Calcium for hyperkalaemia in digoxin toxicity

In their article on the management of hyperkalaemia, Dr Ahee and Dr Crowe recommend, “hyperkalaemic patients taking digoxin should be given calcium as a slow infusion over 20 to 30 minutes”. I would caution against this advice.

Hyperkalaemia is usual in acute digoxin toxicity, and not uncommon in chronic digoxin poisoning. Additionally, because it undergoes significant renal clearance, digoxin toxicity is probable in a patient with acute renal failure. Therefore, patients taking digoxin who present with ECG changes and hyperkalaemia should be considered digoxin toxic.

It is widely held that calcium administered in the setting of digoxin toxicity will probably induce arrhythmia or cardiac arrest. Immediate reversal of digoxin toxicity with digoxin antibody (Fab) fragments will rapidly reduce the serum potassium and is the treatment of choice. In the absence of Fab fragments, treatment against this advice.

Hyperkalaemic patients taking digoxin who present with ECG changes and renal failure. Therefore, patients taking digoxin should be given calcium as a slow infusion over 20 to 30 minutes”. I would caution against this advice.

What about patient satisfaction following acute ankle sprains?

Investigation of the effectiveness of double Tubigrip for acute grade 1 and 2 ankle sprains through a randomised controlled trial is commendable. However, I feel compelled to comment on aspects of this study. It is interesting that 85 (17.5%) of the 485 patients approached to take part in this study expressed a treatment preference and therefore were not randomised. Given that only 197 patients completed the study, the 85 expressing a treatment preference is equivalent to a third arm of the study.

In the absence of Fab fragments, treatment with magnesium sulphate rather than calcium should be considered. Magnesium sulphate has been shown to be effective for digoxin induced arrhythmias and there is laboratory and some clinical evidence to suggest that magnesium exerts similar effects to that of calcium on the trans-membrane current against this advice.

M Davey
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References

Table 1

<table>
<thead>
<tr>
<th></th>
<th>DTG group</th>
<th>No DTG group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preference for DTG (%)</td>
<td>73 (76.8)</td>
<td>77 (77.8)</td>
</tr>
<tr>
<td>Preference for No DTG (%)</td>
<td>22 (23.2)</td>
<td>22 (22.2)</td>
</tr>
<tr>
<td>Satisfaction score (average)</td>
<td>8.2</td>
<td>8.2</td>
</tr>
</tbody>
</table>

Two cases of near asphyxiation in children, using non-releasing plastic garden ties

We read with interest the emergency casebook featuring two cases of near asphyxiation. It is our practice to admit all cases of near strangulation who present early with signs or symptoms in keeping with the history for a period of observation. We adopt this policy on the basis that it is possible to miss occult, significant upper airway pathology in victims of near strangulation and airway obstruction can present as late as 36 hours after such an event. In addition it is possible to overlook visual impairment in such patients as subtle changes in visual acuity may not initially be apparent. Cases of near asphyxiation in children are not widely reported in the literature and therefore it is difficult to have an evidence based admission/discharge policy. Are we being over cautious?

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References

Author’s reply

We agree entirely, the experience with asphyxiation in children is limited and therefore there is no evidence base as to what is the most appropriate admission/discharge policy. At the Birmingham Children’s Hospital we are fortunate in being able to observe less sick children in an accident and emergency based observation bay, in case they get delayed respiratory symptoms, and therefore do not need to admit many children to the paediatric wards.

We were interested to note the reference to subtle changes in visual acuity by Baldwin et al. This suggests it would be wise to consider visual acuity testing a few weeks after such an incident and we would certainly look towards arranging ophthalmological follow up with these patients in the future.

N Makkwana
Royal Wolverhampton NHS Trust, Wolverhampton, UK

Reference

Tuberculous osteomyelitis

Yuen and Wong describe a case of tuberculous osteomyelitis in a foot ulcer. However, in many instances, the diagnosis of tuberculosis is difficult to verify. For instance, acid fast bacilli may not be identified on biopsy or may be non-tuberculous in origin. Additionally, subsequent culture confirmation can take several weeks or may fail completely, because of the fastidious nature of TB.

Although the reliance on clinical suspicion is the basis for the diagnosis of many cases of TB, definitive diagnosis is desirable in view of the long term nature of treatment. It is also important to ensure that the organism is not resistant to the chemotherapeutic regimen being used, particularly with the increasing incidence of multidrug resistant TB strains. A number of molecular techniques have been developed to facilitate this. The use of the polymerase chain reaction to amplify specific TB DNA sequences permits a rapid confirmation of the diagnosis and an estimation of drug sensitivity. These techniques have been successfully used on both clinical specimens and culture material. Thus, acid fast bacilli can be rapidly identified as Mycobacterium tuberculosis and an estimation of rifampicin sensitivity can be obtained in a matter of days, free from the constraints of waiting up to several weeks for the standard culture to grow. These techniques should therefore be considered where appropriate, particularly if the clinical findings are subtle or atypical.

T B L Ho
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References

Authors’ reply

We thank Dr Ho for his comment on our article reporting a young patient with tuberculous osteomyelitis. We wrote the article from the perspective of emergency medicine. Although polymerase chain reaction (PCR) is a good adjunct to microbiological culture for diagnosing mycobacterium tuberculosis, it is not available to the majority of emergency physicians in Hong Kong. None the less, we should discuss it briefly so that our article is more informative to readers.

Without argument, PCR provides an opportunity for early diagnosis and treatment. However, we should also note the limitation of the PCR especially when the PCR result is negative.

In 1998 Shah et al reported the accuracy of the AMPLICOR PCR test in diagnosing mycobacterium tuberculosis in tissue and body fluid specimens. In this study, culture proof was adopted as the gold standard for diagnosing tuberculosis. Although 1032 patients were included in this study, only 34 specimens were positive for tuberculous. Therefore, the sample size was too small and the 95% confidence interval of the sensitivity was too wide to suggest that PCR would not miss the diagnosis of mycobacterium tuberculosis. In this study, the PCR had a sensitivity of 76.4%, a specificity of 98.8% when results were compared with the gold standard. With the high specificity, PCR is a good “rule in” test. However, PCR should not be used as a “rule out” test because of the high false negative rate.

In 2000 Lim et al reported the accuracy of the AMPLICOR PCR test in diagnosing pulmonary tuberculosis in smear negative respiratory tract specimens. Again, the PCR test had a low sensitivity of 44% and a high specificity of 99%.

With evidence from both studies, a positive PCR test result facilitates early diagnosis, but a negative PCR test result cannot exclude mycobacterium tuberculosis. At the moment, microbiological culture remains the gold standard for diagnosing tuberculosis and a high index of suspicion for tuberculosis is the key to diagnosis.

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Journal clubs in clinical medicine

Journal clubs in clinical medicine have long been recognised as a useful tool to keep up to date with new developments. More recently they have been used as a tool for the teaching of critical appraisal, which for emergency medicine trainees in the UK is an important part of their final fellowship examination.

Since the inception of our journal club we have noticed a subtle change in both the quantity and quality of papers in the journals that we chose to review. This made it more difficult to combine both the educational value of critical appraisal and keeping up to date with the relevant advances in our specialty so that we can apply this to our practice of evidence based medicine.

To address this we undertook to review our choice of journals to try to increase our yield of relevant articles. After finding a complete journal list from Medline a consensus opinion was reached on the basis of relevance to practice, past experience of quality of papers, and personal choice. The number of times per year that the journals, or groups of journals, are reviewed depends on the number of issues per year and the likelihood of finding papers relevant to emergency medicine in them.

The complete list of journals and their review rates is shown in table 1.

We believe that all departments with a journal club should regularly revise their selection of journals in order to increase the value of this important educational process.

Department of Emergency Medicine, Manchester Royal Infirmary, Oxford Road, Manchester M13 9WL, UK

Correspondence to: Professor K. Mackway-Jones
**A misdiagnosed fracture of the calcaneum**

I am writing in response to the interesting case report of “A misdiagnosed fracture of the calcaneum”. The author, having accepted the original diagnosis of partial Achilles tendon rupture was incorrect, suggested on expanding the criteria for radiological assessment in doubtful clinical cases. It was obvious from the history that the injury was sustained as a result of minimal trauma, in a patient with significant risk factors for osteoporosis. Coupled with an examination finding of a palpable gap in the Achilles tendon/calcaneal complex, the incorrect diagnosis was made solely on a negative Simmonds test. With these clinical findings and the published lateral radiograph of the calcaneum, I do not accept our shortcomings. Please note the correct examination. The last thing we need is to radiology, but the importance of taking a good clinical history that the injury was sustained as a result of minimal trauma, in a patient with significant risk factors for osteoporosis.

### Table 1 Frequency of journal review

<table>
<thead>
<tr>
<th>Journal</th>
<th>Reviews per year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Emergency Medicine</td>
<td>4</td>
</tr>
<tr>
<td>Annals of Emergency Medicine</td>
<td>4</td>
</tr>
<tr>
<td>British Medical Journal</td>
<td>4</td>
</tr>
<tr>
<td>Lancet</td>
<td>4</td>
</tr>
<tr>
<td>Medical journals (Archives of Internal Medicine, Annals of Internal Medicine, Clinical Medicine, Chest, Cardiology, Circulation, etc)</td>
<td>4</td>
</tr>
<tr>
<td>New England Journal of Medicine</td>
<td>4</td>
</tr>
<tr>
<td>Paediatric Journals (Archives of Disease in Childhood, Pediatric Emergency Care, etc)</td>
<td>4</td>
</tr>
<tr>
<td>American Journal of Emergency Medicine</td>
<td>3</td>
</tr>
<tr>
<td>Emergency Medicine Journal</td>
<td>3</td>
</tr>
<tr>
<td>JAMA</td>
<td>3</td>
</tr>
<tr>
<td>Intensive care journals (Anaesthesia and Intensive Care, Critical Care Medicine, Intensive Care Medicine, etc)</td>
<td>2</td>
</tr>
<tr>
<td>Journal of Trauma</td>
<td>2</td>
</tr>
<tr>
<td>Resuscitation</td>
<td>2</td>
</tr>
<tr>
<td>Anaesthetic journals (Anaesthesia, Anaesthesia and Intensive Care, British Journal of Anaesthesia, etc)</td>
<td>1</td>
</tr>
<tr>
<td>Burns</td>
<td>1</td>
</tr>
<tr>
<td>European Journal of Emergency Medicine</td>
<td>1</td>
</tr>
<tr>
<td>Injury</td>
<td>1</td>
</tr>
<tr>
<td>Injury Prevention</td>
<td>1</td>
</tr>
<tr>
<td>Nursing journals (Accident and Emergency Nursing, Emergency Nurse, Journal of Emergency Nursing, etc)</td>
<td>1</td>
</tr>
<tr>
<td>Sports journals (American Journal of Sports Medicine, British Journal of Sports Medicine, etc)</td>
<td>1</td>
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</tbody>
</table>

**References**


**Screening for alcohol misuse**

The Paddington Alcohol Test (PAT) confers considerable advantage over the CAGE as the accident and emergency (A&E) screen for alcohol misuse. Haddad et al’s commendable study identified 28% (out of 413) A&E attendees as having an alcohol related problem. A pilot study using the CAGE, run in our department a decade ago, had a very low pick up rate, which was one of the reasons behind the development of the PAT. Our recent study,\(^1\) using the PAT, had an overall detection rate of 6.4% rising to 9.8% in the third month after intensive audit and feedback. Four features could explain the discrepancy:

1. In the PAT study only 61.1% of patients had presenting complaints mandating the test. The detection rate for this group (in month 3) was 14.3%.
2. In this group, 62 patients (of 286) were missed—that is, did not have the test applied.
3. The Hadida et al study identified a number of misusers by “staff assessment”. The basis of this assessment is unclear. Two questions are paramount: (a) Was an alcohol history taken?, (b) Did the patient agree with the doctor/nurse’s assessment?
4. The Hadida et al study effectively had an extra member of staff run the screening protocol—whereas PAT usage simply reflects our own routine practice, with no extra staffing.

Studies suggest the CAGE detects dependent rather than hazardous drinkers,\(^2\) a point rightly discussed by Hadida et al, and emphasised elsewhere.\(^3\) Compared with dependent drinkers, hazardous drinkers (earlier on in their drinking history) are more likely to respond to brief interventions.\(^4\)

The PAT is designed specifically for use by A&E practitioners, to detect hazardous as well as dependent drinkers. Detection is not indiscriminate but guided by “The Top Ten” presenting conditions, whereby screening is targeted and most effective. Furthermore, question 3 of the PAT—“do you feel your current attendance at A&E is related to alcohol?”—helps reinforce the idea that their presenting problem may be alcohol related, even if the patient were to refuse help on this occasion.

As the number of A&E departments that work with alcohol health workers increases it is hoped that the worth of the PAT will be further recognised.

**J Huntley, C Blain, R Touquet**

**Correspondence to:** Mr R Touquet

**Author’s reply**

We thank Huntley and colleagues for their comments on our paper.\(^5\) They make the point that the Paddington Alcohol Test “is a better instrument for screening for alcohol problems in the emergency department than the CAGE.” We would not take issue with this.

The main aim of our study was not to investigate the sensitivity and specificity of...
different screening tests, but rather to show the feasibility of screening high proportions of patients as a first step towards intervention. We successfully screened 413 of 429 patients (96%), a much higher proportion than other studies.2 As Huntley et al point out, this may reflect the fact that we effectively had an extra member of staff to run the screening. In addition we chose to recruit a representative flow sample of patients rather than consecutive attenders.

A further aim of our study was to ascertain whether different screening instruments identified different groups of patient. Our results suggested that they did, and we suspect that this would have been the case regardless of the precise screening instrument used in the study. The main point is that patients presenting to the emergency department with alcohol problems are a complex and heterogeneous group. Blanket approaches to treatment are unlikely to work and we need to target specific interventions to those patients who might most benefit.

As regards assessment tools, a brief alcohol history was taken by the researcher interviewing the patient. The staff assessment consisted simply of the interviewer asking the patient agreed with the staff assessment in just over one third of cases (29 of 76). There was a higher level of agreement between the patient and the CAGE assessment, with agreement in two thirds of cases (49 of 75).

We strongly support the use of gold standard tools such as the PAT and the CAGE to screen for alcohol problems in the emergency department. However, for this to be a useful process all emergency department attendees need to be screened. Screening programmes that miss significant numbers of patients are unlikely to be worthwhile.

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K Mackay-Jones
Department of Emergency Medicine, Manchester Royal Infirmary

Correspondence to: Dr N Kapur, University Department of Psychiatry, School of Psychiatry and Behavioural Sciences, Manchester Royal Infirmary, Oxford Road, Manchester M13 9WL, UK

References


**BOOK REVIEWS**

**Advanced paediatric life support, 3rd edn**


The Advanced Paediatric Life Support manual was born in the early 1990s. As with all new borns, it was difficult to tell how it would develop. However, its parents hoped that it would develop into a practically widely used entity. As a candidate on the first Manchester APLS course in 1992, the manual existed as a series of handouts from various paediatric specialists. Many met the aims of being practical, while others were too inclusive.

The Manchester APLS manual first spoke to the world in 1993. Its highly practical approach proved to be extremely popular. Therefore, building on the feedback from the Advanced Paediatric Life Support Courses the manual began to walk with the publication of its second edition in 1997.

The manual is now ready to start school and interact with other organisations. The 3rd edition has affiliated itself with the European Resuscitation Council, the Resuscitation Council of South Africa and Australian Advanced Paediatric Life Support Course. This latest edition has undergone some refinement. The initial two parts of the manual have had only minimal revision bringing them into line with current resuscitation practice and add further practical advice such as the use of semi-automatic defibrillators in children. The main revision has been in the seriously ill child section. Chapter headings have been changed to reflect the presenting problem of children. Layout and presentation of this section has changed dramatically.

The final sections on trauma and practical procedures have had only minimal alterations. It is noteworthy that with the affiliation to Australia, an additional appendix has been added dealing with issues which have been faced with junior doctors in the resuscitation room of our Orthopaedic Hospital with the APLS manual open correcting my actions!

There are some disappointments with the new text. As with a child starting school, there is an inordinate amount of spelling and grammatical errors contained within the new sections. While these seldom directly affect the understanding of the manual, they are extremely irritating. I have mixed feelings about the revision to the serious illness section. While there is much more information contained within the chapters compared with the 2nd edition, the revisions have made the chapters less easy to read and more like a standard textbook. There is also an excessive amount of repetition in each of the chapters.

However, these are minor quibbles in a text which has become the gold standard for paediatric resuscitation in the UK.

The strength of the APLS manual has been that it is available to buy without actually undertaking the course. It is also continually updated by feedback from individuals undertaking these courses. The manual will continue to grow and reflect changing patterns of care in paediatric emergencies. Long may it continue.

J Ferguson

*Save lives, save limbs*


“Save lives save limbs” by Hans Husum and his colleagues is a book that is attractive, full of information, and, although at times it reads like a heart tugging novel, it retains a high educational value. In a concise and well illustrated manner the book describes the total care of the victims of anti-personnel weapons. It should appeal to everyone interested in trauma and is, in my opinion, valuable reading for those who find themselves working outside the luxurious resources of Western hospitals. The authors have substantial experience of working in adversity and they try to offer a solution to the inadequate resources usually found where most of these injuries occur.

It begins with a well illustrated description of the types of mines and the injuries they may cause—a vital but common form of what sort of person actually sits down and designs these ghastly devices. Perhaps even more amazing is the thought that many highly respected members of Western communities live well on the profits from this lethal trash.

ATLS techniques are described in detail and there is an excellent theme of damage control in trauma care. Technical details are supported by the simple language so that everyone can learn the basic techniques of life and limb preservation and once learnt it is our duty to pass on the knowledge. The simple statements and clear illustrations, often in cartoon form, prove that the authors themselves followed this ideal and urge the concept of the “Village University”.

There is an academic quality to this book as well as practical advice on initial care, surgical techniques, anaesthesia, and nutrition. The physiological importance of fear is emphasised with an example of how to calm a patient while organising their removal from a minefield—a vital but common form of prehospital care in the real world. Every subject is illustrated by, inspiring, examples of ordinary people—some qualified in medicine or nursing and others not—who have saved life and limbs by using their skills.

Trauma specialists are no use if they are three days travel away from the casualty. The possession of higher surgical qualifications at a distance count for nothing compared with limited but immediately. An impressive proof of this fact is the use of limited laparotomy when isolated from a major hospital. The book describes how to stop bleeding and leave the complex visceral repair to the “experts” after transfer. There is an excellent example of an Afghan nurse successfully undertaking imperative “damage control” laparotomy for intra-abdominal bleeding; movement of the casualty to a hospital was not possible because of the likelihood of aerial fighter attack during daylight hours! Quite possibly this type of treatment would lead to a reduction in the incidence of the increasingly recognised “abdominal compartment syndrome”.

Very few engaged in trauma care would fail to gain some new knowledge or insight from this excellent, “one sitting read”. Despite its simple format the book is an excellent text for UK trainees and demonstrates universally applicable methods while using common sense to underline theory.

The book confirms that “knowledge is power” especially when it is shared. It is
obviously aimed at developing countries but I would recommend that this book find a place in all NHS hospital libraries. Perhaps when junior doctors in the United Kingdom are feeling overworked and consultants believe that they are underpaid a review of this renowned text would lead them to ponder on their good fortune.

J P Beavis

Key topics in accident and emergency medicine, 2nd edn


This is the second edition of a book that will be already familiar to most trainees and consults in emergency medicine. Speaking from personal experience this excellent textbook is well worth the investment. It will be of use to anyone preparing for postgraduate examinations. The succinct, logical, and easy to read format provides an excellent reference and is sure to prove equally as valuable once again.

J Colville Laird

Eye know how


Ophthalmology is a tricky area for many staff in accident and emergency (A&E). There are few true ophthalmic emergencies but many semi-urgent conditions that could benefit from early diagnosis and treatment. Unfortunately, ophthalmology is increasingly being squeezed from the undergraduate curriculum and many in A&E will be relatively unfamiliar with the aspects of resuscitation in primary care. This book could easily be used as a manual for a prehospital ALS course.

My only criticism would be the method of insertion described in the book. This is not the method recommended by the manufacturers.

J Colville Laird

Resuscitation in primary care


I have a thing about “whinging” GPs (despite the fact that my three children believe that it is me). I get really irritated by the person who stands up at a clinical meeting and tells his hospital colleagues “there’s all right for you in your ivory tower but out there in the real world”. So when I saw this book I thought is this another attempt by primary care to demonise and criticise their need to be independent of our hospital colleagues? We have an excellent Resuscitation in Primary Care, why do we need this? Then I sat down, took my cynic’s hat off, and looked at the situation once again. I got out my Advanced Life Support Course Manual and looked through it and thought to myself—I do not carry adrenaline. Blood gas analysis in the patients bedroom is a tricky procedure, the cardiac arrest team is usually me and an ambulance crew and well and general anaesthetic resuscitation consists of getting the patient to hospital as quickly as possible—vital support is necessary. So there are significant sections of the Advanced Life Support Manual that are not relevant to GPs and there therefore probably is a need for a book about resuscitation in primary care. I could now spend the next two or three pages giving you reasons why The Resuscitation Council should think about an ALS Course—specifically for out of hospital practitioners. I will resist the temptation—it may however be worth thinking about.

“Resuscitation in primary care” not only goes over all the relevant material with regard to prehospital cardiac resuscitation but also covers resuscitation of infants, children, and the newly born—in my experience areas that are areas where I would welcome debate with the rest of the book. One must however be aware that unit with all the protocols for that unit grows. Many published handbooks reflect the practice in a given unit, designed to be used in that unit with all the protocols for that unit documented and expanded upon. As such they will probably travel badly.

There are many areas in which this book is commendable. The chapters have relevant headings with a logical pattern. Flow diagrams are well presented. Protocols are logical and relevant to most practices, as are the references at the end of the chapters and sections. These, however, have a significant bias to North American publications, ignoring publications from other geographical areas. Is their Medline different to ours?!

Now, however, we come to Oscar Wilde (see above). This book is driven by North American practice, associated with North American phraseology, terminology and usage. Those of us who get most of our CME from watching ER and Chicago Hope will probably be familiar with much of the terminology (CVC, BUN, etc). While this is little more than an irritant it does detract from the relevance to United Kingdom practice.

I tried to gain some insights into the management of some of the children in our department by delving into the book, after I had seen the patients. In the main I agreed with the principles of care described, but there were areas where I was totally unfamiliar with the authors. I was particularly disappointed not to be able to find anywhere in the book a description of how to perform a femoral nerve block. Surely this would be much more important to include than fig 15.2 showing how to remove a foreign body from an ear?

S D Carley

Handbook of pediatric emergencies, 3rd edn


“We have really everything in common with America nowadays, except, of course, language.”

Oscar Wilde, “The Canterville Ghost”, 1887

A good handbook should provide ready access to relevant information in a readable format. One might expect trainees to carry it around in their pockets, referring to it with decreasing frequency as their confidence grows. Many published handbooks reflect the practice in a given unit, designed to be used in that unit with all the protocols for that unit documented and expanded upon. As such they will probably travel badly.

There are many areas in which this book is commendable. The chapters have relevant headings with a logical pattern. Flow diagrams are well presented. Protocols are logical and relevant to most practices, as are the references at the end of the chapters and sections. These, however, have a significant bias to North American publications, ignoring publications from other geographical areas. Is their Medline different to ours?!
How does this book fare? The clinical data are good, but the style (and North American slant in particular) detracts from its appeal on this side of the pond. Other than that, Oscar Wilde says it all!

T F Beattie

Injury control: a guide to research and program evaluation


This book aims to catalogue the research designs available for all those involved in injury control and research. It is aimed particularly at those who wish to improve their understanding, review injury research or conduct research in the field, so essentially it is a reference text. It is a hard backed book, 280 pages long, written by a group of epidemiologists and trauma surgeons from Harbourview Medical Center in Seattle.

To a large extent this book is successful in its aim. It has 20 chapters and begins with a historical review of what injury research has achieved to date. The future challenges of improved management for traumatic brain injury, multi-organ failure prevention and the measurement of disability are laid before us. The first half of the book lays the baseline and describes injury scoring systems, the use of secondary databases, how to select the correct study design and issues such as sampling. Some of these first 10 chapters are useful, others, such as that on rates and epidemiological principles, lack worked examples that would have helped when explaining issues, such as the difference between direct and indirect standardisation and the different forms of regression analysis.

Despite its omissions this book is a useful reference text for those undertaking research in injury and those wishing to broaden their knowledge and understanding with some focused reading. Injury control needs a clinician’s as well as an epidemiological perspective.

T F Beattie

NOTICE

999 EMS Research Forum Board

The 999 EMS Research Forum Board is accepting abstracts for presentation at AMBEX 2002. Papers are invited on all areas of prehospital emergency healthcare. Papers for consideration should be submitted by 6 May 2002.

To obtain an official submission form email Anne Surman at a.g.surman@swan.ac.uk or write to Anne at the Clinical School, University of Wales Swansea, Singleton Park, Swansea SA2 8PP.

Submissions

Authors of the most original and interesting scientifically based work in the prehospital arena will be invited to present their study in either an oral or poster presentation during sessions at AMBEX 2002.

All work must be original and must not have appeared in a national journal or have been presented at a national meeting prior to the submission deadline.

All abstracts accepted by peer review will be published in the Emergency Medical Journal.

Awards

Cash awards will be given for:
• research most likely to impact on patient care
• most original research
• best poster

CORRECTION

An editorial error occurred in this article by Tewary and Cawte (January 2002; 19:81). The illustration was used by permission from Disney Enterprises, Inc. We apologise that this statement was omitted from the article.