

Slide 1: Friends, in this webinar, we shall discuss how to identify jaundice in preterm neonates

Slide 2:

Nearly three fourths of preterm neonates develop jaundice in the first week of life. Jaundice may be identified on clinical (visual) assessment of the neonate, by doing transcutaneous bilirubin levels or by measuring total serum bilirubin levels.

Slide 3:

In order to identify jaundice clinically, one should examine the baby in bright day light. Alternatively, the baby can be examined in white fluorescent light. Make sure there is no yellow/ off white background. The neonate should be completely examined including the palms and soles. Examine for jaundice by 'blanching' a small area of skin (often on the nose) by pressing it against a bony prominence, and by inspecting the sclerae of the eyes and palate. Visual assessment of jaundice should be carried out as frequently as possible, during every examination of the newborn, during the first week of life. It has to be remembered that visual examination does not reliably identify the severity of neonatal jaundice and hence, any jaundice identified on visual examination should be further evaluated using Transcutaneous bilirubin or total serum bilirubin estimation

Slide 4:

Transcutaneous bilirubin

TcB measurements beyond the first 24 hours of life correlate reasonably well with the serum bilirubin estimation in premature infants, particularly for the 2 widely used TcB devices in practice (ie, Bili-Check and JM-103).

A TcB reading ≥ 3.0 mg/dL below the phototherapy threshold for an infant (discussed in a separate webinar on treatment of jaundice in preterm neonates) could be considered safe for not initiating phototherapy in an otherwise well preterm, without the need for TSB estimation from the laboratory. On the other hand, a TcB reading falling within 3 mg/dl below the threshold or a TcB reading greater than or equal to the phototherapy threshold needs to be followed up with total serum bilirubin estimation. For eg., if a neonate's bilirubin threshold to start phototherapy is 15 mg%, and the TCB value is 11.5 mg%, one does not have to evaluate further or start phototherapy. On the other hand, if the TCB value is more than 12 mg%, one has to evaluate further using TSB and decide accordingly. Decision to start phototherapy would then be based on the TSB value. TCB performed with both common devices Minolta JM 103 and Bilicheck are reasonably accurate.

Slide 5:

It is recommended to obtain serum bilirubin level in the following situations:

- Any visible jaundice in first 24 hours of life
- Beyond 24 hours, any clinical jaundice evaluated with Tcb and when Tcb levels falling within 3 mg/dl below OR \geq the threshold for phototherapy, needs to be followed up with total serum bilirubin estimation

- Any clinical jaundice in a sick preterm neonate also requires testing. The definition of the term sick neonate is shown here in the slide
- During phototherapy and any subsequent measurements after stopping phototherapy to look for rebound jaundice