Renal failure in the newly born

Sir,

Dr Brocklebank states that a bicarbonate dialysis solution would be preferred to the standard lactate solutions in some infants. \(^1\) Bicarbonate dialysis solutions are not manufactured commercially but can be prepared by the hospital pharmacist. We have not yet administered them to neonates but have used them in older infants and children in renal failure after cardiac surgery.

We use two solutions formulated to contain sodium and glucose concentrations similar to standard dialysis solutions (for example, Dianeal, Baxter Healthcare Ltd) (table).

<table>
<thead>
<tr>
<th>Table Two solutions used for bicarbonate dialysis</th>
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<tbody>
<tr>
<td><strong>Bicarbonate solution</strong></td>
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<tr>
<td>Glucose, anhydrous</td>
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<tr>
<td>Sodium</td>
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<tr>
<td>Chloride</td>
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<td>Bicarbonate</td>
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A basic solution containing glucose and sodium chloride in 950 ml of water is heat sterilised in glass containers and can be prepared in advance; 50 ml sodium bicarbonate 8.4% injection (IMS Ltd) is added immediately before use to complete the solution. Calcium and magnesium salts are not present in the bicarbonate dialysis solutions and may need to be supplemented by the intravenous route.

Further information on the solutions and their preparation are available from one of the authors (AJN).

Reference


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Prone or supine?

Sir,

Recently considerable interest has been shown in the question of whether babies should be nursed prone or supine. \(^1-4\) We feel that a word of caution should be added to the suggestions that it may be better to nurse preterm babies in the prone rather than in the supine position. We have seen two babies with notching of the alar margin seemingly caused by pressure from a nasal endotracheal tube.

One child was born at 30 weeks’ gestation, was...
Correspondence

ventilated for 11 days, and developed a notch of her left nostril. The other child was born after a gestation said to be 23 weeks, was intubated for 53 days, and also developed a notch of the left nostril (figure). Both children have required reconstructive surgery.

We feel that the most likely explanation is that these defects were caused by pressure from a nasal endotracheal tube producing ischaemic necrosis of the alar margin. Although this could happen whatever position the baby is nursed in, it is most likely to occur in a baby nursed prone when the endotracheal tube and its connections may be pushed upwards or to one side. Also the situation is more likely to pass unnoticed in this position. Both these children came from a special care baby unit where babies are commonly nursed prone for much of the time.

Reconstructive surgery for this defect is difficult. If the prone position is used for babies with nasal endotracheal tubes perhaps an awareness of this problem coupled with supporting the baby's shoulders on a small pillow or roll would lead to fewer injuries.

References


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