In conclusion, parents are not present any more during ward rounds. However, we have not formally evaluated this approach. Parents are now formally informed about major issues after the main ward round by the consultants, in the presence of the doctor on duty. On minor issues, doctors and nurses inform the parents while they visit their baby.

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Prolonged hyperinsulinaemic hypoglycaemia in newborns with intrauterine growth retardation

Intrauterine growth retardation (IUGR) is an important cause of neonatal mortality, morbidity and poor neurological outcome.[1] Hypoglycaemia as a consequence of IUGR is a major risk factor for neurodevelopmental impairment. The factors that predispose these patients to hypoglycaemia include failure of counter-regulation, immaturity of the enzyme systems regulating glycogenolysis, gluconeogenesis, ketogenesis, reduced adipose tissue stores, hyperinsulinism or increased sensitivity to insulin.[2–4] Hypoglycaemia in patients with IUGR is usually thought to be transient, lasting for a few days. However, the precise duration of transient hyperinsulinaemic hypoglycaemia is unclear.

We report on our experience of prolonged hypofattyacidaemic hypoketotic hyperinsulinaemic hypoglycaemia (between 3 and 9 months' duration) in 20 infants with symmetrical IUGR who required treatment with diazoxide and chlorothiazide. A total of 20 consecutive patients referred to the London Centre for Paediatric Endocrinology and Metabolism, Great Ormond Street Children's Hospital NHS Trust, London, UK, with symmetrical IUGR (birth weight <3rd centile) and persistent hypoglycaemia (hypoglycaemia persisting for >10 days at the referring hospital) were recruited into the study. The mean birth weight and mean gestational age of the whole cohort were 2.1 kg and 38 weeks, respectively.

In each patient, the hypoglycaemia was characterised by inappropriate insulin secretion, increased glucose clearance (>10 mg/kg/min), blunting of the serum cortisol and glucagon counter-regulatory hormonal responses, and resistance to growth hormone as shown by low serum levels of insulin-like growth factor 1 and insulin-like growth factor-binding protein 3 and raised serum levels of growth hormone.

All patients required treatment with diazoxide (5–10 mg/kg/day) and chlorothiazide (7–10 mg/kg/day) to correct their hypoglycaemia. The mean age for starting diazoxide was 18 days. Each of these patients was then followed up at 3-monthly intervals to assess their response to diazoxide withdrawal. In 10 patients, administration of diazoxide and chlorothiazide was stopped at age 3 months, in seven patients at 6 months and in the remaining three patients at 9 months.

In summary, some infants with IUGR may continue to have hypofattyacidaemic hypoketotic hyperinsulinaemic hypoglycaemia beyond the first a few weeks of life. As this hypoglycaemia is associated with a lack of alternative substrates for the brain to use (such as ketone bodies), recognition and treatment of this group of patients is important. If unrecognised, this may have important implications for neurodevelopmental outcome of these patients. Further studies are needed to understand the underlying mechanism of these observations.

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Neonatal pure red cell aplasia due to anti-M

Haemolytic disease of the newborn (HDN) is caused by maternal immunoglobulin (Ig) G acting against antigens expressed on mature fetal red cells. Anti-M antibodies active at 37°C are a rare cause of HDN.[1] We report data, arising from the investigation of a neonate with severe transient pure red-cell aplasia, indicating that anti-M can cause hypoplastic HDN by inhibition of erythroid precursor growth, as frequently occurs with anti-Kell antibodies.[2]

A female neonate presented at 4 weeks of age with severe hypoplastic anaemia (haemoglobin 3.7 g/dl, reticulocytes 11×10^9/l) and mild jaundice (bilirubin 30 μmol/l). Direct anti-globulin test was negative. A bone marrow aspirate showed reduced but morphologically normal erythroid precursors. The patient was transfused twice before spontaneous increases in reticulocyte and haemoglobin values were noted at 74 days of age, the haemoglobin value reaching and remaining within normal limits until discharge from follow-up at 15 months.

The patient's blood group was O M+N+ and that of her mother A M−N+. At presentation, maternal serum contained anti-M with both IgM and IgG components.

In view of this finding, experiments were carried out to determine the role of anti-M in causing anaemia. With local research ethics committee approval and parental consent, marrow mononuclear cells from the patient and group O controls (ie, children with acute lymphoblastic anaemia in remission, where excess sample was available at a scheduled marrow examination) were cultured by standard assay (Methocult System, Stem Cell Technologies, Vancouver, Canada) and in the presence of inert serum (from the child's father) and dilutions of maternal serum. On the basis of 95% ranges derived from repeated analysis of two samples (data not shown), reductions in erythroid colony numbers (burst-forming and colony-forming units–erythroid combined) in the patient and in controls 2 and 3 with 10% and control 3 with 1% maternal serum were considered significant. No inhibition was seen in a patient with the NN phenotype (table 1). In experiments with absorbed maternal serum, the considerable inhibition of erythroid growth was abolished in one of two samples by prior absorption with group OM+N− cells but not by OM−N+ cells (data not shown).

The M antigen is expressed on immature erythroid precursors[3] and it is plausible that precursor cell growth would be inhibited by anti-M. Our patient's clinical picture and our in vitro data provide strong circumstantial evidence that anti-M should join anti-Kell as a cause of reticulocytopenic HDN.

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Table 1 Erythroid precursor colony numbers (per 5×10^4 nucleated cells) in patient and control bone marrow samples and the effects of both neutral serum and maternal serum (containing anti-M) at two dilutions

Subject	Type	Standard assay	+10% inert serum	+10% maternal serum	+1% maternal serum
Patient	MN	39	43	10 (−74)	NT
Control 1	MN	46	44	30 (−35)	44
Control 2	MN	49	40	21 (−57)	36 (−27)
Control 3	MM	63	73	32 (−49)	43 (−32)
Control 4	NN	21	20	26 (+24)	31 (+48)

NT, not tested.
Figures in brackets indicate the percentage change from the value obtained with the standard assay, where this was >20%.

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BOOK REVIEWS

Fanaroff and Martin's neonatal-perinatal medicine diseases of the fetus and infant, 8th edn, Vols I and II

Edited by Richard J Martin, Avroy A Fanaroff, Michele C Walsh. Elsevier: Published by Elsevier Mosby, 2006, £158.00 (hardback), pp 1820 (intrauterine growth retardation). ISBN 0-323-02966-3

Having formally accepted the invitation to review this new edition, which, I have to confess, had never been one of my favoured texts on neonatology (always favouring the UK books), I noticed the fact that the title included the term volumes 1 and 2. Oh dear! I had also forgotten the impending major football event in Germany, which was sure to fill my spare moments more readily than what I was now expecting to be an extremely detailed American textbook. This would appear not to be the ''grab from the shelf'' pocket handbooks that seem to be increasingly popular on special care baby units but are obviously limited in the depth of discussion they can undertake.

Fortunately, I was surprised to find this a very readable and useful reference text. The editors in their introduction note that trying to condense the practice of perinatal and neonatal medicine into even a two-volume, 52-chapter, 1800-page textbook is becoming quite a challenge, as several of the chapters are worthy of textbooks in their own right, but they have made an excellent job of achieving it.

Most chapters are organ or system based and begin with a scene-setting developmental embryology and physiological description of the relevant topic. These sections are interesting and informative, but probably slightly too detailed at times for most readers. Without laboriously listing the contents, there are interesting details on the history and emergence of neonatal care, including some fascinating details on the development of neonatal care and the bizarre concept of the ''premature baby and incubator sideshows'' common in the late 1890s. I suppose these were the forerunner of the current plethora of reality documentaries on all things medical. Sections that deal with ethics and practising evidence-based perinatal or neonatal medicine and neonatology in developing countries are covered well and are not often featured in other texts. Excellent chapters on perinatal ultrasound, intrauterine growth retardation, placental pathology, fetal effects of autoimmune disease, pregnancies complicated by diabetes, metabolic bone disease, neonatal eye disease, hearing loss and orthopaedics are available. Most of the chapters are well illustrated with clear tables, intermittent algorithms, mainly non-colour photos and appropriate examples of ultrasound, computed tomography scans and magnetic resonance images.

As always, my ultimate test for any textbook is whether it can help in providing the answers to a difficult clinical scenario or question. I compiled a list of several common and uncommon problems that always cause me consternation and that are often not dealt with well, and decided to put the authors to the test. Managing hypoglycaemia, investigating possible metabolic disease, problems with intersex, neonatal seizures, congenital infection, disorders of the head (shape and size), issues regarding surfactant treatment, neonatal neutropenia and neutrophilia, meconium syndromes, congenital urinary tract malformations, neonatal thyroid disease and many others were covered well and relatively concisely. I certainly came away with my knowledge improved and my thoughts clearer on these and other topics.

As with all American texts, some topics, particularly the chapters on legal issues and normal values, are less relevant to the UK reader, but legal issues still raise some important issues. The chapter on skin disease, although useful, could have been greatly improved by replacing the images used with colour ones. I would have preferred to see some evidence-based ''key points'' summary boxes in those areas in which the evidence is either convincing or confusing, but these are minor criticisms of an otherwise excellent text.

The price tag for this textbook is a hefty £158.00, and so represents a large investment for either the department or the individual. However, if you are looking for a new reference text that extensively covers the discipline of perinatal and neonatal medicine for both generalist and specialist, then I would certainly recommend including this book in your shortlist.

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Roberton's textbook of neonatology, fourth edition

Edited by Janet M Rennie. Churchill Livingstone: Published by Elsevier, 2005, £229.00 (hardback), pp 1372. ISBN 0-44307-355-4.

Having enjoyed the previous editions of *Roberton's textbook of neonatology*, I set out with high expectations of the fourth edition. I have to say that, on the whole, I was impressed. While providing good, in-depth cover of the essential bread and butter topics of neonatology, it also managed to touch on a wealth of additional subjects and many more unusual conditions as well. Indeed, I struggled (and failed) to find any major omissions.

Explicit accounts of epidemiology, organisation and evaluation of perinatal care and outcome after preterm birth set the scene for neonatology as it is known today. There are chapters on psychological aspects of neonatal care, counselling, parent support and legal and ethical issues. Anyone working in the neonatal field will appreciate how important these considerations are from day to day, and to be provided with such readable, considered text is a boon.

The prenatal life section provides good grounding in basic genetics and fetal and maternal issues in pregnancy. However, regarding the next segment on resuscitation, I feel the need to air my only definite gripe with the book. I was rather disappointed with the illustrations on pp 229 and 230, which were taken from an old version of the European Resuscitation Council Guidelines. I am concerned that they do not provide a good example of airway support and, worse, may be misleading to those inexperienced in neonatal resuscitation. One picture is mislabelled and both pictures show a pad under the baby's occiput rather than the shoulders, a rather clumsy-looking hold on the face-mask and no evidence of chin support or jaw thrust; all factors that are likely to hinder rather than enhance good airway management. Such basics are vitally important and should not be left open to misinterpretation.

In the short time since I started to review the book, I have repeatedly referred to section four, which provides an excellent coverage of the essentials of general neonatal care. In the section disorders of the newborn, each body system has its own chapter and is considered carefully and thoroughly. Worthy of particular mention are the invaluable tables in the malformation syndrome chapter, which list the possible associated syndromes for given clinical findings such as hypertelorism or small mandible. Other highlights, to name a few, include the colour photographs in the dermatology chapter, the clear and comprehensive coverage of metabolic disease and the useful examples of electroencephalogram readings and cranial ultrasound pictures in the neurology chapter. I was also delighted to find chapters devoted to infection, non-immune hydrops, ophthalmology, orthopedics and gynaecology along with those for the usual major body systems. Altogether, a robust core to this compelling book.

The closing sections of the book, excluding a glaring typographical error in the biochemistry chapter that suggests that a baby's circulating volume is only 10 ml/kg, provide excellent accounts of pathology, radiology, biochemistry and a concise pharmacopoeia. Nestled among these is a useful chapter that shrewdly describes iatrogenic complications alongside descriptions of practical procedures. A well-placed reminder to ''primum non nocere…''

My lasting impressions of this book are all very positive. For the few criticisms I have made, I have no doubt that some will think me pedantic. However, I have no hesitations in unreservedly recommending this textbook as a reference source to any paediatrician likely to be dealing with the newborn.

Go on and read it, you know you want to…

C L Smith

Pre-published book reviews

Book reviews that have been accepted for publication but have not yet been published in the print journal can be viewed online at http://adc.bmjjournals.com/misc/bookreviews.shtml