

portosystemic shunt had not resulted in any amelioration. Four months after removal of a 1.7 kg heavy spleen, platelets were at 550 000/mm<sup>3</sup> and all skin signs had disappeared. Even if it can be asserted that the thrombopenia is no real reason for concern, knowing that it has normalised is reassuring. We confirm improvement of pulmonary function and a positive effect on nutritional status, which was maintained even 5 years later. From the present article and our own results, it is clear that splenectomy can have many beneficial effects while of delaying the need for liver transplantation for several years. However, it should be performed only in highly controlled conditions, with provision for a rigorous follow-up and constant awareness of the danger of overwhelming sepsis.

**Stephanie Van Biervliet, Eddy Robberecht**  
Ghent University Hospital, Ghent, Flanders, Belgium

Correspondence to: Dr S Van Biervliet, Ghent University Hospital, De Pintelaan 185, 9000 Ghent, Belgium; [stephanie.vanbiervliet@ugent.be](mailto:stephanie.vanbiervliet@ugent.be)

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Competing interests: None declared.

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## More blood tests in paracetamol overdose?

We read with interest the recent article in *Archives of Disease in Childhood* concerning paracetamol-induced hepatotoxicity,<sup>1</sup> and discussed it at the Journal Club of the Derbyshire Children's Hospital's. We found the management algorithm useful for knowing which patients we need to refer to a specialist unit. However, we felt that some clarification is needed regarding the issue of repeat blood tests in two situations.

1. In Management A (paracetamol level below the treatment line and an overdose <150 mg/kg), the authors suggest observation and repeat blood tests in 24 h. Our current practice, as guided by Toxbase (<http://www.spib.axl.co.uk/toxbaseindex.htm>), is not to do any further blood tests on children who do not require treatment. They stay in hospital to see Child and Adolescent Mental Health Services, and are often discharged before 24 h. The authors did not present any evidence for repeating blood tests in those not requiring N-acetylcysteine (NAC). Adopting this practice would increase our current admission times.

2. Management B suggested 8–12-hourly blood tests while on NAC. Again, our current practice is to perform blood tests at the end of the NAC, which is usually about 16 h later. Depending on these blood test results, we make the decision whether or not to continue the NAC. We are not sure whether to perform blood tests sooner on all patients, or on some patients, and whether this would change our management.

It would be helpful to know the evidence behind these issues.

**Ruth Owen**  
Derbyshire Children's Hospital, Leicester, UK

**Helen M Sammons**

Correspondence to: Dr R Owen, Derbyshire Children's Hospital, Uttoxeter Road, Derby DE22 3NE, UK; [ruth.owen@doctors.org.uk](mailto:ruth.owen@doctors.org.uk)

Competing interests: None declared.

## Reference

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## Authors' response

The letter by Sanchez-Bayle *et al*<sup>1</sup> states that the administration of hypotonic saline to children with gastroenteritis is not, in their view, associated with an increased risk of hyponatraemia. This is in sharp contrast with our findings,<sup>2,3</sup> and those of others, showing that the risk is real. Unfortunately, the data provided by Sanchez-Bayle are insufficient for analysis and we look forward to their findings being published in full.

On the other hand, we also concluded from our studies that any isotonic solution used should contain added glucose. In two studies of children with gastroenteritis (n = 154), we have documented a 4% rate of hypoglycaemia (blood glucose concentration <2.6 mmol/l) at presentation.<sup>2,3</sup> In both studies, the hypoglycaemia responded to the 2.5% dextrose content of the intravenous fluid prescribed at either a slow or rapid rehydration rate. Much of the recent literature on isotonic versus hypotonic saline solutions for children ignores the need for glucose, and we welcome this focus.

**Kristen A Neville, Charles F Verge, Andrew R Rosenberg, Matthew W O'Meara, Jan L Walker**  
Sydney Children's Hospital, Randwick, New South Wales, Australia

Correspondence to: Dr K A Neville, Sydney Children's Hospital, High St, Randwick, NSW 2031, Australia; [kristen.neville@sesiahs.health.nsw.gov.au](mailto:kristen.neville@sesiahs.health.nsw.gov.au)

Competing interests: None declared.

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## Developmental assessment: practice makes perfect

Developmental assessment is an essential component of paediatrics, and is a key feature of the Member of Royal College of Paediatrics and Child Health (MRCPC) clinical examination. All candidates have a child development station, which accounts for 10% of the total mark. The "Hints and Tips" section of the Royal College of Paediatrics and Child Health *Guide notes for candidates* document states "The

**Table 1** Number of practice developmental assessments in preparation for examination

Number of practices	Candidates n (%)
0	16 (26%)
1	15 (25%)
2	15 (25%)
3	11 (18%)
5	3 (5%)
>10	1 (1.6%)

examiners are looking for an organised approach—and the best thing you can do, is to assess as many children as possible."<sup>1</sup>

Candidates attending preparatory clinical courses held 2–3 weeks before the MRCPC clinical examination sessions in February and June 2006 were asked how many times they had practised a developmental assessment of a child in preparation for their examination. Table 1 details the answers given by 61 candidates.

The results show that the candidates fail to understand that developmental assessment is a key component of the examination, and imply that these core skills are not being dealt with in current senior house officer training programmes. Three quarters of the candidates had practised no more than twice, with a quarter having performed no practice in child development assessments at all.

Developmental assessment should be considered a core competency in early paediatric training programmes. Candidates taking the MRCPC clinical examination need to ensure that they use all available opportunities to practise assessing child development. It is also clear that good organisation and preparation are the key factors in passing clinical examinations.<sup>2</sup>

The restructuring of competency-based training and assessment, as a result of the modernising medical careers reforms,<sup>3</sup> is an opportunity to increase developmental assessment training for paediatric trainees.

**Robert E Klaber, Steven B Welch**  
Department of Paediatrics, Imperial College London (St Mary's Campus), Wright Fleming Institute, Norfolk Place, London, UK

**Saul N Faust**  
University of Southampton, Highfield, London, UK

Correspondence to: Dr R E Klaber, Department of Paediatrics, Imperial College London (St Mary's Campus), Wright Fleming Institute, Norfolk Place, London W2 1PG, UK; [bobklaber@doctors.org.uk](mailto:bobklaber@doctors.org.uk)

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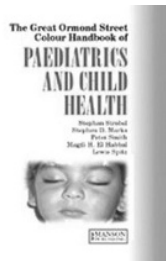
Competing interests: None.

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- 3 National Health Service. Modernising medical careers. <http://www.mmc.nhs.uk/pages/home> (accessed 11 Dec 2006).

## The Great Ormond Street colour handbook of paediatrics and child health

Edited by Stephan Strobel, Stephen D Marks, Peter K Smith, Magdi H El Habbal, Lewis Spitz. Published by Manson Publishing, London, 2007, pp 640, £49.95 (paperback). ISBN 1-874545-27-8



NOW, what I want is, Facts. Teach these boys and girls nothing but Facts. Facts alone are wanted in life. Plant nothing else, and root out everything else. You can only form the minds of

reasoning animals upon Facts: nothing else will ever be of any service to them. This is the principle on which I bring up my own children, and this is the principle on which I bring up these children. Stick to Facts, sir! (*Charles Dickens, Hard Times*)

Charles Dickens was not only a neighbour of Great Ormond Street Hospital (GOSH) but also one of its first celebrity supporters and a friend of Dr Charles West, the inspiration behind the hospital. Dickens publicised GOSH in his popular *Household words* magazine. If only he could see how the hospital he so publicly supported has produced a supreme yet compact textbook and atlas, which has provided these "Facts" in such a digestible way.

The book is unique in combining both reference text and over 1100 colour illustrations and photographs; as the foreword claims – a seemingly unrivalled collection. This beautiful production is largely testimony to the vast wealth of expertise and accumulated experience behind the book. Seventy three authors, mostly either previous trainees or consultants at GOSH, have collaborated together to encompass an expanse of medical and surgical specialties.

Each specialty chapter is presented in the familiar "medical sieve" format of incidence, aetiology, presentation, diagnosis, treatment, etc. Text is clear and concise and is accompanied by high definition photographs, radiological scans, graphs and diagnostic images as well as text box summaries. There is a comprehensive reference section at the end of each chapter, some referencing up to 21 papers, journals and texts. Each reference section is subdivided into categories, making them easy to find within each specialty. The book has a detailed 12-page index to aid cross-referencing.

The overwhelming aspect of this book is the broad and all-encompassing approach to paediatrics. Chapters concerning speech and language therapy, oral and dental surgery, otorhinolaryngology and neonatal paediatric surgery are included as well as traditional areas. One chapter of note was that covering

child protection. It included a practical guide on immediate and longer-term management of child abuse with Department of Health guidelines and relevant website list referencing.

Above all, this book's cover will never have to be dusted off; it will appeal to students in training, doctors in practice and the multi-disciplinary allied professionals. Yet, even though there is broad perspective, important detail is never sacrificed, making it useful in daily clinical practice and as a reference. Unlike some books, it not only shows common and rare disorders but also normal variants, highly reassuring to the paediatrician and useful to relay to worried parents.

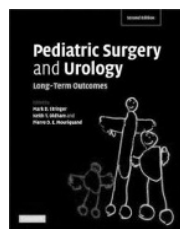
Perhaps Dickens did predict that the hospital he supported to such a degree would produce such an encyclopaedic, all-encompassing coffer of paediatric knowledge, appealing to so many professionals.

It has always been my opinion since I first possessed such a thing as an opinion, that the man who knows only one subject is next tiresome to the man who knows no subject. Therefore, in the course of my life I have taught myself whatever I could, and although I am not an educated man, I am able, I am thankful to say, to have an intelligent interest in most things. (*Charles Dickens, Wreck of the Golden Mary*)

Gita Modgil, Radha Modgil

## Paediatric surgery and urology. Long-term outcomes, 2nd edition

Edited by Mark D Stringer, Keith T Oldham, Pierre DE Mouriquand. Published by Cambridge University Press, Cambridge, 2006, pp 1096, £156.75 (hardback). ISBN 10: 0-52-183902-5



*Paediatric surgery and urology* is an impressive text providing a unique and comprehensive view of the entire spectrum of surgical and urological conditions found in neonatal and paediatric patients. It differs from other paediatric/urological reference books as it does not solely concern

itself with the usual disease epidemiology, clinical features, diagnosis and management but focuses on long-term outcomes.

The contents of the book's 1096 pages are anatomically and systematically ordered in nine parts and follow an opening section, which essentially provides a backdrop for the succeeding content. The opening chapters emphasise the importance of approaching paediatric surgery or indeed any area of medicine from a "long-term outcome" perspective. This is achieved by outlining not only the principles of such an approach but also the historical context from which it originates. The

clinical chapters which make up the remainder of the book explore, at first, conditions by anatomical region, which is followed by subjects such as transplantation and oncology.

While exploring the book, I focused on chapters of interest which may be encountered in my regular practice, for example necrotising enterocolitis (NEC) as a neonatology trainee. This chapter was well constructed and initially followed a predictable course and was annotated with purposefully positioned tables, x rays and summary lists. Following a detailed discourse on clinical incidence, diagnosis and treatment, the discussion of the potential short- and long-term outcomes with a summary and review of the contemporary literature followed. This chapter provided comprehensive detail on the pitfalls of the long-term management of NEC and provided evidence-based analysis of potential therapy. Although this example reflects only one chapter, the template used provides the basis for the remainder of the book and is matched in its quality.

Each section is contributed by a broad range of experts in their respected fields and from numerous world renowned centres. The authors are not exclusively from a surgical background, thus broadening the appeal of this book. Throughout the text, concurrent literature has also been extensively cross-referenced providing an excellent evidence base, which will provide confidence to the reader.

This book's purpose, as the preface outlines, is "to bring together and analyze what we currently know about the long-term effects of conditions and operative procedures in paediatric surgery and urology". It is surprising to discover a surgical textbook which may find its way onto the shelves of anyone who is involved in managing neonates, infants or children with the long-term effects of surgical intervention. It is even more rare to find a book which should be an essential reference for those practising in such a potentially broad field, from neonatologists to paediatric/adult physicians, surgeons and urologists. This book should provide the cornerstone of practice in these fields.

Jonathan W Davis

## CORRECTION

Owen R, Sammons H M. *Arch Dis Child* 2007;**92**:278. More blood tests in paracetamol overdose? This letter was mistakenly linked to an unrelated Authors' response by K A Neville, C F Verge, A R Rosenberg, M W O'Meara, J L Walker, resulting in incorrect authorship listed in the March issue. The only authors of the letter *More blood tests in paracetamol overdose?* are R Owen and H M Sammons. K A Neville, C F Verge, A R Rosenberg, M W O'Meara, J L Walker are the authors of *Added glucose to intravenous fluids for rehydration of children with gastroenteritis – Authors' response*. We apologise for this error.

doi: 10.1136/adc.2006.107078corr1

M P McMonagle and M T Corbally. An unusual case of anaemia and dyspnoea (*Arch Dis Child* 2007;**92**:223). The affiliation of the authors of this paper is Dublin, Ireland, and not the UK as published.

**G/THURS/GEM1 Table 1** Tests to exclude non-metabolic disorders

Test	% Patients	Test	% Patients
Virology	23.7	Toxicology screen	13.5
Bacterial culture	44.1	Carbon monoxide	0

**G/THURS/GEM1 Table 2** First-line metabolic investigations

Test	% Patients	Test	% Patients
Liver function tests	71.2	Urine organic acids	20.3
Glucose	33.9	Free fatty acids	6.8
Serum lactate	40.7	3-hydroxybutyrate	6.8
Acylcarnitines	23.7	CPTII mutation	6.8
Blood amino acids	20.3	McArdle's mutation	6.8
Urine amino acids	18.6	XP21 mutation	0

26.7 s). Wilson's disease, alpha-1-antitrypsin deficiency, haemochromatosis, viral and autoimmune hepatitis were all excluded. The ammonia was subsequently noted to be elevated (303  $\mu\text{mol/l}$ ) and testing for urea cycle defect confirmed a diagnosis of ornithine transcarbamylase deficiency and treatment was instituted, with resolution of the abnormal liver function tests. Subsequent mutational analysis confirmed a mutation of the ornithine transcarbamylase (OTC) gene (P225L).

The second case presented to hospital at 12 months of age, with a history of intermittent lethargy and vomiting for 1 month. She was noted to have elevated liver enzymes (ALT: 5143 IU, AST: 284 IU) and abnormal coagulation profile. Ammonia was slightly elevated (105  $\mu\text{mol/l}$ ). Viral and autoimmune hepatitis was excluded. Following a protein challenge, the ammonia rose to 224  $\mu\text{mol/l}$  and the urine organic acid profile detected increased orotic acid suggestive of OTC deficiency. This was confirmed by enzymatic assay of a liver biopsy. The abnormal liver function tests subsequently resolved with institution of dietary intervention.

X-linked OTC deficiency is the commonest urea cycle defect, with a predicted incidence of 1 in 14 000 births. Males may present with severe life threatening neonatal hyperammonaemia or with a milder late onset form. The presentation in females can be subtle. OTC deficiency should be considered in the differential diagnosis of children presenting with abnormal liver function tests, in particular with a subtle presentation in females.

Haycock G, Greenough A. Sudden infant death, bed-sharing and dummies: authors' reply. *Arch Dis Child* 2007;**92**:560. This was a comment on an earlier article in *ADC*: Fleming P, *et al*. New knowledge, new insights and new recommendations. *Arch Dis Child* 2006;**91**:799–801. It was not an authors' reply since the original article did not refer to any previous publications. We apologise for this error.

Owing to incorrect authorship listed in the online March issue the following letters are republished here.

### Intravenous rehydration of children with gastroenteritis: which solution is better?

Recent publications have suggested that hyponatraemia may develop in children with gastroenteritis treated with intravenous hypotonic saline.<sup>1–3</sup>

Even though we believe these papers have been well designed and developed, we cannot agree with their results for we are carrying out a similar study in our centre (81 cases up to now) that is leading to the opposite conclusion: our children with gastroenteritis did not develop hyponatraemia even though they were all treated with hypotonic intravenous solutions (0.3% saline with 5% glucose), while isotonic fluids were only used in "preshock" situations.

The incidence of hyponatraemia at the time of diagnosis is lower in our study (9%) than in those published previously (range 30–50%); this could be due to differences in climate or diet.

In the analysis, we separated children according to whether they were hyponatraemic, normonatraemic, or hypernatraemic at presentation. In the first group, hypotonic intravenous saline increased mean plasma sodium (from 132.4 (SD 2.07) to 135.3 (SD 2.21) mEq/l); it was decreased slightly in the second group, without leading to hyponatraemia (139.2 (SD 2.9) to 137.3 (SD 2.9) mEq/l), and also in the third group (150.4 (SD 4.12) to 140.6 (SD 3.6) mEq/l). No cases of hyponatraemia post-infusion were seen. Hoorn and colleagues,<sup>4</sup> in a sample of 1586 children, showed that the cases of hyponatraemia in their study were due to incorrect treatment, with higher volumes of fluid than needed.

In our study, 10 children (16.3%) presented with glucose levels lower than 70 mg/dl (40 mg/dl in one case). If these children were treated with isotonic fluids without adequate glucose, levels would never increase, with serious consequences.

These data are not definitive, but should be taken into consideration before selecting an appropriate solution in these patients. Further studies with different designs are required.

**M Sanchez-Bayle, A Alonso-Ojembarrena, J Cano-Fernandez**

Hospital Infantil Niño Jess, Madrid, Spain

Correspondence to: Dr M Sanchez-Bayle, Hospital Infantil Niño Jess, Avenida Menendez Pelayo, 65, Madrid 28009, Spain; msanba@teleline.es

doi: 10.1136/adc.2006.099093  
*Arch Dis Child* 2006;**91**:716.

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- 4 Hoorn EJ, Geary D, Robb M, *et al*. Acute hyponatremia related to intravenous fluid administration in hospitalized children: an observational study. *Pediatrics* 2004;**113**:1279–84.

### Intravenous rehydration of children with gastroenteritis: which solution is better? Authors' response

The letter by Sanchez-Bayle *et al*<sup>1</sup> states that the administration of hypotonic saline to children with gastroenteritis is not, in their view, associated with an increased risk of hyponatraemia. This is in sharp contrast with our findings,<sup>[2 3]</sup> and those of others, showing that the risk is real. Unfortunately, the data provided by Sanchez-Bayle are insufficient for analysis and we look forward to their findings being published in full. On the other hand, we also concluded from our studies that any isotonic solution used should contain added glucose. In two studies of children with gastroenteritis (n = 154), we have documented a 4% rate of hypoglycaemia (blood glucose concentration, 2.6 mmol/l) at presentation.<sup>[2 3]</sup> In both studies, the hypoglycaemia responded to the 2.5% dextrose content of the intravenous fluid prescribed at either a slow or rapid rehydration rate. Much of the recent literature on isotonic versus hypotonic saline solutions for children ignores the need for glucose, and we welcome this focus.

**Kristen A Neville, Charles F Verge, Andrew R Rosenberg, Matthew W O'Meara, Jan L Walker**

Sydney Children's Hospital, Randwick, New South Wales, Australia

Correspondence to: Dr K A Neville, Sydney Children's Hospital, High St, Randwick, NSW 2031, Australia; kristen.neville@sesiahs.health.nsw.gov.au

*Arch Dis Child* 2007;**92**:278

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- 3 Neville KA, Verge CF, Rosenberg AR, *et al*. Isotonic is better than hypotonic saline for intravenous rehydration of children with gastroenteritis: a prospective randomised study. *Arch Dis Child* 2006;**91**:226–32.



## Intravenous rehydration of children with gastroenteritis: which solution is better? Authors' response

Kristen A Neville, Charles F Verge, Andrew R Rosenberg, et al.

*Arch Dis Child* 2007 92: 278

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