A survey of current consultant practice of treatment of severe ankle sprains in emergency departments in the United Kingdom

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Objective: To determine current consultant practice in larger UK emergency departments in the management of severe ankle sprains.

Design: Questionnaire study to all UK emergency departments seeing more than 50 000 new patients per year.

Results: 70% response rate. Most popular treatment was ice, elevation, Tubigrip, and exercise, each of which was reported as used in most cases by over 70% of respondents. Crutches, early weight bearing, and non-steroidal anti-inflammatory drugs were each reported as used in most cases at over half of responding departments. Physiotherapy was usually only used in selected cases. Rest was usually advised for one to three days (35%). Follow up was only recommended for selected patients.

Conclusions: The results of this survey suggest that there is considerable variation in some aspects of the clinical approach (including drug treatment, walking aids, periods of rest) taken to the management of severe ankle sprains in the UK, although in some areas (for example, not routinely immobilising, early weight bearing as pain permits, use of physiotherapy, use of rest, ice, and elevation) there was concordance.
70% of respondents. Other common choices were crutches, early weight bearing and non-steroidal anti-inflammatory drugs, chosen as treatment for “most cases” by over 50% of respondents. The routine use of flexible casts, plaster of Paris casts, and other forms of strapping was less than 5%. Many departments opted to use a method of rigid support in selected cases, and in this situation plaster of Paris casting was the most popular choice, being used by 25% of departments. Bledsoe boots were used infrequently (15.7% of departments reported using it rarely). Physiotherapy was usually only used for selected cases.

**Routine advice for severe ankle sprain**

Responses given on the questionnaire to the questions that asked about the advice that would be offered to a patient presenting with an ankle injury of the type described in the scenario are given in table 2. In advising a rest period after an ankle injury, most consultants were fairly conservative, with the majority (35%) opting for a rest period of one to three days. The majority of consultants opt to prescribe non-weight bearing exercises within a 24 hour period of the injury, and to begin weight bearing as pain permitted (71%). Forty per cent of consultants reported applying a mechanical brace (POP cast, aircast splint, or flexible cast) in most or selected cases. Twenty eight per cent of these advocated a delay period before applying the brace. The remainder applied the brace immediately. Too few advice (n = 4) sheets were returned to undertake any analysis.

**Follow up options**

Most consultants reported that follow up was only advised for selected cases (table 3), and when this was offered it was mostly to an emergency department or a physiotherapy clinic (44% and 47% respondents respectively). Emergency department clinic follow up for most cases was reported by 27% respondents. Referral to a general fracture or orthopaedic, sports or specialist ankle clinic was rare, 69% never using or not having access to a sports clinic, and 81% never using or not having access to a specialised ankle clinic.
DISCUSSION
The results of this survey suggest that there is considerable variation in some aspects of the clinical approach (including drug treatment, walking aids, periods of rest) taken to the management of severe ankle sprains in the UK, although in some areas (for example, not routinely immobilising, early weight bearing as pain permits, use of physiotherapy, use of rest, ice, and elevation) there was concordance. The findings need to be treated with some caution as the study is based on the opinion of lead clinicians, not on actual practice. They are also the practice of larger departments (over 50 000 new patients per year); smaller departments may have less access to facilities and resources, for example, physiotherapy, magnetic resonance imaging. The extent to which clinicians within each department adhere to the reported departmental practice is unknown. However, the commonest treatment that was advocated is rest until pain subsides, followed by mobilisation, early non-weight bearing exercise, ice, elevation, Tubigrip, oral non-steroidal anti-inflammatory drugs, and follow up only in selected cases.

There is a lack of high quality evidence to support clinical decisions for one type of treatment above another particularly in severe sprains. A recently published meta-analysis of relevant trials has revealed that treatment with a plaster cast was significantly worse than treatment with Tubigrip or bracing, with respect to subsequent giving way and residual pain at six weeks. However, all types of functional treatment were classed together in the meta-analysis, and it was not possible to draw distinctions between them. One trial of mild to moderate ankle sprains (grade 1 and 2) revealed more pain at one week for those treated with Tubigrip but failed to reveal any other differences, and follow up was limited to one week. There have been no randomised studies to support the use of Bledsoe boot type immobilisation. No reliable studies have been found that describes long term outcome for varying treatments.

Present evidence suggests that functional treatment is better than either immobilisation over three weeks or no treatment. There remains a need for a well conducted and adequately powered randomised controlled trial of the clinical and cost effectiveness of different clinical approaches before evidence based guidelines can be written. This survey has been used to inform decisions about the design of a randomised controlled trial (n = 1500) to compare Tubigrip, dynamic splinting, plaster of Paris cast, and Bledsoe boot.

Contributors
MWC designed the questionnaire and managed its distribution and results collation SL assisted with data collation, design and analysis of questionnaire, preparing sections of first draft of paper, JM cleaned, analysed and summarised the questionnaire data JD contributed to the design of the study, the interpretation of the findings and the drafting of the paper. All authors were involved in writing the final paper. MWC is the guarantor of the paper.

A copy of the questionnaire used in this study is available to view on the journal web site (http://www.emjonline.com/preliminary).

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Funding: none.
Conflicts of interest: none declared.

REFERENCES