

Sir,

We read with interest the paper by Kite *et al.*¹ We would like to present our experience with C reactive protein, which we have been using for the past five years in combination with haematological tests (that is, abnormality observed in any of the following: total white cell and/or neutrophil counts, immature to total neutrophil ratio) for the diagnosis of neonatal infection. Estimations of C reactive protein were originally performed manually by latex agglutination test but later quantitatively by an automated analyser employing immunoturbidometry. The overall sensitivity of the initial C reactive protein in 'proven' neonatal infections (that is, positive blood and/or cerebrospinal fluid cultures) in over 200 such cases was 74%. In infections occurring in the first 24 hours it was lower (60%). When these results were broken down according to the isolated organism the sensitivity was 100% for fungal, 95% for Gram negative, but only 55% for Gram positive infections, respectively. This was due to low sensitivity not only to coagulase negative staphylococci (25%) but to *Staphylococcus aureus* (48%) while the sensitivity for other Gram positive cocci was higher. In infections due to *S aureus*, however, where the initial concentration of C reactive protein was low, it increased within one to three days of the diagnosis. With these staphylococcal infections the other haematological tests mentioned above gave greater sensitivity (71%). When C reactive protein was considered in combination with the haematological tests the overall sensitivity increased to over 95% (that is, neonates having at least one test abnormal). The concentration of C reactive protein was of little value in operated neonates with suspected sepsis and it was also falsely raised in the presence of significant perinatal asphyxia (although in both instances there was a falling trend in serial measurements). Using serial measurements of C reactive protein as a guide to successful antibiotic treatment we have been able to reduce the length of treatment and the number of neonates receiving antibiotics for over seven days as in our experience in most cases C reactive protein values became normal first, compared with the white cell count and differential. In our unit, however, the combined use of C reactive protein and haematological tests has not led to any significant reduction in the number of neonates being put on antibiotics.

Reference

- ¹ Kite P, Millar MR, Gorham P, Congdon P. Comparison of five tests used in diagnosis of neonatal bacteraemia. *Arch Dis Child* 1988;63:639-43.

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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 Two solutions used for bicarbonate dialysis

	Bicarbonate solution	Low sodium bicarbonate solution
Glucose, anhydrous	30 g/l	30 g/l
Sodium	140 mmol/l	130 mmol/l
Chloride	90 mmol/l	80 mmol/l
Bicarbonate	50 mmol/l	50 mmol/l

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

- ¹ Brocklebank JT. Renal failure in the newly born. *Arch Dis Child* 1988;63:991-4.

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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