References

1 **Olivares M**, Walter T, Osorio M, *et al*. Anemia of a mild viral infection: the measles vaccine as a model. *Pediatrics* 1989;**84**:851–5.
2 **O'Brien RT**, Santos JI, Glasgow L, *et al*. Pathophysiologic basis for anemia associated with Haemophilus influenzae meningitis: preliminary observations. *J Pediatr* 1981;**98**:928–31.
3 **Reeves JD**, Yip R, Kiley VA, *et al*. Iron deficiency in infants: the influence of mild antecedent infection. *J Pediatr* 1984;**105**:874–9.

Bamboozled by *cBNF*

On my drive into work a few weeks ago, BBC Radio 4's *Today* programme announced with some fanfare the publication of the first formulary specifically for children; the *Children's BNF*. As a user of *Medicines for Children* (*MfC*) for several years this surprised me. There were interviews with experts and a well argued case for the expertise and resources of the *BNF* being used to provide regular updated editions for all medical professionals working with children.

A week or two later it arrived on the wards in familiar *BNF* format with additional helpful comments on the management of common paediatric problems. In A&E this week, after seeing another 18 month old with viral exacerbation of asthma, I attempted to look up the dose of nebulised terbutaline in the *cBNF*. After a frustrating failure I went back to the *Medicines for Children*.

I then conducted a small and very unscientific study (n = 8) of paediatric SHOs, middle grades, and nurses to see how long it would take to look up the dose of nebulised terbutaline (commonly used this time of year) for an 18 month old with exacerbation of asthma in the ward's battered 1999 edition of *MfC* and the new *cBNF*. For the *MfC* the average time taken was 18 seconds (range 12–75 seconds). For the *cBNF* only one out of eight was able to find the dose (in 75 seconds) within the two minute time limit. The dosage in the *cBNF* is not on any page number listed in its index, and for those who wish to try the Terbutaline Test the answer's at the bottom of this letter.

The new *cBNF* is a muddy mix of formulary and clinical handbook, and does neither well. The *MfC* was a shining example of clarity and ease of use. Surely an excellent example of ''If it ain't broke, don't fix it''.

Answer: cBNF, p. 157, para 10.

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Human herpesviruses-6 and -7 and neurological morbidity

We have just become aware of your paragraph in Atoms[1] which commented on our accompanying paper, ''Human herpesviruses-6 and -7 each cause significant neurological morbidity in Britain and Ireland'' in the June 2005 issue of *Archives of Disease in Childhood*.[2]

Unfortunately, these editorial comments show a complete lack of understanding and misrepresent the findings in our paper.

The study did not set out to determine the frequency of serious neurological disease after HHV-6 and -7 infection and makes absolutely clear in the introduction that primary infection with these viruses is usually silent or sometimes results only in the mild childhood disease, exanthem subitum/roseola infantum. What the work did seek to find, again made plain in the introduction and discussion, was how much of serious neurological disease in children 2 months to 3 years old was caused by these two viruses. Rather than being a case series, our prospective study covered an entire population (that of Britain and Ireland).

In the event, the results have shown for the first time that in the British Isles population surveyed, an unsuspected 17% of cases arose from primary infection by these agents and, equally important, that HHV-7 was a hitherto unrecognised equal contributor to the total burden of such disease.

It is perhaps worth mentioning that your journal's anonymous reviewer of the manuscript for this paper characterised the work as ''a landmark study'' and when the paper appeared the *BMJ*, picked it out for highlighting and favourable comment.[3]

Under the circumstances, revision or retraction of your misleading appraisal is the least you can do to make amends so that your readers can understand our findings in the proper context.

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on behalf of N J Andrews, C M Verity, E Miller, E M Ross

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Competing interests: none declared

References

1 **Bauchner H**. HHV-6 and -7: how often do they cause convulsions. *Arch Dis Child* 2005;**90**:551.
2 **Ward KN**, Andrews NJ, Verity CM, *et al*. Human herpesviruses-6 and -7 each cause significant neurological morbidity in Britain and Ireland. *Arch Dis Child* 2005;**90**:619–23.
3 **Marcovitch H**. A virus, not a vaccine, causes infantile encephalitis. *BMJ* 2005;**331**:133.

Is Chandipura virus an emerging human pathogen?

Chandipura virus (CHPV), initially thought to be an orphan virus, was later reported to cause sporadic cases of fever with arthralgia,[1] Reye's syndrome,[2] and epidemic coma. Epidemic coma was reported as epidemic brain attack of childhood (EBAC) (supported by clinical features, normal CSF in all cases, neuroimaging, and response to treatment)[3–5] or Chandipura encephalitis (supported by virus isolation, identification by electron microscopy, immunofluorescence, and PCR).[6–9]

CHPV is ubiquitous in the Indian subcontinent (at least since 1955),[1] Srilanka,[10] and Africa (Nigeria, Senegal).[11 12] Human cases have only been reported from India. CHPV can infect many other mammalian species. The high prevalence of specific antibodies and viral RNA in the population of India combine to obscure any potential role of this virus in paediatric illnesses, and the matter remains unresolved.[13] Chandipura virus has been employed for several years in academic virology laboratories as a substitute for the animal pathogen, vesicular stomatitis virus, in research on interferon, for assay of retroviruses by pseudotype formation, and as a vehicle for antigen presentation. There have been no adverse consequences.[14 15]

Isolation and detection of CHPV, serological status, and presence of viral antigen in brain biopsy by immunofluorescence assay, while providing reasonable evidence of an association between CHPV and the outbreak,[16] fulfil neither the Bradford Hill criteria nor modified Koch's postulates.[3 17] Since there is histopathological evidence of an inflammatory reaction in the brains of mice,[16] but not in humans, it could be a passenger virus, a concomitant virus, or a pathogenic virus in humans.[3]

In an outbreak of EBAC, clinicians critically argued against the diagnosis of encephalitis and a pathogenic role of CHPV since the linkage between CHPV and EBAC was not proved.[3 5 17] In subsequent papers,[6 9 18 19] virologists avoided arguing against the ischaemia hypothesis or defending the diagnosis of encephalitis or the aetiological role of CHPV by ignoring that report, and did not even reference the articles.[3–5 17 21]

Evidence of atypical measles encephalitis in an identical epidemic by the same authors[20] was subsequently believed to be a laboratory contamination with measles vaccine virus.[21] Evidence from multiple studies from multiple laboratories is necessary before accepting CHPV as a human pathogen (as has been done for SARS).

Evidence of the presence of the virus, its genome, or antigen or antigen–antibody complex in the middle cerebral artery in at least some cases would confirm the aetiologic role of the CHPV in EBAC.

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References

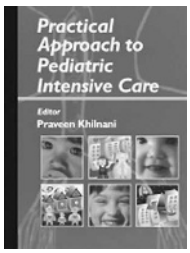
1 **Bhat PN**, Rodrrigues FM. Chandipura virus: a new arbovirus isolated in India from patients with febrile illness. *Indian J Med Res* 1967;**55**:1295–305.
2 **Rodrigues JR**, Singh PB, Dave DS, *et al*. Isolation of Chandipura virus from the blood in acute encephalopathy syndrome. *Indian J Med Res* 1983;**77**:303–7.
3 **Rao PN**, Kumar PA, Rao TA, *et al*. Role of Chandipura virus in an epidemic brain attack in Andhra Pradesh, India. *J Pediatr Neurol* 2004;**2**:131–43.
4 **Hussain IHM**. Viruses and epidemic ''brain attacks'': new agents, new challenges. *J Pediatr Neurol* 2004;**2**:117–19.
5 **John TJ**. Chandipura virus, encephalitis, and epidemic brain attack in India. *Lancet* 2004;**364**:2175.
6 **Rao BL**, Basu A, Wairagkar NS, *et al*. A large outbreak of acute encephalitis with high fatality rate in children in Andhra Pradesh, India, in 2003, associated with Chandipura virus. *Lancet* 2004;**364**:869–74.
7 **Hassler D**, Braun R, Schwarz TF. Deadly encephalitis epidemic in India caused by the Chandipura virus [in German]. *Dtsch Med Wochenschr* 2003;**128**:1817.

8 **Van Ranst M**. Chandipura virus: an emerging human pathogen? *Lancet* 2004;**364**:821–2.
9 **Chadha MS**, Arankalle VA, Jadi RS, *et al*. An outbreak of Chandipura virus encephalitis in the eastern districts of Gujarat state, India. *Am J Trop Med Hyg* 2005;**73**:566–70.
10 **Peiris JS**, Dittus WP, Ratnayake CB. Seroepidemiology of dengue and other arboviruses in a natural population of toque macaques (Macaca sinica) at Polonnaruwa, Sri Lanka. *J Med Primatol* 1993;**22**:240–5.
11 **Fontenille D**, Traore-Lamizana M, Trouillet V, *et al*. First isolations of arboviruses from Phlebotomine sand flies in West Africa. *Am J Trop Med Hyg* 1994;**50**:570–4.
12 **Traore-Lamizana M**, Fontenille D, Diallo M, *et al*. Arbovirus surveillance from 1990 to 1995 in the Barkedji area (Ferlo) of Senegal, a possible natural focus of Rift Valley fever virus. *J Med Entomol* 2001;**38**:480–92.
13 **Tselis A**. Isolation of Chandipura virus from a child with febrile encephalopathy. http://www.promedmail.org/pls/promed/f?p=2400:1001:7162837423564717958::::F2400_P1001_BACK_PAGE,F2400_P1001_ARCHIVE_NUMBER,F2400_P1001_USE_ARCHIVE:1202,20040806.2160,Y.
14 **Focosi D**. Homo sapiens diseases—subcellular life forms. http://focosi.altervista.org/pathoviruses.htm
15 **Rose NF**, Roberts A, Buonocore L, *et al*. Glycoprotein exchange vectors based on vesicular stomatitis virus allow effective boosting and generation of neutralizing antibodies to a primary isolate of human immunodeficiency virus type 1. *J Virol* 2000;**74**:10903–10.
16 **John TJ**. Chandipura virus, encephalitis, and epidemic brain attack in India. Author reply. *Lancet* 2004;**364**:2175–6.
17 **Bhaskaran CS**, Kamala K, Narasimham MVVL, *et al*. *Outbreak of viral encephalitis in Andhra Pradesh. Report of the Research & Analysis Cell, Department of Health, Medical & Family Welfare*. Government of Andhra Pradesh, India, 2003.
18 **Geevarghese G**, Arankalle VA, Jadi R, *et al*. Detection of Chandipura virus from sand flies in the genus *Sergentomyia* (Diptera: Phlebotomidae) at Karimnagar District, Andhra Pradesh, India. *J Med Entomol* 2005;**42**:495–6.
19 **Arankalle VA**, Prabhakar SS, Madhukar WA, *et al*. G, N, and P gene-based analysis of Chandipura viruses, India. *Emerging Infectious Diseases* 2005;**11**:123–6.
20 **Wairagkar NS**, Shaikh NJ, Ratho RK, *et al*. Isolation of measles virus from cerebrospinal fluid of children with acute encephalopathy without rash. *Indian Pediatr* 2002;**38**:589–95.
21 **John TJ**. Encephalopathy without rash, caused by measles virus? More evidence is needed. *Indian Pediatr* 2003;**40**:589–93.

BOOK REVIEWS

Practical approach to pediatric intensive care

Edited by Praveen Khilnani. Hodder Arnold, 2005, £69.00 (approx. €101, $118) (hardback), pp 826. ISBN 0340905824



Parveen Khilnani and an impressive authorship from across India and the USA have set out to produce a text emphasising the practical aspects of paediatric intensive care. It is described in the preface as the ''first comprehensive Indian textbook on pediatric intensive care''. Have Khilnani and his colleagues succeeded and will the book reach out to a wider European and North American audience? I read on with interest.

Using a systems approach the book is divided into 12 sections. In keeping with the title the first section is basic practical issues. Unfortunately a tone is set for the book immediately. It is plagued by spelling mistakes and quite fundamental factual errors. For example, five different formulae and tables are provided for estimating endotracheal tube size. One formula calculates a size 16 tube for a 4 year old rather than the correct size 5. Throughout the book the theme is of poor editing and a lack of focus. Allowing the important issue of cardiogenic shock to be limited to neonatal disease in a paediatric textbook is just one example, but one of many I'm afraid.

These failures are a great pity because there is much to admire, particularly in the sections on procedures which are complemented by clear diagrams and schematics. I found the information on airway obstruction and difficult intubation to be concise and informative and the emphasis on basic physiology throughout is commendable. I have a particular interest in the transport of critically ill children, and the relevant chapter based on the American Academy of Pediatrics guidelines is sound, with some useful detail relating to aeromedical work. The appendix to this chapter details appropriate medications, which is also useful, but the lack of international consensus on drug names and doses will be limiting for some.

The intensive care of children requires a multi-professional approach. The book has a short chapter on nursing issues which is rather superficial and fails to emphasise the impact of extending roles, for example in weaning from ventilation. A senior paediatric physiotherapy colleague who reviewed the chapters on mechanical ventilation felt that there was a repetitive discussion of principles, modes, and equipment which was both potentially confusing and unnecessary. A paragraph on the role of chest physiotherapy was also felt to be superficial and lacking in enough detail to benefit units where physiotherapy provision was limited.

Is there anything here for the generalist or trainee on attachment? If you have the time to hunt for useful information you will find it, but I would suggest there are better, more focused texts on the market for this audience.

So for the acid test—will this book become a well thumbed copy on the shelves of my intensive care unit? Unfortunately, the answer is no. There are just too many errors, too many important differences from established practice, and too little emphasis on multi-professional team working. In the end good intentions are nothing without attention to detail.

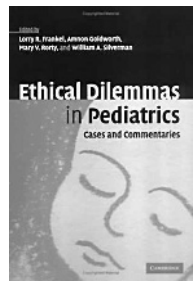
Acknowledgements

I would like to thank ML for her help with this review.

S Hancock

Ethical dilemmas in pediatrics: cases and commentaries

Edited by Lorry R Frankel, Amnon Goldworth, Mary V Rorty, and William A Silverman. Cambridge: Cambridge University Press, 2005, £45.00 (approx. €65, $80) (hardback), pp 302. ISBN 0521847443



Ethical problems are common. Nowadays doctors face a dual difficulty, deciding what is best for the child while ensuring that their actions do not result in complaint, criticism, or worse. Will this book help paediatricians? The simple answer is that it might. What it does is to spell out some clinical scenarios, and then discuss the ethical aspects.

The scenarios are mostly familiar to paediatricians: severe CNS impairment following hypoxia or cardiac arrest; decision making in children with complex cardiac or intestinal pathology; the management of malignancy and bone marrow transplantation; withholding food and fluids; whether or not to ventilate a 23 week gestation infant; the management of an infant with septic shock whose mother demanded herbal therapy.

The book has 27 contributors, all of whom have MD or PhD degrees; one is from the UK, but the rest are from the USA. A significant part of the book concerns issues that are unfamiliar or unheard of in the UK, such a healthcare organisation refusing to fund a paediatric surgeon (for a child with a Wilms' tumour who was then operated on by an adult surgeon), or refusing to sanction a plastic surgeon for a child whose face had been badly bitten by a dog. The gulf between medicine in the USA and the UK is further illustrated with the comment regarding a case of intentional poisoning (laxative abuse) when it is gloomily noted that the management of Munchausen syndrome by proxy is ''often not financially rewarding for the health care and other practitioners involved''.

The discussions of each clinical scenario vary from being mundane and self-evident to thought provoking and helpful. Unfortunately an undue proportion of comments are jargon ridden and unfathomable. For example:

> ''Seeking a ground common to and intelligible to holders of utilitarian, aretaic or deontological theories, it avoids a deductive or top-down approach to ethical decision making.''

or

> ''If 'principilism' represents an ecumenicism of theory, casuistry as the term is used in bioethics represents a countervailing inferential intuitionism.''

or

> ''I analyze their encounter and its outcome as being the product of an inapposite model of ethical reasoning that cannot be made more compelling by politicizing adherence to principles.''