START is not the best triage strategy

I read with interest the article of Delaney and Drummond in the April issue, and found it both useful and informative. However, I must disagree that in mass casualty situations “Most experts agree that START (simple triage and rapid treatment) . . . is the best strategy.”

This recommendation should only be made if the system is the easiest to use for the people undertaking the triage process, or is the most accurate at triaging patients.

Three triage systems are currently in common use in the developed world: START, Careflight, and the Triage Sieve and Sort.

START was devised in the mid 1990s in the United States, and has since been modified. It bases triage around walking, breathing, presence or absence of a radial pulse, and the ability to follow commands, and categorises patients for immediate or delayed care, or as unviable.

Careflight is used in many parts of Australia, and also uses walking as the first discriminator. It then relies on the ability to follow commands, presence of a radial pulse, and presence of breathing to assign an appropriate category. Patients are immediate, urgent, delayed, or dead.

The UK system, Triage Sieve and Sort, uses the same four triage categories. The Sieve is used for primary triage, at the scene, and patients are retriaged using the Sort at the casualty clearing station.

The Sieve first uses a walking filter, and then presence of breathing, respiratory rate, and capillary refill time or heart rate to categorise patients. The Sort uses the triage revised trauma score, to which may be added anatomical information.

In terms of ease of use, the algorithm chosen must fulfill two criteria. The first is that it is simple to use: all three algorithms fulfill this requirement. The second is that users should be familiar with it. The triage Sort will be familiar to most UK pre-hospital personnel, as it is the system used by most UK ambulance services on a day to day basis. The Sieve will be familiar to all those who have attended the Major Incident Medical Management and Support (MIMMS) course or the shorter one day version.

As increasing numbers of doctors, nurses, ambulance personnel, and other emergency services are now attending MIMMS courses, the Triage Sieve and Sort will become more familiar. The course is now taught in Sweden, Holland, Australia, Cyprus, and has recently been accepted by NATO. It is being considered in South Africa.

With regard to the accuracy of the algorithm, a recent article in the Annals of Emergency Medicine retrospectively compared START, Careflight, and the Triage Sieve. The authors found that START had the same sensitivity and a lower specificity than Careflight for identifying critically ill patients. The use of Triage Sieve alone rather than Sieve and Sort makes interpretation of their results with regard to that system unreliable.

Many mass casualty situations involve children, and a triage algorithm that relies on walking or adult physiological values will over-triage many children. The Triage Sieve offers an alternative in the Paediatric Triage Tape, which is currently being prospectively validated in South Africa.

This combination of factors—familiarity to UK pre-hospital providers, accuracy, and accommodating injured children—should lead to the recommendation that, for mass casualty situations in the United Kingdom, the Triage Sieve and Sort should be the triage algorithm of choice.

Furthermore, all those providing medical care at mass gatherings such as sporting events should have attended a MIMMS course, which provides an excellent system in the unlikely event of a massive casualty situation.

L. Wallis

Reference


Computer based screening in concussion management: use versus abuse

As reviewed by Schnirring, a number of user friendly, computer based systems for concussion management have been developed, including CogSport in Australia and HeadMinder and ImpACT in America. Important cautionary comments have been made about the appropriate use of such programmes (versus potential for their misuse), which from a neuropsychological perspective warrant further elaboration. The computer based technology in question falls within the specialist field of the clinical neuropsychologist, whose area of expertise encompasses the development and use of psychometric tests for screening for brain damage. The problem to emphasise here is that there is the potential for malpractice when such computer based tests become separated from their professional—that is, neuropsychological—source.

There is a growing consensus that computerised test platforms such as referred to above have substantial practical advantages over conventional neuropsychological tests for use in the sports arena. They offer automated assessment which can be conducted on groups of individuals, and they can be administered by a trained team doctor or school coach, or be web based, without the presence of a neuropsychologist. However, it is precisely herein—that is, the apparent ease with which these computer based systems can be applied—that the potential for misuse lies.

As Schnirring points out, non-neuropsychologists are not in a position to evaluate the various programmes being marketed. Developing this point further, there is a real danger that non-psychologists may fall into the trap of construing that the scores derived from such programmes can be used, in and of themselves, as a type of “litmus paper” for making decisions about the presence or absence of cerebral dysfunction in the individual case. This type of misconception occurred in the early days of neuropsychological test development, and has been a chronic source of inadequate practice in the discipline. Accordingly, in modern neuropsychology the attribution of this type of diagnostic power in respect of a single neuropsychological test, or any set of tests in isolation—that is, in the absence of clinical and collateral data—goes against fundamental practice principles and is vehemently opposed.

In keeping with this, it is encouraging that top medical professionals involved in concussion management (as cited in Schnirring’s article) have emphasised the following: computer based test results should be viewed as only one aspect of an assessment, together with the individual neurological examination, careful analysis of symptom presentation, possible imaging tests, and/or a more detailed neuropsychological examination.

From a neuropsychological perspective, such cautionary comments on computer based screening batteries cannot be too strongly endorsed. In practice this amounts to the following: return to play decisions should not be made on the basis of computer based test outcome alone in the absence of access to a clinical assessment of the individual, and importantly, nor should test results be interpreted by a practitioner without neuropsychological expertise. In the event of a medicolegal claim, such non-specialist use of computer based programmes is unlikely to be upheld as ethical practice. Due respect for the complexities involved in neurological interpretations of psychometric test results—that is, the professional terrain of the neuropsychologist—will ensure that the apparent ease of computer based testing does not result in its misuse.

A B Shuttleworth-Edwards, M A Border

References


BOOK REVIEW

The musician’s hand
Ian Winspur, Christopher Wynn Parry, Martin Dunitz Publishers, 1998, £49.95. ISBN 1 85317 492 0

This sounds an intriguing title for a book to be reviewed in this journal. In clinical sports medicine practice, it is not uncommon to be consulted by musicians with a variety of soft tissue problems. This is partly because of the lack of specific medical care available for this group of people.

There is also an overlap between the problems of sports men and women and musicians that suggests that each group has much to offer the other. This book by two hand surgeons from London is a fascinating addition to the literature but ultimately disappoints both the sports physician and the performing arts physician.

Clearly the strength of two surgeons as authors is their diagnostic approach to musician’s hand problems and their obvious surgical skills in this region. Where they stray into topics outside their own expertise, there is both a lack of understanding and a lack of perspective of the injuries discussed. For example, the discussion of “tendinitis” and “tennis elbow” would send shivers down the spine of any reader of the “tennis elbow” chapter references. From the frequent mention of her name, I could have assumed that she could have written the chapter on cello technique by herself!

As I said, there are some real strengths in this book that makes it a useful addition for hand surgery practice, but it could have been so much more. If the authors had utilised expertise from outside the small world of “musician’s medicine”, a far deeper understanding of the problems could have resulted. There are so many overlaps with sports medicine that it is scary.

For the clinician who wants a better overview of this whole area (rather than just hand problems), then the book Performing arts medicine (2nd ed) by Sataloff, Brandfonbrener, and Lederman (Singular Publishing Group, San Diego, 1998, ISBN 1 56593 982 4) is a much better option as a starting point.

This sounds an intriguing title for a book to be published by the British Association of Performing Arts Medicine. Clearly the strength of two surgeons as authors is their diagnostic approach to musician’s hand problems and their obvious surgical skills in this region. Where they stray into topics outside their own expertise, there is both a lack of understanding and a lack of perspective of the injuries discussed. For example, the discussion of “tendinitis” and “tennis elbow” would send shivers down the spine of any reader of the British Journal of Sports Medicine. The terminology in these areas and the pathological basis of the conditions has been extensively reviewed in recent times. The authors presented in the chapters on nerve compression syndromes and focal or task specific dystonias where a neurological input would have given far more perspective into the current thinking in this interesting and stimulating field.

There are also far too many examples of “cross referencing” of the co-author’s work rather than a true review of the published literature, which would have added so much more to this book. A prime example of this is in the nerve chapter again, where the electro-diagnostic techniques are referenced to a 1981 publication of the co-author rather than any of the wide range of neurological reference books on this subject.

This book has many strengths however. It has a “chatty” style which reads well and contains many anecdotal observations by leading musicians and conductors on performance technique that give a fascinating insight into the minds of these gifted individuals. There is, however, a lack of critical appraisal of their comments and how the experience of leading concert performers may be extrapolated into assisting the problems of “non-elite” instrumentalists. The surgical discussions are concise and elaborate many of the critical issues in planning surgical intervention in this group. Any surgeon contemplating operating on the hand of a musician at any level would certainly benefit by reviewing this important information.

One of the problems of any book with multiple contributors is editing the various sections to achieve balance and avoid repetition. This is not well achieved and the repeated reference throughout the text to a “Joan Dixon, the doyen of cello pedagogues” is enough to drive the reader barmy. It is never explained who this person is. Ms Dixon is not listed in the contributors nor in the chapter references. From the frequent mention of her name, I could have assumed that she could have written the chapter on cello technique by herself!

As I said, there are some real strengths in this book that makes it a useful addition for hand surgery practice, but it could have been so much more. If the authors had utilised expertise from outside the small world of “musician’s medicine”, a far deeper understanding of the problems could have resulted. There are so many overlaps with sports medicine that it is scary.

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This will be the first of an annual conference on Sports Medicine to coincide with the premier 7s event. Please visit the website www.droid.cuhk.edu.hk/events/smss.htm.

Further details: Iain Stewart, National Diagnostic Imaging, Woden, ACT 2606, Australia; tel: +61 2 6282 2888; email: ncdi@ozemail.com.au

Vth World Congress on Science & Football
April 2003, Lisbon, Portugal
Further details: Dr J Cabri; email: jcabri@fml.ulisboa.pt
Web site: http://www.fml.ulisboa.pt/wesf

2003 SMA Queensland State Conference (Australia)
3–4 May 2003, Nara SeaWorld Resort, Gold Coast.
Speakers: Dr John Best, Medical Director for the 2003 Rugby World Cup; Associate Professor Kim Bennell, Director, Centre for Sports Medicine Research and Education, (School of Physiotherapy), University of Melbourne, Victoria, Australia.
Further details: www.sportsmedicine.com.au

3rd Québec International Symposium on Cardiopulmonary Rehabilitation Evidence Based Interventions: Science to the Art of Cardiopulmonary Rehabilitation
11–13 May 2003, Québec City Convention Centre, Québec, Canada
Call for abstracts deadline is 1 November 2002. The abstract submission form and complete programme can be printed from the web site.
Further details: email: Jean.Jobin@med.ulaval.ca
Web site: www.ulaval.ca/symp-rehab

The 6th STMS World Congress on Tennis in conjunction with the LTA 2004 Sports Science, Sports Medicine and Performance Coaching Conference
Keynote speakers include Professor Per Rønstrom (SWE), Professor Peter Jokl (USA), Professor Savio Woo (USA), Dr Carol Otis (USA), Dr Mark Safran (USA), Dr Ben Kibler (USA), Prof Bruce Elliott (AUS), and Professor Ron Maughan (UK).

2003 Sports Medicine Seminar at the Hong Kong Sevens
27 March 2003, Hong Kong

Further details: 0870 165 4999; fax: +44 (0)870 165 4949; email: smsw@drr.nsw.gov.au

Keynote speaker: Professor Nikolai Bogduk, University of Newcastle.
Further details: www.smansw.com.au or email smsw@dsr.nsw.gov.au

SMX 2003
22–23 March 2003, University of Melbourne, Victoria, Australia
The Victorial Conference of Science and Medicine in Sport and Exercise in conjunction with The Gastrolyte VIS International Science and Football Symposium.
Further details: members@vic.sma.org.au

Sports Medicine Seminar at the Hong Kong Sevens
27 March 2003, Hong Kong
This will be the first of an annual conference on Sports Medicine to coincide with the premier 7s event. Please visit the website www.droid.cuhk.edu.hk/events/smss.htm.
Further details: Iain Stewart, National Diagnostic Imaging, Woden, ACT 2606, Australia; tel: +61 2 6282 2888; email: ncdi@ozemail.com.au
Winners of the annual BASEM Prizes
Dr Eileen Mackie (Clupiogrel inhibits platelet activation and exercise induced ischaemia in stable coronary artery disease) and Mrs Eleanor Curry (Role of exercise in multiple sclerosis) (joint winners).

The poster prize was won by Dr Stuart Reid (Injury patterns and injury prevention strategies in the winter sports population attending the English medical centre in Val D’Isere.

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Details for the above exam can be found on the Royal College of Surgeons of Edinburgh Website at http://www.rcsed.ac.uk alternative applicants can write to: The Royal College of Surgeons of Edinburgh, Eligibilities Section, Careers Information Services, 3 Hill Place, Edinburgh; tel: +44 (0)131 668 9222 or Mrs Yvonne Gilbert, Intercollegiate Academic Board for Sport and Exercise Medicine, Royal College of Surgeons of Edinburgh, Nicolson Street, Edinburgh EH8 9DW; tel: +44 (0)131 527 3409; email: y.gilbert@rcsed.ac.uk

Intercollegiate Academic Board of Sport and Exercise Medicine Diploma Exam
The following were successful diplomates in the Intercollegiate Academic Board of Sport and Exercise Medicine Diploma Exam:

July 2000
- Dr Prabodh C Agarwal
- Dr Robert Bleakney
- Dr Trevor W Fleet

November 2000
- Dr James P Robson
- Dr Samantha L Fee
- Dr David C Watkins
- Dr RS Prabu

For further information contact: Donald AD MacLeod, Chairman, Intercollegiate Academic Board of Sport and Exercise Medicine

www.basecm.co.uk
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Please contact: A/Professor Peter Brukner: p.brukner@unimelb.edu.au (Research Degrees), A/Professor Kim Bennell: k.bennell@unimelb.edu.au (Research Degrees), Mr Henry Wajswelner: h.wajswelner@unimelb.edu.au (Certificate Courses), www.physioth.unimelb.edu.au/csmre

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- Applications for the Master of Physiotherapy by Coursework (Sports Physiotherapy) close 1 October 2002.

Please check the website for updates and information about the courses: www.physioth.unimelb.edu.au/postgrad.html
Expression of concern about content of which Dr Paul McCrory is a single author

This paper is authored by Dr Paul McCrory. During 2021 and 2022 there was an investigation by BJSM and BMJ which found that some of his work was the product of publication misconduct. Such misconduct includes plagiarism, duplicate publication, misquotation and misrepresentation in publications in respect of which he was listed as the sole author.1 We are placing a notice to readers on all content in relation to which he is identified as the sole author to alert them to the conclusions of our investigation.

REFERENCE