

appropriate historical information, and (4) the principle of biological plausibility.⁹

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Reply to Maiwald et al

To the Editor—We really appreciate the comments of Maiwald et al.¹ on our article² and would like to respond as follows.

1. The chlorhexidine (CHG) used in our study was in aqueous solution to make sure that the antiseptic property was solely of CHG, not of alcohol, and to assess contact dermatitis secondary to CHG as well. CHG in alcohol solution has been reported to increase the risk of skin irritation, which may be related to alcohol itself irritating the skin or to CHG inducing a reaction or hypersensitivity.^{3,4}

2. We included *Staphylococcus aureus* as a contamination because most infants (330/344 [96%]) in our study had blood cultures drawn on day 1 (on admission) to rule out infection. Skin flora organisms, that is, coagulase-negative staphylococci, or *S. aureus*, are very unlikely to be the cause of early-onset sepsis in newborns. For late-onset sepsis, *S. aureus* is one of the most common organisms, especially in neonates with a central venous catheter; however, we would consider this organism as a cause of infection on the basis of clinical circumstance, and if this is the case, antibiotics would be continued with an adequate duration, usually for at least 7 days. This is the reason we defined culture contamination in such a way that antibiotics have to have been discontinued before 3 days, together with clinical improvement.

3. We included blood cultures taken from umbilical catheters because umbilical catheterization (UC) is a very common procedure in neonates on admission and because the UC procedure is not like other central line access, as steps of procedure itself, including tapping, holding, and cutting the cord, are prone to contamination. There is also a chance of the skin antiseptic preparation not being followed correctly, for example, inadequate time to let antiseptic dry. We have seen blood culture contamination from UC on admission in our unit from time to time.

4. Regarding the statistical issue, we appreciate the comments. As mentioned in the “Discussion” of the original article,² because the incidence of blood culture contamination was lower than we expected, it is possible that the null hypothesis would not have been rejected if more infants had been enrolled.

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