PostScript

LETTERS

Indicators of mortality from meningococcal disease

Dr Riordan's study on promptness of antibiotic treatment for meningococcal disease showed that "door to needle" time to administration of appropriate antibiotic for children decreased clearly from before to after a teaching intervention was given to nurses and doctors.¹ That this decrease occurred only for the children who had typical rash on arrival is not a surprise, given that the intervention was a lecture that focused on recognition of the rash. But could the intervention be different from that? Petechial rash is the sign that, although not pathognomonic, is highly suggestive of meningococcal disease. I suspect that in a substantial proportion of those children who had no rash on arrival the diagnosis was actually investigated or made only when the typical rash appeared.

Notwithstanding the decrease in door to needle time, it is disappointing to learn from Riordan's study that the case-fatality ratio of cases diagnosed after the intervention was actually higher than before (11.9%, 95% confidence intervals (CI) 4.5% to 26.4% versus 6.1%, 95% CI 1.1% to 21.6%), with a risk ratio of 1.96 (95% CI 0.41 to 9.49). Because the numbers were small one cannot rule out the role of chance to explain this finding, but one can also speculate that the decrease in door to needle time was not the major determinant in terms of risk of death from meningococcal disease. It is well possible that early recognition of petechiae by parents or caregivers and their understanding that this finding requires prompt intervention by a doctor would have a higher impact on mortality from meningococcal disease. "First manifestation to first examination" time could therefore be a better indicator of prognosis. If this is so, focus on teaching interventions should be shifted from physicians and nurses to parents and caregivers.

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Author's reply

I was interested to read Dr S de A Nishioka's letter. He wonders which interventions we should focus on to decrease the mortality from meningococcal disease. In a review of deaths from meningococcal disease, the most frequent and lengthy delays were parents not recognising that their child was seriously ill and doctors failing to make the diagnosis.¹ We therefore need to improve both of these.

Early antibiotic treatment decreases the risk of dying from meningococcal disease.² Strategies to improve this are thus worthwhile. However, in a single centre these cannot be expected to show a decrease in mortality.

Dr de A Nishioka's suggests "first manifestation to first examination time" might be a useful prognostic indicator. However, children with severe meningococcal disease become unwell rapidly and present to hospital sooner. In a previously reported cohort of children with meningococcal disease,³ median "first manifestation to first examination time" was significantly shorter in those who died compared with survivors (12 hours versus 17 hours; $p=0.012$). The usefulness of this time is thus confounded by disease severity. However, early recognition of meningococcal disease by parents can lead to better outcomes.⁴

I agree that parents require accurate and appropriate information about meningococcal disease, but improvements are also required in the early recognition and treatment of children with this potentially life threatening disease.⁵

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BOOK REVIEW

Medical toxicology: a synopsis and study guide

S Schonwald. (Pp 893; \$89). Lippincott Williams and Wilkins, 2001. ISBN 0-7817-2613-1.

This book has everything, which is the main problem.

Its opening statement, that there are an estimated 4-5 million cases of poisoning per annum in the USA sounds dramatic, but this is immediately qualified by the admission that 75% are treated at home (North American mums seemingly use ipecac syrup frequently), and that less than half of cases attending hospital require admission. In attempting therefore to cover every possible toxic compound available in American society, the book presents a smorgasbord of information, but at 862 pages of 9 point text with only two diagrams (the nomograms for paracetamol and aspirin serum levels), this is pretty indigestible stuff.

I did immediately warm to the layout of the book. Divided into "Principles", "Drugs", "The home", "Chemical products", and "Natural toxins", each entry is well presented in bite sized pieces with the same subheadings; introduction, pathophysiology, pharmacokinetics, etc. Unfortunately, this was marred, for me, by the multiple choice questions in a shaded box that followed each section. These provided the first irritation as I am used to shaded boxes containing summaries of the text and kept referring to them first. Combining these questions at the end of each chapter would have condensed the text and prevented them interrupting the flow.

The entrée (principles of medical toxicology) serves up a good, if somewhat simplistic summary of the basic approach to the poisoned patient, gut decontamination, antidotes, etc.

The main body of the text, describing the drugs themselves, is divided into Analgesics, Anti-infectives, Drugs of abuse and then interestingly, Systems toxicology, for example, haematology, cardiovascular, etc and Receptor toxicology, for example, serotonin, histamine.

Three final offerings cover "The home" including food toxicology, "Chemical products", including chemical warfare and radiation toxicology!, and finally "Natural toxins"—that is, animal and plant including herbal medicines.

A synopsis is defined in the Oxford Concise English Dictionary as "a brief account dispensing with needless details".

Unfortunately, many of the entries in the book are redundant. When did you last treat a case of ethchlorvynol poisoning, or someone bitten by a Gila monster?? What is needed in the emergency department is rapidly accessible, up to date management of the effects of poisoning by a particular compound. This is where computer based

information such as Toxbase really comes into its own. Much of the information in this book is interesting but instantly forgettable, especially where so many toxins are presented.

Written by the director of toxicology in the department of emergency medicine in Ayer, Massachusetts, the book tries to appeal to toxicologists and emergency physicians alike.

The blurb on the back cover promises to help the reader; "Assess the problem, identify the toxin, select the appropriate treatment, improve outcomes, and review for subspecialty certification in toxicology". I was left feeling that it only succeeds in the last of these worthy aims.

P Burdett-Smith