- Lie of the fetus is abnormal
- Uterus may be felt as a separate mass on one side of lower abdomen
- Free fluid is present as shifting dullness.
- FHS are absent
- In women coming late, signs of peritonitis may be present and above findings are not well made out.

— ***Vaginal examination***

Vagina and vulva are edematous and dry. There may be foul smelling discharge and vaginal bleeding. The presenting part is not felt or it is high up, cervix may be closed and uterus is felt as a separate mass with an empty uterine cavity.

If the fetus is still in the uterine cavity, the presenting part may be jammed in the pelvis. Meconium discharge is present. Uterus is very tender.

2) **Rupture of uterine scar**

History of previous CS with the indication can be elicited. Abdominal scar \ of a LSCS is vertical subumbilical, right paramedian subumbilical or suprapubic transverse. The earliest sign of rupture is maternal tachycardia, suprapubic tenderness and vaginal bleeding may or may not be present. The bleeding is minimal. Many times, rupture is diagnosed after delivery when bleeding continues (PPH) or on routine exploration of lower segment.

Rarely rupture is diagnosed at the time of manual removal of placenta when rent is discovered with placenta lying in peritoneal cavity.

Differential Diagnosis

- Abruptio placentae—The concealed variety may simulate rupture uterus.
- Shock—shock due to other causes.

15.4.3 Management

i) ***Preventive***

The preventive management is same as described for obstructed labour. In addition, all women with a scar in the uterus should have delivery conducted in a referral hospital. Close monitoring is done for scar rupture if they are allowed vaginal delivery.

ii) ***Curative***

Intravenous fluid infusion is started. Blood is grouped and cross matched. She is sedated with injection pethidine (100 mg 1M) and phenergan (25 mg 1M). Laparotomy is done at the earliest. Start parenteral antibiotics. If she is in shock, resuscitate her simultaneously preparing for the laparotomy.

At laparotomy depending on the extent and site of tear and parity of the woman, surgical procedures are carried out.

- 1) Subtotal/total hysterectomy
- 2) Repair of the tear and tubal ligation
- 3) Rarely, in a woman with no live issue, only repair of tear is done. These women are at risk of rupture during the subsequent pregnancy.

Scar rupture usually can be repaired by trimming the edge and suturing the tear.

Complications

Maternal

- Maternal mortality due to hemorrhage, sepsis, amniotic fluid embolism or renal failure.
- Maternal morbidity - Sepsis, vesicovaginal and rectovaginal fistulae (ureter may be involved) and Sheehan's syndrome.

- Spontaneous rupture—100% fetal mortality
L.S.C.S. Scar rupture—10% fetal mortality

Check Your Progress 3

- 1) Fill in the blanks:
 - a) Spontaneous rupture of uterus usually follows
 - b) The common site of spontaneous rupture is
- 2) Name the drugs that cause uterine rupture if used injudiciously.
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- 3) What do you understand by the term “complete rupture” of the uterus?
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15.5 LET US SUM UP

In this unit, you learnt about indentifying women who may develop prolonged labour from the plottings on the partograph and their appropriate management. You also learnt about causes and risk factors for obstructed labour, its diagnosis and management. Deaths due to obstructed labour and rupture uterus contributes to about 12% of maternal deaths. You also realize how you can prevent all such deaths from your area by closely working with community, family and other health personnel. Providing quality antenatal care will help you to recognize high risk factors and most of the causes of obstructed labour and you will be able to refer them for delivery in a referral hospital. Prolonged labour and arrested labour can be diagnosed by recording the findings in a partograph and referral of these women will help in reducing mortality and morbidity. Diagnosis of rupture uterus and its management has also been described.

15.6 KEY WORDS

- Bands’ ring** : The pethological retraction ring at the junction of upper and lower uterine segments.
- CPD** : Cephalopelvic disproportion

Caput succedenum : Swelling over the scalp caused by collection of serosanguinous fluid in connective tissue due to interference with the various return.

PPH : Postpartum haemorrhage

LSCS : Lower segment caesarean section

15.7 ANSWERS TO CHECK YOUR PROGRESS

Check Your Progress 1

- 1) i) Prolonged labour, ii) obstructed labour, iii) Rupture uterus
- 2) i) CPD (cephalopelvic disproportion), ii) alert line, iii) latent phase, 8 hours.
- 3) i) Terminate labour, ii) Augment labour, iii) Observe with supportive therapy.
- 4) When the membranes are ruptured for more than 12 hours

Check Your Progress 2

- 1) Obstructed labour in the condition when the fetus cannot pass through the pelvis inspite of good uterine contraction due to mechanical obstruction.
- 2) i) Cephalopelvic disproportion, ii) Abnormal presentations, iii) Fetal abnormalities such as hydrocephalus, fetal ascitis or conjoined twins.
- 3) i) Antenatal care, ii) Recording of finding in partograph during labour.

Check Your Progress 3

- 1) a) Obstructed labour
b) Lower uterine segment
- 2) i) Syntocinon
ii) Ergometrine
iii) Prostaglandin
- 3) Uterine rupture is complete when the entire wall of the uterus including visceral peritoneum is involved in the tear. The uterine cavity communicates with the peritoneal cavity.

15.8 REFERENCES FOR FURTHER READINGS

The Partograph— A Managerial Tool for the Presentation of Prolonged Labour, WHO/MCH/88.4– WHO-Maternal and Child Health unit, Geneva, 1988.

Williams Obstetrics, 20th Edition, Prentice Hall International Inc. 1996.