UNIT 5 OBSTETRICAL EMERGENCIES AND NURSING MANAGEMENT

Structure

5.0 OBJECTIVES

After studying this unit, you should be able to:

- define obstetric emergencies;
- list the conditions related to obstetric emergencies;
- enumerate the essential qualities of the nurse/midwife in dealing with obstetric emergencies;
- explain the important signs and symptoms of each conditions;
- discuss the immediate management of each emergency;
- describe the specific role of the midwife in the management of various obstetric emergencies discussed; and
- recommend strongly the practising of basic life support procedures on a regular basis.

5.1 INTRODUCTION

Although, pregnancy and childbirth is a normal process, complications may occur any time during antenatal or post natal period. The ability of the midwife to deal with competence the obstetric emergencies depends on the prompt action taken by her. The speed of this action while calling for medical assistance will often help to determine the outcome for the mother and the baby. Every delivery must be managed as an obstetrical emergency and all the preparation done to deal these emergencies.

At times the midwife may face an emergency such as sudden collapse which is not directly related to mother's pregnancy. This requires that she should remain alert to the possibility of such a situation. Keeping this in view, Basic Life Support procedures are briefly discussed in this unit.

5.2 DEFINITION AND CONCEPT OF OBSTETRIC EMERGENCIES

In this sub-section we will acquaint you with the concept of obstetric emergencies. As a midwife you are expected to read carefully about obstetric emergencies and its management.

Definition of Obstetric Emergencies

These are life threatening situations in obstetric or midwifery practice which are unexpected, develop rapidly, are relatively uncommon and often fatal for the women and foetus. These conditions may develop any time during the maternity cycle.

Conditions such as severe 1) hypertensive disorder, 2) haemorrhage, and 3) embolism threaten, the life of the mother while 4) prolapse of the umbilical cord, vasa privea directly threats the life of the foetus. Death of the mother due to obstetric emergencies was common during the early 20th century. Due to improved health care facilities available to the pregnant women and general awareness a gradual decline in incidence is being noticed but still these emergencies do occur in many of the developing countries.

All these situations demand immediate attention. Any emergency is initially treated according to ABC principle i.e. Airway, Breathing, Circulation.

A — Airway

B — Breathing

E — Circulation

5.3 ESSENTIAL QUALITIES OF THE MIDWIFE IN HANDLING OBSTETRIC EMERGENCIES

A professional nurse or a midwife is one of the important members of a health team. Nurses must be able to combine competence with caring and critical thinking. Midwife need to have and develop essential qualities in caring of a woman with obstetric emergencies. These are summarised as below:

- She should be able to **recognise** the problem and **initiate** emergency actions before medical assistance arrives.
- **Remain alert** to the possibilities that an emergency other than the cause due to obstetric reason can occur to the mother.
- Take **prompt action** using decision making skills to save the life of the mother and child.
- **Address both** the physiological and psychological needs of the mother, and treat her as an individual with distinctive needs.
- **Reassure, explain** and **support** the family members to reduce their anxiety and fear.
- **Maintain** proper pertinent records and be **skilful** in reporting.
- **Positive Attitude.**
- Always strive to keep her knowledge and skill **updated**.

Check Your Progress 1

1) Define Obstetric Emergency.

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2) List conditions included in obstetric emergency.

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3) Enumerate the essential qualities of a midwife in handling obstetric emergencies.

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5.4 OBSTETRIC EMERGENCIES AND THEIR MANAGEMENT

Though there are a number of obstetric emergencies, but here we will discuss six most commonly accepted ones, which are as follows:

- Rupture of uterus
- Vasa Previa Cord Presentation and Cord Prolapse
- Amniotic fluid embolism
- Shoulder dystocia
- Shock

5.4.1 Rupture of Uterus

Definition

Break in the continuity of the uterine wall any time beyond 28 weeks of pregnancy is called rupture of the uterus. This is one of the most serious accidents in obstetrics occurring in approximately 1 in 2500-3000 deliveries.

Rupture can be complete or incomplete. Life of both mother and foetus may be endangered in either situation.

Causes

1) Weak Uterine Scar: This can be due to:
   - Impaired healing of the classical caesarean scar
   - Inter pregnancy interval less than 6 months
2) Obstructed labour due to:
   - Malpresentations
   - Cervical dystocia
   - Cephalopelvic disproportion
   - Malpositions — Deep transverse arrest in occipito posterior position
   - Locked twins
   - Pelvic mass — Fibroids, Ovarian cysts.
   - Foetal abnormalities — hydrocephalus
3) During manipulations — most of the time this is due to rough handling:
   - For correcting a shoulder presentation by internal podalic version
   - External cephalic version
   - Obstructed labour
   - Already existing weak uterine scar may give in
4) Incorrect use of Oxytocin Drugs:
   - Multiparity
   - Obstructed labour
   - Overstimulation of the uterus
5) Extension of Cervical Laceration:
   - Application of forceps before full dilatation of cervix

- Mother pushing the baby through an incompletely dilated cervix
- Premature bearing down

6) Sudden fall, blow over the abdomen:

a) Uterine rupture during Antenatal period (Rare) usually occurs in last four weeks of pregnancy:

Signs and Symptoms

If slow:

- Onset-slow or acute
- Intermittent right sided abdominal pain
- Shock
- Intrauterine death of foetus
- Slight vaginal bleeding

If acute:

- Acute abdominal pain
- Fainting attacks
- Collapse
- Absence of foetal heart rate

Diagnosis

History of known uterine scar with above symptoms. Laparotomy confirms the diagnosis.

Management

- Resuscitation of the mother
- Preparation for emergency laparotomy
- Laparotomy operation which may include any one of the three i.e. repair of the scar or repair with sterilization or hysterectomy

b) Uterine rupture during intranatal period (Caesarean section scar)

Signs and Symptoms

- Severe constant, lower abdominal pain
- Vomiting
- Suprapubic tenderness
- Increased pulse rate
- Slight fresh vaginal bleeding
- Uterine contractions occur but cervix does not dilate
- Foetal tachycardia
- Sometimes scar ruptures and the woman goes into shock.

Management

- Immediate Caesarean section
- Repair of the tear/hysterectomy
- Manage shock and give blood transfusion

c) Uterine rupture following obstructed labour

Signs and Symptoms

- Severe and constant abdominal pain
- Severe foetal distress
- Maternal shock—Restlessness and anxiety

Management

- Treat shock
- Prepare for hysterectomy

d) Incomplete rupture

This involves tearing of the uterine wall but not the perimetrium. The onset is insidious and is only found after delivery or during a caesarean operation and is more commonly associated with previous caesarean section.

Signs and Symptoms

- Rupture may manifest as a cause of PPH following a vaginal delivery
- Abdominal pain tenderness and uneasiness
- Shock during third stage of labour
- Blood loss can be scanty or severe
- F.H.S. may be irregular

Management

- Prepare for immediate caesarean section with the aim to deliver an alive baby
- Management of shock
- Assessment of rupture following delivery
- Hysterectomy, repair of the rupture depending on the extent of trauma and condition of mother.

Specific Role of the Midwife

- Never attempt to deliver a mother with history of previous caesarean section at home or in partially equipped centres.
- Any signs of maternal shock or foetal distress should alarm the midwife.
- Monitor the vital signs of mother and F.H.S.
- Keep nothing for oral an operation.
- Call for medical assistance in case of suspicion of complete or incomplete uterine rupture.
- If working in community, make arrangement to shift the mother to a well equipped hospital.
- Resuscitate the mother and arrange for I/V fluids including blood.
- Identify the predisposing factors of uterine rupture and do not attempt to deliver vaginally in a community set up.
- Give assurance to mother and keep the husband and other family members informed about doubtful survival of the mother and baby.
- Never give false hopes to the family members and also prepare them for possible outcome i.e. hysterectomy.
- Nurse should remain calm, composed and work efficiently at all times.

Check Your Progress 2

1) Define rupture of uterus.

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2) List causes of uterine rupture.

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3) Mention five specific roles of midwife in handling uterine rupture.

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5.4.2 Vasa Praevia

It is a condition when foetal blood vessels lies over the os in front of the presenting part i.e. in this case blood vessels may run through the membranes between the site of insertion of the cord and placenta and is positioned over os. There is a high foetal mortality rate associated with the emergency. Vasa Praevia may sometimes be palpated on vaginal examination when the membranes are still intact. If it is suspected a speculum examination should be done.

Signs and Symptoms of Ruptured Vasa Praevia

- Slight fresh bleeding vaginally at the time of rupture of membranes
- Signs of foetal distress disproportionate to blood loss i.e. foetal bradycardia or tachycardia, meconium stained liquor, increased foetal movement.

Management

- With the rupture of foetal vessels chances of foetal survival is very much decreased.
- Cord blood is collected for estimation of foetal haemoglobin.
- If in second stage of active labour vaginal delivery should be expedited.
- Emergency caesarean section is permitted if the foetus is alive and mother is in 1st stage of labour or depending on parity and foetal condition.

Specific Role of the Midwife

- At the earliest sign of vasa praevia, seek for immediate medical help while monitoring the foetal heart.
- Inform the mother, father and family members about the possible outcome.
- The midwife should stay with the mother in second stage of labour and encourage her to bear down in the hope of a live baby.
- Send a call for the paediatrician in hospital, as baby if alive might require resuscitation and blood transfusion.
- While working in community, arrange for transport to shift the mother to the nearest well equipped hospital.

5.4.3 Cord Presentation and Prolapse

Definition

Cord Presentation : When the umbilical cord lies in front of the presenting part with membranes intact the condition is known as cord presentation.

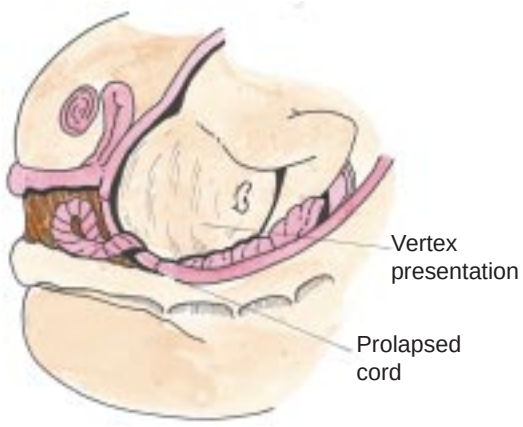

Fig. 5.1: Cord Prolapse

Cord Prolapse: The cord lies in front of the presenting part but the membranes are ruptured, occurs in 1:400 births. Prolapse of umbilical cord is associated with high foetal mortality and morbidity. Umbilical cord prolapse may be hidden (occult)/not visible at any time during labour.

Predisposing Factors: These are some for both the conditions.

- Multiparity, prematurity, mal-presentation i.e. breech, shoulder, brow, face, high head, long cord, poly-hydramnio's and multiple pregnancy.

Diagnosis of Cord Prolapse

- Cases where factors predisposing to cord prolapse is present, a vaginal examination should be immediately done after spontaneous rupture of membranes.
- Abnormal foetal heart sound (Bradycardia).
- The cord is most commonly felt in the vagina or in cases where the presenting part is very high cord may be felt in the cervical os.
- A loop of cord may be visible at vulva.

Management

- Delivery must be expedited with the greatest possible speed to reduce mortality and morbidity rate associated with cord prolapse.
- If foetus is alive, and the woman is in 1st stage of labour immediate caesarean section is performed.
- Administer oxygen by mask to reduce foetal hypoxia.
- In second stage of labour, a liberal episiotomy and bearing down by the mother to deliver the baby. This is more possible in case of a multi-gravida. Squatting position is also helpful in multi-gravida.
- Where the presentation is cephalic, delivery is expedited by application of forceps or vacuum extraction.
- To release pressure on the cord, foot end of the bed is raised before preparation for immediate delivery can be arranged.

The Specific Role of the Midwife

- Where the diagnosis of cord prolapse is made, take immediate action.
- Explain the mother and the family members about the findings and the emergency measures that may be needed. (Possible caesarean section).
- If an oxytocin drip is in progress it should be stopped and plain I/V fluids to be started.
- Administer oxygen by mask 10-12 litre per minute until she delivers.
- Do a per vaginal examination to assess the degree of cervical dilatation, identify the presenting part. The time should be noted.

- If the cord is felt pulsating it should be handled as little as possible to avoid spasm of the cord due to reduction in temperature.
- If the cord is lying outside the vagina gently replace it back. Record F.H.S. Cover the cord loosely with a sterile guage piece soaked in warm normal saline with gloved hands.
- Attempt to relieve the pressure on the cord, specially during a contraction. Keep finger in the vagina and hold the presenting part off the cord.
- Position the mother with her buttocks higher than her shoulders by elevating the foot end of the bed, or placing her in a knee chest position (Fig. 5.2) or by placing two large pillows or rubber wedges under the buttocks [Exaggerated Sim's lateral (Fig. 5.3)]. All these positions attempts to gravitate the foetus towards the mother's diaphragm relieving the compression on the cord. These measures need to be maintained until the baby is delivered either vaginally or by caesarean section. Other positions that can be used are knee-chest and Trendelenburg position. (Fig. 5.4).

Fig. 5.2: Knee-chest Position

Fig. 5.3: Exaggerated Sim's Lateral position

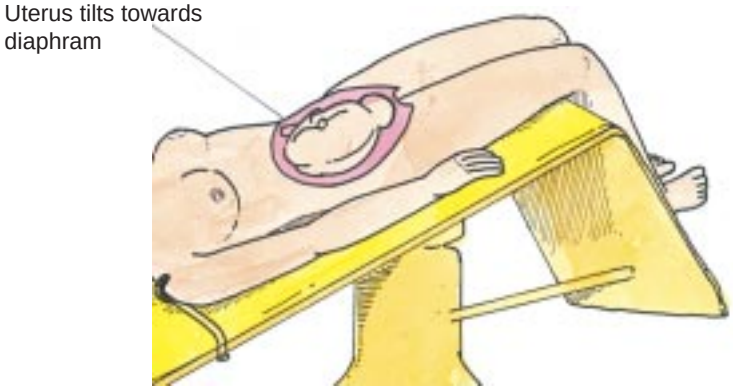

Fig. 5.4: Trendelenburg position

- While working in the community, if foetus is alive, transfer the woman immediately by ambulance to a hospital.
- Carry out the same procedures to relieve the pressure on the cord with mother in an exaggerated Sim's position.
- Accompany the mother to the hospital.
- Maintain proper record of the action taken.

Check Your Progress 3

1) Explain the signs and symptoms of Vasa Praevia.

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2) Differentiate between cord presentation and cord prolapse.

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3) How can you diagnose a case of cord prolapse?

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4) Explain two positions that can be used to relieve pressure on the umbilicus.

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5.4.4 Shoulder Dystocia

Definition

It is the failure of the shoulders to spontaneously rotate into the anterio posterior diameter of the outlet following delivery of the foetal head.

In this condition the anterior shoulder of the foetus is trapped behind or on the symphysis pubis, while the posterior shoulder may be in the hollow of the sacrum or high above the sacral promontary.

It is not a common emergency and the incidence reported varies between 0.37% - 1.1%.

Risk Factors

- Maternal age over 35 years
- High parity, post dated pregnancy
- Maternal obesity
- Maternal diabetes and gestational diabetes
- Large foetus with increased birth weight
- Oxytocin augmentation
- Prolonged labour, and prolonged second stage of labour
- Operative deliveries.

Warning Signs and Diagnosis

- Initially the delivery may have been uncomplicated but the head may have advanced slowly.
- The chin may have had difficulty sweeping over the perineum.
- Once the head is delivered, it may looks if the head is trying to recede back to vagina which is caused by a reverse traction.

  Shoulder dystocia is usually diagnosed or suspected when the usual method used by the midwife fails to deliver the shoulders.

Management

- Call for medical assistance immediately.
- Reassure the mother, and explain her to get full co-operation for the manoeuvres that may be needed to deliver the baby.

Specific Role of Midwife

- Remain calm and composed.
- Try to explain the mother in simple language and reassure her.
- Episiotomy or extension of episiotomy may be required.
- Call for medical help.
- The principle of using the most simple manoeuver (s) first should be applied.
- Any change in the mother's position may help to release the foetal shoulders.
- Apply supra pubic pressure on the side of the foetal back and towards the foetal chest.
- Try to rotate the shoulders/deliver the posterior shoulder first/deliver the posterior arm.
- Position the mother straight lying down and bring her thighs with knees bent to near to her chest (The Mac-Robert's Position) (Fig. 5.5).
- Keep an accurate and detailed record of the type of manoeuvre(s) used, the time taken, the amount of force used and the outcome of each manoeuvre(s) attempted.
- If working in community do all the above.
- Refer to hospital.

Fig. 5.5: Mac-Robert's position

5.4.5 Amniotic Fluid Embolism

Definition

This is a condition when amniotic fluid is forced into the maternal circulation via uterus or placental site forming an embolism which obstructs pulmonary vessels leading to respiratory distress and circulatory collapse. The amniotic fluid may contain vernix, hair, foetal squamons cells or meconium.

This is a very rare condition, difficult to predict and equally difficult to prevent. The maternal mortality rate is as high as 86% and a foetal mortality rate is 50%.

Pre-disposing Factors

- Rapid or precipitate labour.
- Multiparity, advanced maternal age.
- Over-estimation of uterus by drugs
- Uterine trauma during manipulation.
- While performing caesarean section.
- Abruptio placenta — When the placental bed is disrupted.

Signs and Symptoms

- Sudden onset of maternal respiratory distress i.e. severe dyspnoea, cyanosis.
- Chest pain
- Coughing with frothy pink sputum
- Profound hypotension and tachycardia
- Shock out of proportion to blood loss
- Vomiting, restlessness and anxiety
- Convulsions immediately preceding collapse.

Diagnosis

It is usually confirmed by detection of amniotic fluid in the blood or on post-mortem examination of the lungs.

Management

- Call for medical help
- Assist in immediate resuscitation
- Prepare for intubation and mechanical ventilation
- Arrange for intravenous infusion of fluid and aminophylline.
- Put indwelling urinary catheter and measure hourly output.

- Administer oxygen by face mask 8-10 litre/minute or by resuscitation bag delivery 100% oxygen.
- Prepare for emergency birth once maternal condition is stabilised.
- Maintain proper record and report.

Specific Role of the Midwife

- Initiate or assist in resuscitation immediately after signs of respiratory distress occurs
- Call for an ambulance or doctor while working in community
- Monitor foetal and maternal condition
- Prepare for emergency birth once the mother's condition stabilises.
- Tilt the mother 30 degree to side to displace uterus.
- Provide re-assurance and emotional support to the mother and family members. Keep them informed about what is happening.

Check Your Progress 4

1) What are the risk factors involved in shoulder dystocia?

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2) Mention the warning signs and diagnosis of shoulder dystocia.

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3) Briefly explain the role of the midwife in handling shoulder dystocia.

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4) Explain Amniotic Fluid Embolism.

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5) What are the pre-disposing factors for amniotic fluid embolism?

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6) List three signs and symptoms of AFE.

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7) Describe the specific role of the midwife in the management of AFE.

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5.4.6 Shock

Definition

It is a condition of collapse due to failure of the mother's circulatory system to meet the body's need for oxygen, nutrients and removal of waste substances.

Causes

- Greyish blue or pale skin
- Cold and clammy skin, shivering, increased perspiration
- Dry mouth
- Rapid breathing, but as the mother's condition worsens breathing becomes deeper and slower. Finally mother may become unconscious.
- Blood pressure is normal in the beginning but after about 40% volume loss, blood pressure is unrecordable.
- Rapid, weak pulse, slow bounding pulse.
- Skin may be flushed.
- Decreased urinary output.
- There may be pyrexia or sub-normal temperature

Signs and Symptoms

- Haemorrhage: Haemorrhagic shock may occur at any stage of pregnancy, labour or puerparium, leading to hypovolemia, non-haemorrhagic shock may be due to;
- Trauma
- Prolonged labour/psychological distress
- Fluid loss
- Septaecimia
- Pulmonary embolism
- Following normal labour

Management

- Start resuscitative measures immediately
- Maintain airway
- Replace fluids, start I/v infusion volume expanding
- Administer oxygen
- Record intake and output

Specific Role of the Midwife

- Detect early signs of shock, put the mother in a comfortable position.
- Check and record mother's vital signs and FHS every 15 minutes.
- Raise foot end
- Maintain airway, administer oxygen
- Try to make up fluid loss by I/v infusion
- Call for medical assistance
- In community start resuscitation and arrange to transport the mother to a hospital. Accompany her.
- Oxygenate her on way to hospital in case oxygen is available in ambulance
- Sometimes, shock is due to Psychological stress; provide good support encouragement and emotional security.
- Reassure the husband and family members
- Maintain proper record.

Check Your Progress 5

1) Explain shock.

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2) Describe the specific role of the midwife in the management of shock.

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5.5 SOME LEGAL IMPLICATIONS FOR EMERGENCY CARE

i) Take informed written consent before any treatment/action.

ii) Keep the husband and family members informed about the condition of the mother and child, including possibility of death of either mother or child.

iii) Call for medical help at the earliest.

iv) Be sure about what, how, where and when of your action.

v) Reach help in time, take prompt and immediate action.

vi) Give Basic Life Support whenever indicated.

vii) When working in community, use standard protocol developed for all health workers involved in maternal care. Give instruction for transport arrangement for taking the mother to a referral centre.

viii) Whenever you refer a pregnant women you must complete the referral form, which should accompany the woman to the referral centre. The form should include identification data, pateint's brief history and clinical condition, emergency care/ treatment/action taken, referred from (name and location of the working place of midwife), date of reference and signature.

ix) Record all drugs, intervention done on the women.

x) Accompany the mother while transfer, if feasible/possible.

xi) Maintain proper record which should be clear, legible concise, accurate, pertinent and complete.

Check Your Progress 6

1) List six legal tips for emergency care.

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2) Prepare a referral form to transfer a mother with any one obstetric emergencies to a nearly Community Health Centre.

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5.6 BASIC LIFE SUPPORT

The health professionals must be aware of the basic life support (BLS) and develop skill in doing it. Basic life support refers to the maintenance of an airway and support for breathing without any specific equipment.

The three basic principles involved in BLS are: a) Airway, b) Breathing; and c) Circulation.

Procedure to give BLS

i) Assess the level of consciousness of the mother by shaking her shoulders and ask if she can hear.

ii) Call for assistance and remain with the mother.

iii) Remove pillows, and put her in flat position.

iv) Clear the airway of any mucus, vomits, remove dentures.

v) Open the airway by tilting the head backwards and lifting the chin upwards (Fig. 5).

vi) Observe the chest for respiratory effort and listen for the breath sounds. Feel for breath exhaled by the mouth and nose of the mother.

vii) Feel and check the carotid artery. This is felt in the neck at the side of the mother's larynx.

viii) If no breathing is noticed, mouth to mouth ventilation is indicated. To do this, the Midwife uses her hand behind mother's neck to maintain the head in a position of maximum backward tilt. She then pinches the mother's nostrils together with a thumb and index finger of her other hand which also continues to exert pressure on the forehead to maintain the backward tilt.

Midwife, then takes a deep breath and exhale the air into the mother's mouth so that her chest can be seen to rise. Thereafter allow the air to escape. Continue to do this repeatedly. Use a Ambu Bag or a moulded face mask if available.

ix) If no pulse is felt a pre-cordial thump is delivered centrally to the sternum. Then, using the fist a short, sharp blow is administered on the sternum. The fist is then removed quickly, and the pulse rechecked to see whether the blow has been effective is restarting the heart beat. The blow should start from a height of 15 cms.

x) Give external cardiac massage is needed if the pre-cardial thump is not successful to start the heart beat. For giving external cardiac massage, locate the Xiphisternum, place the palm downwards on top of one another with the fingers inter-linked. Position, the heel of the lower hand on the lower two thirds of the sternum. With arms straight lean on the sternum depressing 4-5 cms. and release it slowly as the same rate as compression. Repeat this action at the rate of eighty times per minute. To suitably carry out this procedure you may need to kneel over the mother or stand on something. Moreover, in order to be successful make sure that the surface under the mother is firm and she is properly positioned.

xi) Continue Chest compression and ventilation until help arrives and until those who are experienced in resuscitation are able to take over. If one person is present, a rate of 15 chest compressions to; breaths are carried out and if two people are available then the rate is 5 compressions to one breath.

Summary of Basic Life Support Guidance

1) Call for help
2) Check breathing
3) Check pulse
4) Cardiac Arrest — give pre-cordial thump to chest
5) Recheck the pulse
6) Give 2 breaths to 15 compressions
7) Continue the procedure till further help arrives.

Check Your Progress 7

1) Explain the term "Basic Life Support".

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2) Mention the summary for guidelines on Basic Life Support.

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5.7 LET US SUM UP

In this Unit on Obstetric Emergencies, we have discussed some of the common emergencies that a practising midwife can face while at work in hospital and community.

Although, Childbirth is a normal physiological process, there is every possibility of any emergency situation which may arise suddenly during the course of pregnancy, labour or puerparium. These conditions adversely effect the life of the mother and the child. Each of these situations must be handled immediately by the attending midwife with alertness, knowledge, competence and skills using judgement and critical thinking. Her prompt action will always help in reducing further complications, provide good deal of comfort, courage and reassurance to the mother and family members.

Rupture of uterus is a serious condition where there is a break in the continuity of the uterine muscles and can occur during pregnancy and labour, specially to mothers with history of previous caesarean section, operative manipulations on uterine, misuse of oxytocin, mal-presentations, obstructed labour etc. are some of the causes of uterine rupture. The signs and symptoms presented by the mother are acute or intermittent abdominal pain, fainting attacks, shock, collapse and absence of foetal heart sound.

Vasa Praevia, Cord presentation and Cord prolapse are conditions when the foetal blood vessels or umbilical cord lies in front of the OS or the presenting part. There is a danger of rupture of the vessels and pressure on the cord, which threatens the life of the fetus if no prompt and immediate action is taken.

Shoulder dystocia is a rare condition which occurs when the shoulders fails to rotate spantaneously into the anterior posterior diameter of the outlet following the delivery of the fetal head.

Amniotic fluid embolism is an extremely serious condition of the mother, usually fatal when the amniotic fluid is forced into the maternal circulation via uterus or placental site. This then obstructs pulmonary vessels leading to respiratory distress and circulatory collapse.

Shock is a condition of collapse which is caused by failure of the mother's circulatory system to meet the body's need for oxygen, nutrients and removal of waste substances. The causes of shock can be either haemorrhagic or non-haemorrhagic.

In all these emergency conditions the attending midwife must take immediate action to avoid further damage to mother and child. The actions include calling for immediate assistance, resuscitative measures, accurate monitoring and recording of the condition of mother and child, administer oxygen, ensure patent airway, preparation for immediate surgery, transfer of the mother to a better facility hospital or centre when she is working in a community set up. In each case she has to be efficient and skilful using knowledge, skill and judgement. Some legal tips are also given to save the Midwife from legal problems. She need to keep these in mind while giving emergency care.

This unit has also included information regarding Basic Life Support (BLS) measures because all health professionals must be aware of BLS to handle any emergency situation, for saving life Basic Life Support measures refers to the maintenance of an airway and support for breathing without any specific equipment, the main features are Airway, Breathing and Circulation.

5.8 KEY WORDS

Basic Life Support : This refers to the procedures/measures carried out in emergency for the maintenance of airway and support for breathing without any specific instrument. The three main principles involved in carrying out BLS are Airway, Breathing and Circulation.

Emergency : It is the development of life threatening condition. In any emergency it is essential to identify the condition as early as possible, provide immediate available treatment, maintain vital functions and to refer the patient to proper place in proper way.

Knee Chest Position : In this position the mother kneels using her knees and chest to bear the weight of the body. The body is at a 90 degree angle to the hips, with the back straight, the arms above or at the side of the head and the head of the mother turned to one side.

Mac-Robert's Position : The mother is helped to lie flat and asked to bring her knees up to her chest as far as possible. Through this manoeuvre an attempt is made to rotate the angle of the symphysis pubis superiorly. The weight of the mother's legs create gentle pressure on the abdomen of the mother, which releases the impaction of the interior shoulder. This procedure is associated with lowest level of morbidity and requires the least force to accomplish delivery.

Obstetric Emergencies : There are life threatening situations in obstetric or Midwifery practice which are unexpected, develop rapidly, relatively uncommon and often fatal for the mother and child. These emergencies can develop any time during pregnancy labour or puerparium. A professional nurse who has had training in midwifery should be aware of these emergencies, their signs and symptoms, management and the specific role she is expected to play. In all the situations she should take prompt and immediate action, using knowledge and skill, to save the life of the mother and child.

Referral : This means transfer or shifting of the patient/mother from the place of emergency to another more equipped place for better

management and to save the life of the patient. Such a place next to the Primary Health Centre is "First Referral Unit" (FRU). In an ideal health care system, it has three levels of linkage i.e. family/community, primary health centre, community health centre and District Hospital.

Trendelenburg Position : The mother's body and head is lowered on the examination table whereby there is a downward displacement of the abdominal viscera alongwith uterus. As a result of which the foetal presentation is displaced. Sometimes, this position may be given but it's a very uncomfortable position for the pregnant mother.

5.9 ANSWERS TO CHECK YOUR PROGRESS

Check Your Progress 1

1) These are life threatening situation in midwifery or obstetric nursing practice which are unexpected, develop rapidly, serious in nature, relatively uncommon and often fatal for mother and child. These condition can develop any time during pregnancy, labour or puerparium.
2) a) Rupture of the uterus
   b) Vasa praevia
   c) Cord presentation and cord prolapse
   d) Shoulder dystocia
   e) Amniotic Fluid Embolism (AFE)
   f) Shock
3) The professional nurse and midwife need to develop certain qualities in her to deal with obstetric emergencies. She should always remain alert to the fact that these emergencies can happen during any time of maternity cycle. She should have ability to take prompt and timely action, recognize problems and initiate actions, make proper judgement and take decisions using knowledge and skills, to save the life of mother and child. During an emergency she should remain calm, composed, treat the mother as an individual, reassure, explain and support the family members to reduce their anxiety and fear, maintain accurate records and be skilful in reporting.

Check Your Progress 2

1) Break in the continuity of the uterine wall any time beyond 28 weeks of pregnancy is called rupture of the uterus. This is one of the most serious accidents in obstetric, occurring in about 1 in 2500-3000 deliveries, endangering the life of both the mother and child. Rupture can be complete or incomplete.
2) a) Weak uterine scar
   b) Incorrect use of oxytocin drugs
   c) Extension of cervical laceration
   d) During manipulations i.e. Ext. Cephalic Version
   e) Obstructed labour
   f) Trauma due to sudden fall, blow over the abdomen.
3) a) Call for medical assistance in case of suspicion of uterine rupture.
   b) Never attempt to deliver a mother with history of previous caeserean section at home or partially equipped centres.
   c) Resuscitate the mother and arrange for intravenous fluids, blood.
   d) Never give false hopes to the mother and family members and prepare them for possible outcome i.e. Hysterectomy.
   e) Transfer the mother to hospital.

Check Your Progress 3

1) Vasa Praevia may be sometimes palpated while doing a vaginal examination with membranes intact. If it is suspected a speculum examination can be done to confirm. In

case of rupture vasa praevia, there will be slight fresh vaginal bleeding at the time of rupture of membranes. There will be signs of foetal distress disproportionate to blood loss i.e. irregular foetal heart sound, meconium stained liquor amnii excessive foetal movement.

2) Cord presentation is a condition when the umbilical cord lies in front of the presenting part with membranes intact.

   Cord prolapse is a condition where the umbilical cord lies in front of the presenting part but the membranes are ruptured. Occurs in the 400 births and is associated with high foetal mortality and morbidity rate.

3) The diagnosis of cord prolapse can be made by doing a vaginal examination soon after the membranes are ruptured in cases where there are presence of predisposing factors i.e. mal-presentation, pre-maturity and high head prolapse.

   - The cord is most commonly felt in vagina or in cases where the presenting part is high up cord may be felt in cervical OS.
   - A loop of cord may be visible at Vulva.
   - Abnormal foetal heart sound (Bradycardia)

4) a) Exaggerated Sim's Lateral Position is a position where the mother is helped to lie on her left side, with a pillow or wedge to raise/her hips, thus the pelvis and buttocks are raised. The foot end of the bed may be raised. Thus, the presenting part is displaced and pressure on the Cord is relieved.

   b) In Knee Chest (Genu pectoral) Position the mother kneels using her knees and chest to bear the weight of the body. The body is at 90 degree angle to the hips, with back straight the arms above or at the side of her head and the head of the mother turned to one side.

Check Your Progress 4

1) Although shoulder dystocia is not a very common condition but once it develops, it may be difficult to handle. The midwife need to be alert to watch for warning signs of shoulder dystocia.

   Initially, the delivery may have been uncomplicated but the head may have advanced slowly. During the delivery of the head the chin may have difficulty in sweeping over the perinium and once the head is delivered, it looks as if the head is trying to recede back to vagina which is caused by a reverse traction.

   The condition of shoulder dystocia is usually diagnosed or suspected when the usual methods used by the midwife fails to deliver the shoulder of the baby.

2) a) Age of the mother more than 35 years.
   b) Multiparity, post dated pregnancy
   c) Material diabetes and gestational diabetes
   d) If the mother is very fat
   e) Large foetus with increased birth weight
   f) Oxytocin augmentation
   g) Prolonged labour and prolonged second stage of labour
   h) Operate deliveries.

3) The midwife should remain calm and composed. Explain the mother in simple language and reassure her. Call for medical help. Give an episitomy or extend the episiotomy if needed. Use the most simple manoeuvres first, like changing the position of the mother in an attempt to release the shoulders, apply supra pubic pressure. Position the mother straight lying down and bring her thighs with knees bent near to her chest (The Mac-Robert's Position). Try to rotate the shoulders. Deliver the posterior shoulder and arm first, followed by the delivery by anterior shoulder. An accurate detailed record must be kept by the midwife mentioning the type of manoeuvres used, time taken, the amount of force used, the outcome of each manoeuvres attempted.

4) When the amniotic fluid is forced into the maternal circulation via uterus or placental site forming an embolus which obstructs the pulmonary vessels, leading to respiratory

distress and circulator collapse. The embolus may contain hair, vernisx, skin cells or meconium. Amniotic Fluid Embolism is rare but serious life threatening condition difficult to predict and equally difficult to prevent. The maternal mortality rate is approximately 86% while the foetal mortality rate is about 50%.

5) The predisposing factors for Amniotic Fluid Embolism can be rapid or precipitate labour, multiparity, advanced maternal age, over stimulation of the uterus by injudicious use of oxytocin, trauma to the uterus during caesarean section or manipulations, and in cases of abruptio placenta when the placental bed is disrupted.

6) a) Sudden onset of acute maternal respiration distress i.e. severe dyspnoea, cyanosis
   b) Chest pain
   c) Shock out of proportion to blood loss.

7) As soon as she observes/notices signs of acute respiratory distress, immediately she should call for medical assistance and initiate or assist in resuscitation. To displace the uterus the mother can be tilted to side 30 degree. The maternal and foetal conditions needs to be regularly monitored and proper record maintained. The mother is to be prepared for emergency birth once her condition stabilises. Since, it is a serious condition the family members remain anxious and worried, the midwife must explain, reassure and provide emotional support and keep them informed about what is happening. If the midwife is working in the community arrangements to transfer the mother to a hospital is to be done.

Check Your Progress 5

1) it is collapse caused by the failure of the mother's circulatory system to meet the body's need for oxygen, nutrients and removal of waste substances. It is a condition when the patient has a greyish blue or pale, cold clammy skin, rapid breathing but as condition deteriorates, breathig becomes deeper and slower. The pulse is rapid and weak. The cause can be either Haemorrhage or non-haemorrhagic.

2) a) Detect early signs of shock. Put the mother in a comfortable position.
   b) Raise the foot end of the mother and check the vital signs and FHS regularly.
   c) Maintain airway and administer oxygen
   d) Call for medical assistance
   e) Try to make up fluid loss by I/v infusion
   f) Record intake and output
   g) Maintain proper record.

In community practice start resuscitation and arrange to transport the mother to a nearby hospital and accompany her. If possible give oxygen during transfer. Sometimes, shock is due to acute psychological stress; provide support, reassurance, encouragement and emotional security to the husband, family members.

Check Your Progress 6

1) a) Always take consent before starting any action.
   b) Call for medical assistant as early as possible.
   c) Give Basic Life Support whenever needed.
   d) Be sure about what, when, where and how of the action taken.
   e) Reach help in time, take prompt and immediate action.
   f) Always maintain proper record which should be clear, legible, concise, accurate, pertinent and complete.

2) Prepare the sample form of referral.

Check Your Progress 7

1) Basic Life Support is an emergency first aid procedure that consists of recognising respiratory and cardiac arrest and starting proper application of cardio-pulmonary resuscitation to maintain life until the mother recovers sufficiently to be transported or until advanced life support is available. This includes the airway, breathing and circulation steps of cardio-pulmonary resuscitation.

2) Summary of basic life support measures are;
   - Shake the patient and shout
   - Call for help
   - Check breathing, check pulse
   - If cardiac arrest — give pre-cordial thump to chest
   - Recheck the pulse
   - Give 2 breaths to 15 compressions
   - Continue the procedure till further help arrives.