



American Academy of Pediatrics
Orange County Chapter
INCORPORATED IN CALIFORNIA

“Breast Feeding and Neonate Hyperbilirubinemia”

By Vinod K. Bhutani, MD, FAAP

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CHATBOX/Q&A QUESTIONS AND FOLLOW-UP ANSWERS

1. Are you encouraging routine cord TB understanding the added expense for the average hospitalization.

ANSWER. NOT AT ALL - NO. My message is that you can use any number between 0.5 to mg/dL at the normal range of cord total bilirubin. I suggested that a value of 2 mg/dL (representing 95th percentile value) works best and guesimates ta most conservative rate of rise (estimated cord bili to first measured bilirubin (usually between age 18 to 48 hours) divided by actual age in hours will give you the estimated rate of rise to make severity, presence of hemolysis and follow-up decisions.

2. Can you make a case for home phototherapy so you don't have to separate mom and baby?

ANSWER. MY case is that a) it is safe in most select cases (other than those with ROR >0.2 mg/dL, Hematological signs of hemolysis, family background suggestive of G6pD deficiency, G6PD enzyme deficiency and infants <38 weeks GA). Family must be educated by credentialed healthcare provider and have out-of-pocket medical expenses including reimbursed home bilirubin testing)

3. What can we pediatricians do about contracted labs that do not report stat lab results in a timely matter?

ANSWER. Pursue a contract requirement, quality care standard that is punitive, advocate for your patient along-with their patents. TcB is good guide. Do the Contract labs have social media presence?

4. When there is a history of hyperbili in family with current baby is a bit high do you get G6PD?

ANSWER. Until your institution has a point of care device (no conflict of interest here), my rationale is that the blood can be drawn and sent to out-of-institution lab. Your role is, assume that the baby is presumably deficient so that you can alert the family take precautions (refer and share your website that lists - provide a list).

5. Is it possible that breastfeeding hyperbilirubinemia causes kernicterus?

ANSWER. I know that sub-optimal breast feeding (and starvation) has been associated with Kernicterus The so-called breast milk jaundice (prolonged unconjugated hyperbilirubinemia⁰ in breast fed baby at TB levels of >25 mg/dL without G6pd deficiency is most likely due to underlying decreased UGT function (has to be proven in prospective study). We know that breast-fed babies with Crigler Najjar I get kernicterus unless treated with long-term daily phototherapy or a liver transplant.

6. Is there high risk for developing skin cancer in newborns exposed to phototherapy?

ANSWER. I have not seen case report. I worried about when I learnt that earlier phototherapy devices did not have mandatory UV filtering protection.



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7. Does sun exposure through the window help jaundice clearance?

ANSWER. Yes, it can bleach the jaundice (Review report of Nurse Ward who first described this effect in England in 1950s). However, effect on bilirubin level is erratic and the risk of UV is real. On the other hand, use of filtered sunlight (to deliver blue light only) has been reported from Nigeria. But you must have sunlight continuously for 18 to 24 hours (usual duration of treatment,

8. What's your opinion about the risk of cromosomopathy with fototherapy?

ANSWER, None that I know or can imagine?

9. Relationship between Transcutaneous values vs Serum values.

ANSWER. One measures bilirubin in skin surface that is layered by many pigments, and the other in a clear serum. They cannot be the same and equal. Review of literature provides you the "Bland-Altman" comparison with the mean off-set and the standard deviation for each device.

10. Why do many Pediatricians discourage moms to breast feed when their baby has hyperbilirubinemia?

ANSWER. I have not figured that or understood their reluctance. I know that there is a gender difference. But, perhaps, I am biased.

11. Thoughts on phototherapy for "borderline" needing day prior to hospital D/C to lower level so less need to Tx later or close?

ANSWER. I am not a fan of pre-emptive phototherapy. I individualize for a) travel distance, GA, family situations, holidays. And mostly ROR and family credibility.

12. What is your advice for persistent direct hyperbilirubinemia?

ANSWER. Unless there has been extensive fetal hemolysis or early proven neonatal hemolysis, it is a GI problem and needs extensive inquiry. Luckily, it is not neurotoxic, unless it is due to conditions such as hemochromatosis.

13. At what number should one turn off Photo Therapy light when baby is being treated for dat positive scenario?

ANSWER. I prefer bilirubin levels <12 mg/dL (well into the low-risk zone and verified by rebound level after 18-24 hours interval. IT experts have come out with apps, theoretically possible, regardless, one must validate with a rebound. After 24-hour interval, you can use a TcB (accuracy diminished for bilirubin >12.

14. Is home phototherapy practical for some neonates who are in lower risk category but exceeding light level threshold?

ANSWER. I think so. These babies continue to need medical supervision. Home phototherapy should be just a change of location. Family must assume Nursing tasks.



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15. Cut-off for admission, retesting, treating breast milk jaundice, who needs to stop BF?

ANSWER. I do not know your definition of BMJ. I do not think this a valid diagnosis anymore. NO one should stop BF. Treatment levels should be same regardless of how the baby is fed. Bilirubin is neurotoxic level at age 5 days, 15 days, or 25 days.

16. How would you use a transcutaneous bill meter in the outpatient setting?

ANSWER. Same as in the inpatient setting. If the baby's face has been exposed to sunlight, check the tcB probed at the sternum (which has been shielded by shirt).

17. Some places administer PhotoRx in mom's room, not NICU. Thoughts about safety/appropriateness of this?

ANSWER. An institutional practice. Same nursing protocol, plus parental education but not their responsibility.

18. Effect of light therapy on neonatal temp regulation?

ANSWER. These LED lights do not generate heat. So be careful to have a warmth on the side not exposed to light or that ambient temp is not cold. At least, no risk of burns. If an over-head source is being used, it may get blocked by phototherapy device.

19. How long can it last?

ANSWER. Jaundice? Usually 7-10 days. After 10-14 days you should worry about elimination disorders.

20. Level for phototherapy past 8 days. Bili 13 ok for 9+ days.

(See Answer to Q19)

21. Any new recommendations for Jaundice in preterm Infants?

ANSWER. I) See Maisels, et al Expert Recs (journal of Perinatology ii) EPIC EMR, BiliRecs. (ARAIN et al) on EMR tool. Anticipating results on Cycled phototherapy for babies <100g.

22. In severe IUGR of a late preterm or term infant, is it better to use the premie Bili calc if BW is closer to avg 32 weeks?

ANSWER. There no good evidence offered, yet. I would use similar risk levels as non IUGR babies other than checking serum albumin to assess if these are disproportionally lower. That would be an added risk.

23. Is bilirubin an antioxidant, and what is its purpose for the newborn? And is colostrum better at breaking down bili vs formula?

ANSWER. Bilirubin is the best antioxidant. Neither breast milk or colostrum nor formula breakdown bilirubin. The liver cells conjugate the vascular bilirubin to water soluble ones. The conjugated bilirubin the gut gets reabsorbed by the persistent fetal entero-hepatic circulation that remains active during starvation, decreased GI motility and the conjugated is unconjugated to return back to the circulation (as happens during fetal life). Certain amino acid (present in casino hydrolysate) interrupts this recirculation.



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24. When do we stop phototherapy? The Nomogram does not address this.

ANSWER. The Nomogram was designed to predict significant hyperbilirubinemia not the use of phototherapy. Please see Answer to Question 12. I like to see levels in the low-risk zone.

25. At my hospital we have blank lights and bili beds for phototherapy treatment, we always use both for treatment. Should we be only using one if the bili level is not super high?

ANSWER. You may wish to refer to COFN Phototherapy Technical Report [Bhutani VK, and the Committee on the Fetus and Newborn, American Academy of Pediatric. Phototherapy to prevent severe neonatal hyperbilirubinemia in the newborn infant 35 or more weeks of gestation. Pediatrics. 2011;128(4):e1046-1052]. Briefly, Blue light (at a dose of 25 to 35 microwatts/sq.cm. delivered either to ventral surface (overhead light) OR delivered to back (biliblanket delivers adequate light to 35% of the exposed body surface area. This is for routine use when you initiate treatment at the threshold level. For readmitted babies, you may wish to combine both surfaces (70%). No need to “rotate” the baby. Most current devices are similar and interchangeable other than the device meter that measures dose.