**Neonatal Phototherapy**

**Definition of Terms:**

* **Jaundice**: the yellow appearance of the skin that occurs with the deposition of bilirubin in the dermal and subcutaneous tissues and the sclera.
* **Bilirubin**: the orange-yellow pigment of bile, formed principally by the breakdown of hemoglobin in red blood cells at the end of their normal life-span. Neonate’s bilirubin production rate is double that of adults and their clearance of bilirubin is reduced, hence the importance of monitoring levels and detecting jaundice in this early post-natal period.
* **Hyperbilirubinaemia**: the excess of bilirubin in the blood.

**Types of Hyperbilirubinemia:**

1. **Physiological Jaundice :** Not appears before the 2nd or 3rd day in term baby. In premature baby, it appears after 3rd or 4th day. No treatment Requires
2. **Pathological Jaundice :** Appears within the 1st day (24 hours after birth). Treatment is important as soon as possible.

**Phototherapy:** a treatment for jaundice where the exposure of skin to a fluorescent light (blue or white) source converts unconjugated bilirubin molecules into water soluble isomers that can be excreted by the usual pathways.

**Side effects of phototherapy:**

1. Dehydration due to increased insensible water loss.
2. Watery diarrhea.
3. Hypocalcemia.
4. Retinal damage.
5. Erythema and skin rashs.
6. Bronze baby syndrome.
7. Cell damage and mutations.
8. Dark yellow urine.
9. Thermoregulatory instability (hyperthermia)
10. Separation of the infant and parents.

**Nurse’s responsibility in phototherapy:**

1. Monitoring bilirubin level.
2. Keep newborn naked except for the diaper area and change position frequently.
3. Continue the feeding.
4. Shield the newborn’s eyes.
5. Cleanse skin frequently to prevent irritation.
6. Maintain adequate fluid intake to prevent dehydration and calculate intake and output.
7. Assess and adjust thermoregulation device and check newborn’s body temperature every four hours.
8. Weight newborn daily.
9. Observe skin, mucous membranes, and stool.
10. Bilirubin levels should be followed for at least 24 hours after discontinuing phototherapy.
11. Promoting infant parent interaction