

Neonatal Jaundice

Dr.Rajashri Karale

Associate Professor, KINS

Neonatal Jaundice

Definition:

- Neonatal Jaundice is defined as excessive levels of bilirubin in blood & characterized by jaundice / icterus called Hyperbilirubinemia.
- Characterized by yellow discoloration of skin OF FACE,NOSE,SCLERA,NAILS,DARK URINE,CLAY COLOR STOOL.
- It is common in new born.
- 60% - term neonate & 80% preterm
- Normal bilirubin – 0.1 - 0.8mg/dl

Classification-

- Physiological
- Phathological
- Breast feeding associated jaundice

Physiological Jaundice

- Appears – **30-72 hrs**
- Maximum in 4th day –term neonate, declines 7-10days
- Maximum in 5-7th day – preterm neonate, declines up to 14days

Causes –

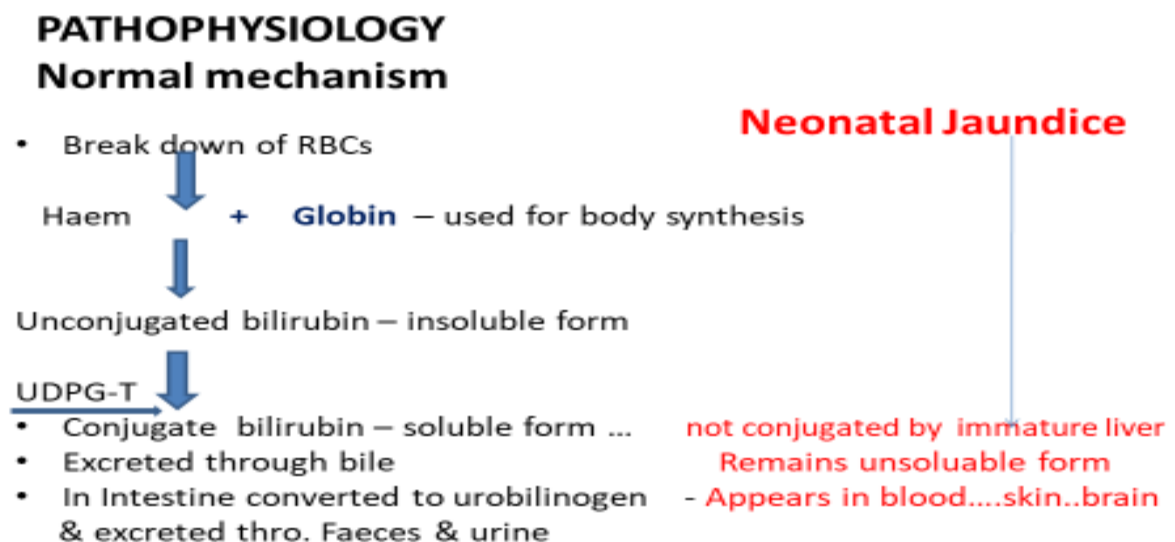
- Higher concentration of RBCs & less life span -70-90days.
- Immature liver function





Link : <https://lumen5.com/user/rajashribhagwatkarale/neonatal-jaundice-ex-fwibg/>

PATHOPHYSIOLOGY:



Complications of neonatal jaundice:

- **Transitional Encephalopathy** – reversible neurological complication
- Increases lethargy by rising level of bilirubin
- Recovery possible – Exchange blood transfusion

- **Kernicterus – Unconjugated** bilirubin deposited in brain cells
leads to necrosis of neurons
- Poor sucking,lethargy,altered consciousness,fever,high pitched cry,hypotonia ..death
- Complications –cerebral palsy,hearing loss,MR

Diagnosis

- Assessment of new born in natural light
- History taking
- Icterus Face- 5-8mg/dl
- Icterus Trunk-10-12mg/dl
- Icterus Palm/sole - 15mg/dl
- Bilirubinometer – Non invasive method

Blood for Bilirubin - total conjugated & unconjugated, Hb,RBC,Direct coomb test

MANAGEMENT:

➤ **Phototherapy for Hyperbilirubinemia**

- Phototherapy – mechanism - bilirubin in skin converted into water soluble bilirubin and excreted in bile & urine.
- Keep baby open under phototherapy.
- Cover the genitals with nappy.
- Cover eyes with eye pads.

Side effects of phototherapy:

- Frequent loose, green stools
- skin changes- Bronze Baby Syndrome – skin looks dusky color
- Gonadal damage
- Retinal damage.

Risk for baby under phototherapy



- Risk of injury to eyes
- Risk of injury to gonads
- Risk of impaired skin integrity
- Risk for fluid volume deficiency
- Risk for hyperthermia or hypothermia
- Risk of neurological injury
- Imbalance nutrition
- Parental anxiety
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MANAGEMENT

- Drug therapy – to bind unconjugated bilirubin in gut – charcol, agar, cholestyramine
- To promote conjugation of bilirubin- orotic acid
- Metabolic precursor – UDPG ACID
- Albumin infusion before EBT
- **EBT – Exchange blood transfusion** - 80 MI/KG DOUBLE VOLUME

- **Blood – compatible with mother is used**

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- **Application of Phototherapy**

- **TYPES OF PHOTOTHERAPY UNITS**

- ✓ Single surface unit.
- ✓ Double surface unit.

- Perform hand wash.
- Place baby naked in cradle or incubator.
- Cover eyes & genital area.
- Keep baby at least 45 cm from lights,if using closer monitor temperature of baby.
- Start phototherapy.
- Frequent extra breast feeding every 2 hourly.
- Turn baby after each feed.
- Temperature record 2 to 4 hourly.
- Weight record- daily.
- Monitor urine frequency.
- Monitor bilirubin level.

Nursing care of phototherapy :

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- ✓ SKIN CARE -Keep the infant clean and dry.
- ✓ Clean only with water.
- ✓ Do not apply oils or creams to the exposed skin.
- ✓ Infants nursed in nappies
- ✓ Monitoring - infants in Newborn Care receiving phototherapy should have a temperature, pulse and respiration rate documented 4 hourly & prevent dehydration.
- ✓ If an infant requires continuous cardiorespiratory monitoring for other reasons, then, this should continue whilst under phototherapy
- ✓ EYE CARE - Eye pads should be removed 4 hourly and eye cares attended with normal saline.

