Reviewer's report

Title: Management of Neonatal Hyperbilirubinemia: Pediatricians' Practices and Educational Needs

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Reviewer: Thomas B Newman

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Valerie Flaherman, M.D., M.P.H. and Thomas B. Newman, M.D., M.P.H.

The authors of this study have conducted a survey that may provide useful information regarding pediatrician practices and beliefs about neonatal jaundice in New Jersey. Most striking to us were the variability in recommendations for exchange transfusion, with significant numbers apparently suggesting this treatment at lower levels than those recommended by the AAP, and the large number of respondents from all settings believing that TSB levels of 20-25 mg/dL put newborns at risk of kernicterus. We also noted that pediatricians appear to be more out-of-compliance with guidelines regarding infants post-discharge than about infants pre-discharge, which may be important, since this is an area in which concrete action can be taken. However, the paper is written in such a way that it is not clear that the results of the study actually support this conclusion. The following are suggestions for improving the clarity of the paper.

Major compulsory revisions:

1. Dates of the survey should be provided. The objective is to examine current practices, and yet the survey is in reference to the 1994 guidelines. The authors should explicitly state that they are comparing responses to the 1994 AAP hyperbilirubinemia guidelines, not the 2004 guidelines.

2. The authors should include more of the details of the survey instrument in the paper. Regarding follow-up for infants whose TSBs were not in treatment range, did the survey questions include specific values for TSB? Did respondents have a way to identify whether the TSB was close to the treatment threshold or not? If these questions were not asked clearly in the survey, then the data from these questions may be of little value and should be omitted. For the question in table 2 under the label of TSB testing with clinical jaundice post-discharge, were respondents given any information about extent of jaundice and/or age of infant? Clearly a 50-hour-old infant jaundiced to the thighs will need different treatment than a 6-day-old jaundiced to the chest. If the question was not clear, the results may not be useful.
3. Regarding the questions concerning risk factors for hyperbilirubinemia and kernicterus, I think it likely that respondents were describing a small or moderate significance of the risk factors discussed, rather than a small or moderate belief. If the authors want to sustain their conclusion that neonatal hyperbilirubinemia-related risk factors were underestimated by the majority of pediatricians, they should offer additional evidence in support of this conclusion.

4. Figure 2 is confusing and should be redone. For example, just looking at the black bars, it appears that 65% of pediatricians would do an exchange transfusion TSB < 20 mg/dL, and more than 50% at 20 mg/dL. This makes no sense. The problem is not just the numbers, this particular way of displaying the data would be confusing even if the numbers added up. One possibility for displaying the same data would be to use the same format as Figure 1, where at least the numbers appear to add to 100% in each panel. Another possibility would be to construct a graph with TSB on the x-axis, % of respondents on the y-axis, and three separate lines showing the relationship of TSB level to the cumulative % of respondents who recommend each treatment at 25-48 hours, 49-72 hours and >72 hours. If this second possibility is chosen, the authors should revise Figure 1 to present the information in a similar way.

* Some statements in the paper seem to contradict others. Information on the average length of practice described in section on Risk Factors for Hyperbilirubinemia and Kernicterus contradicts information in Table 1 and is not credible 6 years vs 3 years?. The last 2 sentences in the results portion of the abstract appear to contradict each other. The entire paper has typographical mistakes and grammatical errors that may cause erroneous understanding. This paper should be carefully proofread.

Minor compulsory revisions:

* Given that the authors are using the 1994 AAP guidelines, they must explicitly state whether they are using the guidelines for consider phototherapy or the guidelines for recommend phototherapy.

Discretionary revisions/suggestions:

Although commonly used, the term clinical jaundice is unclear or redundant. Jaundice is visible by definition; it is not clear what nonclinical jaundice would be.

Quality of written English:
- Needs some language corrections before being published -- THERE ARE FOUR AUTHORS--IF EACH OF THEM PROOFREAD IT, IT WOULD PROBABLY BE OK

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions
Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published

Statistical review: No