

ARCHIVES OF DISEASE IN CHILDHOOD

The Journal of the British Paediatric Association

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Published by the
BMJ Publishing Group
Typeset by
Bedford Typesetters Ltd.
Printed by
The Devonshire Press Ltd.

Second class postage paid,
Rahway NJ. Postmaster:
send address changes to:
*Archives of Disease in
Childhood*, c/o Mercury
Airfreight International Ltd
Inc, 2323 Randolph
Avenue, Avenel,
NJ 07001, USA.

ISSN 0003-9888

LETTER TO THE EDITOR

Autologous umbilical cord blood transfusion

Editor—The therapeutic implications in the paper by Ballin *et al* are, we suggest, over optimistic.¹ As described by Strauss,² the risk from contamination by vaginal commensal bacteria is very substantial in the various papers reported during the past 20 years or so where harvesting of umbilical cord blood for this purpose has been reported. Predictably, some thousands of harvests in 'routine' circumstances, as well as dedicated research conditions, would be needed to confirm bacteriological safety; it is far from clear that in normal working circumstances microbiological safety of the blood can be assured. The technique described by Ballin *et al* is essentially experimental and, in the event of any infection developing in infants transfused such autologous stored blood, the professional, moral, and the legal position of haematologists, bacteriologists, and neonatologists concerned, would be hard to defend; it would be impossible completely to repudiate allegations of iatrogenic sepsis in a recipient with impaired defences.³ Moreover, in our practical experience, thrombosis of blood in the umbilical vessels is commonly activated before the 10 minutes delay Ballin *et al* found after cord clamping.

They do not state whether placental transfusion was allowed at preterm deliveries. As mentioned by Strauss and ourselves,⁴ and subsequently reported, there is a strong case, at least in preterm deliveries, for further investigations of allowing placento-fetal transfusion before interrupting the connection between the placenta and the newborn.

As Nelle *et al* have recently shown,⁵ a 'moderate' placento-fetal transfer of perhaps 20–30 ml blood/kg bodyweight is well tolerated at Leboyer deliveries of term infants, where the cord is not clamped until it has stopped pulsating. Perhaps that extra initial endowment would benefit preterm infants, by enhancing lung function and stabilising the circulation, and reducing needs for intensive care.

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1 Ballin A, Arbel E, Kenet G, Berar M, Kohelet D, Tancy A, *et al* Autologous umbilical cord blood transfusion. *Arch Dis Child* 1995; 73: F181–F3.

2 Strauss RG. Autologous transfusions for neonates using placental blood; a cautionary note. *Am J Dis Child* 1992; 146: 21–2.

3 Cairo MS. Neonatal neutrophil host defence. *Am J Dis Child* 1989; 143: 40–6.

- 4 Kinmond S, Aitchison TC, Holland BM, Jones JG, Turner TL, *et al*. Umbilical cord clamping and preterm infants: a randomised trial. *BMJ* 1993; 306: 172–5.
- 5 Nelle M, Zilow EP, Bastert G, Linderkamp O. *Am J Perinatol* 1995; 3: 212–16.

BOOK REVIEW

Neonatal Respiratory Disorders. Edited by Anne Greenough, N R Clifford Robertson, Anthony Milner. (Pp 516, £95 hardback.) Arnold, 1996. ISBN 0-3405-5242-5.

Faced with trying to do justice to a review of a 516 page definitive reference book, I dipped into *Neonatal Respiratory Disorders* with some trepidation. Concerned that I would be drowned by detailed description of pulmonary mechanics and respiratory function testing, I was pleasantly surprised to find the text was divided into four digestible sections. The first three cover the development, assessment, and use of respiratory techniques; the fourth takes up 60% of the book and covers neonatal respiratory problems. The book has a nice balance between clear and succinct text liberally accompanied by clear radiographs, tables, and diagrams which satisfactorily complement the text. Overall, it comprehensively covers the subject in a readable style, with sections on pathophysiology, clinical signs, investigation, treatment and complications. It is well referenced with each of the 32 chapters having a large bibliography.

However, some aspects are not as comprehensively covered as I would have expected for a definitive work of reference. Nitric oxide is not just the flavour of the month but has been shown to be an important physiological modulator of pulmonary vascular resistance, yet the section on the treatment of persistent pulmonary hypertension gives a mere eight lines to what the authors describe as: 'The most exciting new agent in this area.' Most neonatologists would agree that the intervention that has made the biggest impact on the outcome of respiratory disease in preterm infants is the use of antenatal steroids, yet in the section on epidemiology of respiratory distress syndrome, this is skipped over in summary form in just one paragraph, followed by the assertion that exogenous surfactant has made the greatest impact. In the chapter on chronic lung disease there is the briefest paragraph on fluid balance and nutrition, with no discussion of the role of good nutrition in prevention and amelioration.

Although the cover leads one to believe that it is edited by three leading neonatologists, most of this text has also been written by them with 26 of the 32 chapters contributed to by one or the other. This has the advantage of consistency but loses a little from the diversity that comes from wider authorship. Despite my minor disappointments with some sections, this book is certainly a text that will be readily opened and will provide a useful source of information for all those involved in neonatology from SHO to consultant. At a price of £95, it will not be at the top of most people's shopping list.

A J B EMMERSON
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NOTICE

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