

Slide 1:

Friends, in this webinar we shall discuss the management of jaundice in preterm neonates

The management of neonatal jaundice in preterm infants is unclear– most recommendations for treatment in this population, are essentially consensus-based rather than evidence based.

Slide 2:

This slide summarises the recommendations by the National neonatology Forum for TSB thresholds at, or above which, treatment is recommended. The second and third column show the TSB thresholds for starting phototherapy in a healthy and sick preterm newborn, respectively. The last column shows the TSB thresholds for exchange transfusion. The following neonates are considered to be sick (1) neonates with rapidly rising TSB levels which is taken as greater than 0.5 mg/dL/hr, suggesting hemolysis, and (2) neonates with clinically instability/sepsis/ asphyxia. Let us take an example. A neonate with Birthweight of 1100 grams with septic shock and metabolic acidosis has a bilirubin value of 7 mg%. This neonate would be labelled as “sick” and thereby, the neonate would require phototherapy at this level of serum bilirubin. Now let us consider a stable preterm neonate with Birthweight of 2200 grams with a bilirubin value of 10.5 mg% - this neonate will not require phototherapy.

Slide 3:

Neonates with any of the following conditions in the previous 24 hours are considered to have clinical instability:

(a) apnea requiring bag and mask ventilation ; (b) hypotension requiring pressors and (c) mechanical ventilation at the time of blood sampling. While deciding the need for treatment, it is important to remember that one should use total serum bilirubin; There is no need to subtract direct fraction of bilirubin unless > 50% of the total. We recommend the use of lower value of the range presented in the table in neonates of lower birth weight/ gestational age

Slide 4:

BET is recommended if the TSB levels are above the birth weight specific thresholds for exchange OR if the neonate shows signs of suspected acute bilirubin encephalopathy irrespective of the bilirubin value.

Remember that recommendations for ET in hospitalised neonates apply to those receiving intensive double surface phototherapy to the maximal surface area but whose TSB levels continue to increase despite intensive PT. For readmitted infants, if the TSB level is above the exchange level, intensive PT should be started pending arrangement for BET.

One may consider a repeat TSB measurement just prior to the procedure to confirm the TSB levels are still above the exchange level.

Please note that the classical signs of acute bilirubin encephalopathy such as hypertonia, arching, retrocollis, opisthotonos, high pitched cry, and fever may not be present in preterm neonates. The

only signs of ABE in preterm neonates may be non specific such as poor feeding, reduced tone and recurrent apnoeas.

Slide 5:

- While the neonate is receiving phototherapy, there is No role for clinical assessment or TcB
- In general, TSB can be repeated every 12-24 hrs. As opposed to this, a baby with a setting for hemolysis such as Rh or ABO isoimmunisation would require TSB measurement repeat bilirubin estimation every 6-8 hours during initial 24 to 48 hours or so.
- Discontinue phototherapy when TSB is 2 mg/ dL below the initiation level

Thank You.