

- High risk related to Dysmaturity
- Preterm Infants
- Post term infants
- Preterm Infants:
- Infants born before completion of 37 weeks of gestation are considered preterm or premature regardless of birth weight.
- These newborns are the largest number to be admitted to the NICU.(neonatal intensive care unit)

- They have high incidence for complications and to have congenital defects
- Incidence
- Majority of cases the cause is unknown
- It is common in:
 - In low socioeconomic classes
 - Multiple pregnancies
 - Interrupted pregnancy due to placental accidents
 - Hypertension relater to pregnancy



The premature has to adjust to extra uterine life with his immature systems that leads to problems since his systems are not physiologically ready.

- Diagnostic evaluation:
- On inspection: Very small with little subcutaneous fat
- Large head in proportion to body
- Inactive and relaxed attitude
- Clinical manifestations of

prematurity:

Very small, scrawny appearance

Skin: Red-Pink with visible veins

Fine, feathery hair, Lanugo on back and face

Little or no evidence of subcutaneous fat

Head is relatively large to body

Lies in a relaxed attitude
Limbs extended
Ear cartilage poorly developed
Few fine wrinkles on palms
and soles

Clitoris prominent in females
Scrotum undeveloped and
non pendulous with minimal
rugae and undescended testes

Lax, easily manipulated joints
Absent, weak or ineffectual
reflexes

Other neurological signs are
absent or diminished

Unable to maintain body
temperature

Diluted urine

Pliable thorax

Periodic breathing

hypoventilation

Frequent episodes of apnea

➤ Therapeutic Management:

➤ When a preterm delivery is expected the NICU is alerted and the team of neonatal specialists are present at the time of delivery

➤ Resuscitation is done if needed in the labor room the infant is transferred to NICU in an incubator

➤ Measurements taken and vitamin K is given

➤ Cont. Management

➤ Respiratory support: Apnea mattress – Incubator – O₂ monitoring

➤ Temperature regulation: Incubator, and monitoring of temperature, Humidity as recommended

➤ Cont. Management

➤ Complications such as hypoglycemia and hypocalcaemia are frequent in the premature infant and are managed according to specific conditions and monitored frequently

➤ Respiratory distress syndrome is very common and required respiratory support

➤ **Post term infants**

➤ Infant born after 42 weeks of gestation

➤ Incidence: 12% of births

➤ Cause: Unknown

➤ Post mature (postterm)

delivery is much less common than premature (preterm) delivery. The reason for a pregnancy to continue beyond term is usually unknown

- The placenta becomes less able to provide adequate nutrients to the fetus.
- To compensate, the fetus begins to use its own fat and carbohydrates to provide energy.
- As a result, its growth rate slows
- Its weight may decrease.
- If the placenta shrinks sufficiently, it may not provide adequate oxygen to the fetus, particularly during labor. A lack of adequate oxygen may result in fetal distress
- May result in injury to the fetal brain and other organs.
- Fetal distress may cause the fetus to pass stools (meconium) into the amniotic fluid. The fetus

inhale the meconium-containing amniotic fluid into the lungs during birth.

- As a result, the newborn may have difficulty breathing after delivery (meconium aspiration syndrome).



Symptoms

- A post mature newborn has dry, peeling, loose skin
- May appear emaciated, especially if the function of the placenta was severely reduced.
- The newborn often appears alert.

- The skin and nail beds may be stained green if meconium was present in the amniotic fluid.
- A post mature newborn is prone to developing low blood sugar levels (hypoglycemia) after delivery, especially if oxygen levels were low during labor.

➤ **Treatment**

- The post mature newborn who experienced low oxygen levels and fetal distress may need resuscitation at birth.
- If meconium has been breathed into the lungs, a ventilator may be needed.
- Intravenous glucose solutions or frequent breast milk or formula

feedings are given to prevent hypoglycemia.

➤ If these problems do not occur, the major goal is to provide good nutrition so that the newborn can catch up to the weight that is appropriate for him.

➤ High risk related to Dysmaturity

➤ Preterm Infants

➤ Post term infants

➤ Preterm Infants:

➤ Infants born before completion of 37 weeks of gestation are considered preterm or premature regardless of birth weight.

- These newborns are the largest number to be admitted to the NICU.(neonatal intensive care unit)
- They have high incidence for complications and to have congenital defects
- Incidence
- Majority of cases the cause is unknown
- It is common in:
 - In low socioeconomic classes
 - Multiple pregnancies
 - Interrupted pregnancy due to placental accidents
 - Hypertension relater to pregnancy



The premature has to adjust to extra uterine life with his immature systems that leads to problems since his systems are not physiologically ready.

- Diagnostic evaluation:
- On inspection: Very small with little subcutaneous fat
- Large head in proportion to body
- Inactive and relaxed attitude

➤ Clinical manifestations of prematurity:

Very small, scrawny appearance

Skin: Red-Pink with visible veins

Fine, feathery hair, Lanugo on back and face

Little or no evidence of subcutaneous fat

Head is relatively large to body

Lies in a relaxed attitude

Limbs extended

Ear cartilage poorly developed

Few fine wrinkles on palms

and soles

Clitoris prominent in females

Scrotum undeveloped and non pendulous with minimal rugae and undescended testes

Lax, easily manipulated joints

Absent, weak or ineffectual reflexes

Other neurological signs are absent or diminished

Unable to maintain body temperature

Diluted urine

Pliable thorax

Periodic breathing
hypoventilation

Frequent episodes of apnea

➤ Therapeutic Management:

➤ When a preterm delivery is expected the NICU is alerted and the team of neonatal specialists

are present at the time of delivery

- Resuscitation is done if needed in the labor room the newborn infant is transferred to NICU in an incubator

- Measurements taken and vitamin K is given

- Cont. Management

- Respiratory support: Apnea mattress – Incubator – O2 monitoring

- Temperature regulation: Incubator, and monitoring of temperature, Humidity as recommended

- Cont. Management

- Complications such as hypoglycemia and hypocalcaemia are frequent in the premature infant and are managed according to specific conditions and monitored frequently
- Respiratory distress syndrome is very common and required respiratory support

➤ Post term infants

- Infant born after 42 weeks of gestation
- Incidence: 12% of births
- Cause: Unknown
- Post mature (postterm)

delivery is much less common than premature (preterm) delivery. The reason

for a pregnancy to continue
beyond term is usually unknown

- The placenta becomes less able to provide adequate nutrients to the fetus.
- To compensate, the fetus begins to use its own fat and carbohydrates to provide energy.
- As a result, its growth rate slows
- Its weight may decrease.
- If the placenta shrinks sufficiently, it may not provide adequate oxygen to the fetus, particularly during labor. A lack of adequate oxygen may result in fetal distress
- May result in injury to the fetal brain and other organs.

- Fetal distress may cause the fetus to pass stools (meconium) into the amniotic fluid. The fetus inhale the meconium-containing amniotic fluid into the lungs during birth.
- As a result, the newborn may have difficulty breathing after delivery (meconium aspiration syndrome).



Symptoms

- A post mature newborn has dry, peeling, loose skin

- May appear emaciated, especially if the function of the placenta was severely reduced.
- The newborn often appears alert.
- The skin and nail beds may be stained green if meconium was present in the amniotic fluid.
- A post mature newborn is prone to developing low blood sugar levels (hypoglycemia) after delivery, especially if oxygen levels were low during labor.
- **Treatment**
- The post mature newborn who experienced low oxygen levels and fetal distress may need resuscitation at birth.

- If meconium has been breathed into the lungs, a ventilator may be needed.
- Intravenous glucose solutions or frequent breast milk or formula feedings are given to prevent hypoglycemia.
- If these problems do not occur, the major goal is to provide good nutrition so that the newborn can catch up to the weight that is appropriate for him.