

Nursing management during complicated labor and delivery

Dystocia: (Also known as obstructed labor): Is difficult labor results from any four main component of the labor process: (4 Ps)

1. Abnormalities of the **P**ower (uterine contractions)
2. Abnormalities of the **P**assenger (position, size, or presentation of the fetus)
3. Abnormalities of the **P**assageway (birth canal)
4. Problems with **P**syche

1. **Abnormalities with power:** involves contractions that are irregular in strength, timing or both end result is ineffective cervical dilation include: (**Hypertonic contractions**, and **Hypotonic contractions**)

Hypertonic contractions: Contractions are irregular and more frequent, but ineffective in dilating and effacing the cervix. Occurs in latent phase of first stage of labor, more frequent in primigravida woman

Risk for mother and fetus:

1. Slow cervical dilatation.
2. Premature rupture of membranes.
3. Fetal distress
4. Maternal distress

Nursing management:

- Assessment uterine contraction patterns.
- Provide with comfort measures (Such as Warm shower, Back rub, therapeutic touch)
- Position changes
- Provide pain management via IV analgesics
- Monitor maternal vital signs and fetal status.
- hydration
- Tocolytics to reduce high uterine tone

Hypotonic contractions : The uterine contractions are infrequent, weak and of short duration occurs after active labor has been established

Maternal and Fetal Risks

1. Maternal exhaustion
2. Post-partum hemorrhage
3. Uterine infection
4. Fetal sepsis

Nursing management:

- Augmented labor with Oxytocin
- Assist with amniotomy (AROM) if membranes are intact.
- Provide continuous electronic fetal monitoring.
- Monitor vital signs, contractions, and cervix continually.
- IV hydration
- Plan for surgical birth

2. Abnormalities of the Passenger (position or presentation, and size of the fetus) called (Malposition and Malpresentation)

- **Cephalic (head first):** include (Military, brow, and face presentations) normal presentation
- **Breech (pelvic first):** include (Frank breech, Full or complete breech, A footling or incomplete breech) abnormal presentation
- **Shoulder (Scapula first)** abnormal presentation
- Right occipito- anterior and left occipito-anterior) are ideal for birth which is a normal position, other than this position need to turn of the fetus position.

3. Abnormalities of the Passageway (pelvis birth canal)

Problems with the pelvis are relate to shape of the female pelvis which can be classified into four types, gynecoid, anthropoid, android, and platypelloid

Obstruction in the birth canal, such as (Placenta previa, Fibroids in the lower uterine segment, A full bladder ,and Human papillomavirus (HPV) warts).

Nursing Management

- Assess for poor contractions, slow dilation, and prolonged labor.
- Evaluate bladder status
- Anticipate trial of labor; if no labor progression
- After an adequate trial, plan for cesarean birth.

1. Problems with Psyche

Many women experience an array of emotions during labor, which may include

Fear, Anxiety, Helplessness, Being alone. These emotions can lead to psychological stress, which indirectly can cause dystocia.

Nursing Management

- Nurse should provide physical and emotional support to the client

- Explain interventions that may be needed to assist with the labor process.

Macrosomia :Defined as weight > 4000g

Causes:

- Mother who has diabetes
- Obesity
- Genetics
- a previous baby with macrosomia
- Prolonged gestation
- over 35 years of age

Risk to mother:

- Cesarean delivery is needed
- Dysfunctional labor
- Post partum hemorrhage
- Lacerations

➤ **Risk to fetus :**

- Fetal distress related to meconium aspiration
 - Shoulder dystocia
 - Hypoglycemia
 - hypothermia
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Premature rupture of membranes (PROM)

Is a rupture of the bag of waters before the onset of true labor.

The exact cause of PROM is not known, but many are associated with (Infection, Prolapsed cord, Preterm labor, Incompetent cervix, multiple gestation)

Post term pregnancy: Is a pregnancy that extends to 42 weeks.

The cause usually is unknown, but the most common identifiable factor for a post term pregnancy is **inaccurate dating**. Other factors that may contribute to post-term pregnancy include:

- Primiparity
- Prior post term pregnancy
- Genetic factors
- Advanced maternal age

Risk factors

<u>Risk to fetus</u>	<u>Risks to mothers</u>
<ul style="list-style-type: none">➤ Fetal microsoma➤ Placental insufficiency➤ Oligohydramnios➤ Meconium aspiration	<ul style="list-style-type: none">➤ Increased psychological stress➤ Labor dystocia➤ Increased incidence of forceps-assisted, or cesarean birth

Precipitate labor : Also called rapid labor, is defined as giving birth after less than 3 hours of regular contractions.

There are some variables that might play into potential precipitous labor. These can include:(Younger maternal age, Having given precipitate birth previously, Lower infant birth weight, Muliti parity)

Risk of precipitous labor are:

- Vaginal and/or cervical tearing or laceration
- Emotional distress of mother
- Birth in unsanitary environments such as a car or the bathroom
- Infection due to unsanitary environment
- Post partum hemorrhage
- Fetal distress
- Cerebral trauma

Uterine Rupture: Spontaneous or traumatic rupture of the uterus

Etiology:

- Prior cesarean birth
- Prolonged labor
- labor induction with use of Pitocin overstimulation
- Excessive manual pressure applied to the fundus during delivery

Signs and Symptoms:

1. Sudden fetal distress
2. Acute and continuous abdominal pain
3. Cessation of contractions
4. Absence of fetal heart tones

Therapeutic Interventions:

1. Closely monitor fetal heart tones for distress and maternal vital signs
2. Urgent delivery by cesarean birth

Shoulder Dystocia: Is an obstetric emergency in which the anterior shoulder cannot pass under the pubic arch after the head is born

It places both the woman and the fetus at risk for injury which include:

- vaginal lacerations
- Brachial plexus injury
- Asphyxia

Nursing Management

- Close Fetal monitoring during labor for early decelerations.
 - Avoid downwards traction on the fetal head
 - Change woman position (knees to chest position)
 - Monitor for post partal complications ; hemorrhage d/t uterine a tony
 - Administer IV oxytocin post delivery
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Amniotic Fluid Complications

Normal amniotic fluid amount is 800-1000 mL between 36-37 weeks

Polyhydramnios: more than 2,000 mL

Causes of polyhydramnios:

- Fetal malformations (eg, gastrointestinal or urinary tract obstruction)
- Multiple gestation
- Maternal diabetes
- Rh incompatibility
- Idiopathic

Nursing Management

A therapeutic amniocentesis is performed, monitor maternal and fetal status throughout for any changes.

Oligohydramnios

Is a decreased amount of amniotic fluid (less than 500 mL) between 32 and 36 weeks' gestation.

Causes of Oligohydramnios

- Utero placental insufficiency
- Post term pregnancy
- Fetal malformations, especially renal
- Idiopathic

Nursing management

- Monitoring of fetal well-being during ultrasound or non stress test
 - Amnioinfusion may be performed
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Amniotic Fluid Embolism: Is escape of amniotic fluid in to the maternal circulation and carried to woman's lungs

Risk Factors:

- Oxytocin administration
- Abruption placenta
- Polyhydramnios

Complications

- Respiratory distress
- Heart failure
- Circulatory collapse
- Disseminated intravascular coagulation (DIC)

Management

- Monitoring cardiopulmonary status (resuscitation)
- Oxygen with mechanical ventilation
- Correction of coagulation deficits with platelets or fibrinogen

1. **Prolapsed of umbilical cord:** Descent of the umbilical cord in to the vagina before the presenting part. **There are two types: Overt prolapse, and Occult prolapse**

Predisposing factors:

- Malpresentation
- Transverse lie
- Poly hydromnios
- Rupture of membrane before engagement presenting part
- A long cord

Nursing Management

- Use knee-chest position
- O2 via mask
- Monitor FHR
- Application of saline- soaked sterile dressing over the cord
- Pushing of the head up and off the cord with a sterile gloved hand
- Immediate delivery if mother not fully dilated by C/S

Laceration: Tears in the Perineum, vaginal wall, or cervix, of tissue during delivery . Assess for cervical laceration/ hematoma if bright red bleeding with firm fundus.

- Perineal lacerations are classified as
 - **1st degree extends:** Small tears affecting only the skin
 - **2nd degree:** Tears affecting the muscle of the perineum and the skin.
 - **3rd degree:** extends to the anus

- **4th degree:** into the rectal wall

References:

1. Pillitteri, A. (2013). *Maternal & child health nursing: care of the childbearing & childrearing family*. Lippincott Williams & Wilkins.
2. Ricci, S., S. (2013). *Essentials of maternity, newborn, & women's health nursing*. Wolters Kluwer Health, Lippincott Williams & Wilkins.