

# PostScript

## LETTERS

### Paediatric sport related concussion pilot study

A study was undertaken to determine the degree to which paediatric neurosurgeons agreed on the optimum management of sport related concussion in children. A paradigm for management of concussion in children has not been defined, and the management of such patients largely relies on expert advice from neurosurgeons. This pilot study aimed to establish current consensus neurosurgical practice for management of children with sport related concussion.

#### Methods

For the purposes of this study, we defined sport related concussion as a head injury occurring during sport (or play) participation in children 5-15 years of age with an admission Glasgow coma score of 15 and a normal neurological examination. A standardised questionnaire was sent to 20 neurosurgeons throughout Australia identified as having specific expertise in paediatric neurosurgery. There were three parts to the questionnaire. The first related to the routine management of uncomplicated sport related concussion in children. The second involved the role of follow up neuroimaging, neuropsychology, protective equipment recommendations, and return to school advice. The third examined the degree of importance placed on a number of clinical prognostic indicators by the neurosurgeons.

#### Results

Thirteen paediatric neurosurgeons responded to the study (65% response rate). Only three respondents said that they would routinely use skull radiographs and two would routinely use computed tomography scans in uncomplicated sport related concussion. The respondents varied in their methods of dealing with concussed patients, with some recommending hospital admission, some discharging the patient home with the parents, and others recommending a period of observation in the emergency department.

There was a complete lack of consensus among the respondents about the need for follow up, and, if it was thought to be necessary, the length varied from one to six weeks. None of the respondents stated that they would routinely perform neuroimaging or neuropsychological testing at follow up. The results were similar for return to school and return to sport time frames, with ranges of one to six weeks.

Six of the 13 respondents would routinely advise the use of a helmet, and three of the 13 would recommend the use of a mouth guard after such injuries.

The following symptoms and signs were examined: headache, vomiting, scalp haematoma, scalp laceration, loss of consciousness, pallor, dry tongue, tiredness or sleepiness, irritability or restlessness, refusal to eat, abusive or aggressive behaviour, withdrawn behaviour, amnesia, and parental concern.

There was no consensus on which of these symptoms or signs are of prognostic importance.

#### Discussion

In children aged 15 years and under, traumatic brain injury is a common cause of presentation to emergency departments and general practitioners. In the United States, it has been estimated that more than 1 million children sustain a traumatic brain injury annually (of which 85% are mild injuries), and that such injuries account for more than 250 000 paediatric hospital admissions as well as more than 10% of all visits to emergency services.<sup>1</sup> Neurosurgeons are often asked to provide expert opinion on the management of such patients.

Following the First International Conference on Concussion in Sport in Vienna 2001, guidelines were drafted on the management of concussion in sport.<sup>2</sup> The scientific data upon which these recommendations were based relate specifically to adults and not to children. The American Academy of Paediatrics published guidelines on the management of mild closed head injury in children in 1999; however, these guidelines were more concerned with predicting which children would subsequently develop intracranial complications than the issues of return to sport and neuropsychological recovery.<sup>3</sup> The American Academy of Paediatrics guidelines state that there is no indication for routine use of skull radiograph in paediatric concussion and "no data are available that demonstrate that children who undergo CT scanning early after minor closed head injury with loss of consciousness have different outcomes compared with children who receive observation alone after injury".<sup>3</sup>

It is not surprising given the paucity of literature on this subject that considerable differences exist, even among experts, as to the management of sport related concussion in children. This has a number of important implications over and above the acute management of the injury, given the potential for concussive injuries to have detrimental effects on the child's development and scholastic performance. After this pilot study, we plan to undertake a larger study of the neurological and neuropsychological management of children with sport related concussion.

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Competing interests: none declared

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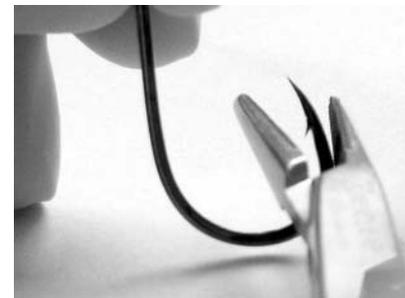
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### A simple method for removal of fish hooks in the emergency department

Fishing is a sport enjoyed by millions of people throughout the world. A common fishing injury is the embedment of the fish hook in the skin. All emergency department doctors have experimented with removing fish hooks. It is a challenging procedure because of the hook's barb, although the external injury is usually minimal.

The parts of the hook are the eye, shank, bend, point, and barb. The function of the barb is to keep the point embedded in the fish's mouth, and therefore it is constructed to make its removal difficult. Hooks come in many different shapes and sizes. Some basic strategies of fish hook removal have been described.<sup>1</sup> Techniques tried include a simple retrograde technique, a string pull technique, a needle cover technique, an advance and cut technique, and an incision technique. The choice depends on the type of hook embedded and the location of the injury site.<sup>1,2</sup> We report a method that is simple to assemble, easy to use, and readily available in the emergency department. It involves the use of a surgical instrument with needle holders only (Aesculap; we used BM012R needle holders). The entry site is first prepared and anaesthetised by injection of 1% lidocaine. The tip of the hook is advanced through the anaesthetised skin. The point and barb of the hook are exposed. The needle holder is used to grasp the point and barb. The barb is cut off using the needle holder which directly depends on the barb's small diameter (fig 1). The barbless hook is gently withdrawn through the entry site (fig 2).

This method is almost always successful even for removal of large fish hooks because of the barbless hook. It can be practiced by anyone, anywhere, and at any injury site except the eye.<sup>3</sup> Antibiotics should be considered to prevent infection.<sup>4</sup> Tetanus status should be assessed and toxoid administered if needed. However, the doctor must weigh this against the potential harm of the foreign body in its current location.<sup>5</sup>



**Figure 1** The barb is cut off the fish hook using the needle holder directly.



**Figure 2** The barbless hook is backed out through the entry site to minimise tissue damage.

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**BOOK REVIEW**

**Basic statistics and epidemiology: a practical guide**

Edited by Antony Stewart. Radcliffe Medical Press Ltd, 2002, £19.95, pp 151, softcover. ISBN 1857755898

In the preface, the author writes "Indeed, the avoidance of too much detail and too many theories is a prime objective". I feel that this aim prevents the book from becoming a required text for either students or practitioners of epidemiological research, as the author's writing style is engaging and very easy to follow. As a result, I struggle to imagine to whom this text is targeted. A student of epidemiology requires far more detail and, most likely, would find this text superfluous. At the other extreme, the experienced and practising epidemiologist would be knowledgeable of (almost) all the topics covered and to a greater depth than that provided.

There were a number of items that I did, however, enjoy seeing presented to the epidemiological community. Discouraging the use of special effects in graphics, the opening paragraph explaining the concept of standard error, extolling common sense when interpreting p values greater than

(but close to) the traditional significance level, and the flow chart approach to explaining the difference between cohort and case-control studies are some of these. As has already been alluded to, however, these were let down by the negligible focus on any of these topics.

Another reason for my reluctance to recommend this text is the treatment of topics that seem to be placed in the "too hard basket". These include two sample t tests (unequal variances), correlation, and the entire topic of non-parametric techniques. However, these omissions paled in comparison when I realised that the reader is referred to other texts for discussions on sample size and power (the cornerstone to any sound epidemiological design) and also for regression. Regression, arguably the single biggest contribution that the field of statistics has made to epidemiological analysis, is given one line of recognition! I have kept in mind that this is intended to be a "basic" text and a "practical" guide, but my belief is that these topics should always be included in such texts.

As in (almost) all textbooks, especially first editions, there are a small number of errors. For example, on page 40 it states that: "...the sample mean is 82.696, there is a 95% probability that the population mean lies between 80.509 and 84.883.". In fact, the probability that the population mean lies between these two limits is 0 (zero) or 1 (one). To my mind, this is the only error worth noting, and I am impressed that the author has touched on such a large range of topics, albeit briefly, and been accurate in all the information provided.

In conclusion, I leave you with a summary that is possibly difficult to understand. I find it difficult to define an audience to whom I would recommend this text while, at the same time, I look forward to seeing a more thorough treatment of the topic by this author.

**Rating**

● Presentation	16/20
● Comprehensiveness	14/20
● Readability	18/20
● Relevance	14/20
● Evidence basis	15/20
● Total	77/100

**A Ugoni**

**CALENDAR OF EVENTS**

**UK Radiological Congress 2005 (UKRC 2005)**

6-8 June 2005, Manchester, UK

The UK Radiological Congress (UKRC) meeting will encompass the medical, scientific, educational, and management issues that are of interest and relevance to all those involved in the diverse fields of radiological sciences and oncology.

The UKRC provides a forum in which to bring together clinicians, scientists, radiographers, technicians, and other professionals to present and discuss the latest developments and challenges in diagnostic imaging, radiotherapy, and allied radiological sciences.

Key subjects to be covered include: diagnostic radiology; ultrasound; nuclear medicine; interventional radiology; veterinary radiology; emerging technologies; image analysis; computer applications; PACS; radiobiology; radiological physics; management & audit; computed tomography; magnetic resonance; equipment development.

Expected attendance (conference and exhibition): 4000

*Further details:* UKRC 2005 Organisers, PO Box 2895, London W1A 5RS, UK; Website: www.ukrc.org.uk; Fax: +44 (0)20 7307 1414; Conference tel: +44 (0)20 7307 1410, Email: conference@ukrc.org.uk; Exhibition tel: +44 (0)20 7307 1420, Email: exhibition@ukrc.org.uk

**1st World Congress on Sports Injury Prevention**

23-25 June 2005, Oslo, Norway

This congress will provide the world's leading sports medicine experts with an opportunity to present their work to an international audience made up of physicians, therapists, scientists, and coaches. The congress will present scientific information on sports injury epidemiology, risk factors, injury mechanisms and injury prevention methods with a multidisciplinary perspective. Panel discussions will conclude symposia in key areas providing recommendations to address the prevention issue in relation to particular injuries and sports.

*Further details:* Oslo Sports Trauma Research Centre and Department of Sports Medicine, University of Sport and Physical Education, Sognsveien 220, 0806 Oslo, Norway. Email: 2005congress@nih.no; website: www.ostrc.no

**Osteosynthese International 2005**

15-17 September 2005, Curiohaus, Hamburg  
Congress-Chairman: Johannes M. Rueger, M.D., Professor and Chair  
Topics:

- Innovations in intramedullary osteosynthesis
- New frontiers in osteoporosis and fracture treatment
- Current trauma research
- Special topic: Recent development in pelvic and acetabular fractures

Abstract submission deadline: 31 March 2005

*Further details:* INTERCONGRESS GmbH, Martin Berndt, Düsseldorf Str. 101, 40545 Düsseldorf-Germany. Tel: +49 211 585897-80; fax: +49 211 585897-99; email: martin.berndt@intercongress.de; website: www.osteoint2005.de

**4th European Sports Medicine Congress**

13-15 October 2005, Lemesos, Cyprus

*Further details:* Email: pyrgos.com@cytanet.com.cy

**BASEM Conference 2005**

10-12 November 2005, Edinburgh, Scotland

*Further details:* Email: basemoffice@compuserve.com

**BASEM Conference 2006**

5-7 October 2006, Oxford, UK

*Further details:* Email: basemoffice@compuserve.com