

LETTERS TO THE EDITOR

Best evidence topic reports: fracture of the clavicle

EDITOR,—The article concerning the treatment of simple fractures of the clavicle, based on best evidence, is unhelpful and potentially misleading.¹ This search highlights the lack of evidence comparing the use of collar and cuff with broad arm sling in the treatment of fracture of the clavicle. Unfortunately some clinicians may infer from this, incorrectly, that both treatments are equally acceptable.

The issue of treatments for fracture of the clavicle can be approached sensibly from a biomechanical point of view. Simple biomechanics dictate that a sling, which provides support, is the treatment of choice. In fact any device that elevates the shoulder (such as double collar and cuff) is acceptable, whereas a single collar and cuff, which provides traction, will distract the fracture, increase displacement, put more tension on the skin overlying the fracture site, and certainly cause a great deal of discomfort. The only potential disadvantage of a sling is that it may directly impinge upon the fracture site.

While we should strive towards evidence based practice it is important that the right questions are addressed: in this instance this has not been achieved. This particular search has been an unnecessary paper exercise and has not contributed in anyway to the rational treatment of fracture of the clavicle.

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1 Carley S, Mackway-Jones K (Mackway-Jones K, ed). Collar and cuff or sling after fracture of the clavicle. *J Accid Emerg Med* 1999;16:140.

Best evidence topic reports: fracture of the clavicle

EDITOR,—I have always found the best evidence topic reports in the journal to be informative and valuable, so much so that we present them to our students as good examples of a questioning approach to accident and emergency practice. I was, however, concerned to find one example recently which was completely illogical. The comparison of collar and cuff or sling after fracture of the clavicle by Dr Simon Carley and Dr Kevin Mackway-Jones¹ may mislead some readers of the journal into thinking that a collar and cuff is an acceptable treatment for fractures of the clavicle.

The deformity in fractures of the mid-shaft of the clavicle is caused by two factors, firstly the upward pull of the sternocleidomastoid muscle on the medial half of the clavicle, and secondly the effect of gravity pulling down the shoulder and the attached distal half of the clavicle. To overcome this deformity, the elbow must be supported, whereas the use of a standard collar and cuff produces the opposite effect. Collar and cuff slings are very useful in treating fractures of the upper humerus, for which "natural traction" is required, but the use of such a sling in clavicular fracture would



Figure 1 Double collar and cuff or Maudsley sling.

predictably cause an increase in deformity and unnecessary pain and suffering. I have been unable to find any reference in textbooks or other literature to suggest that anyone has ever advocated the use of collar and cuff for the treatment of clavicular fractures.

There is, however, an alternative type of collar and cuff sling, known as the double collar and cuff or Maudsley sling, which offers elbow support just like the broad arm sling, but which has significant advantages in terms of patient comfort and mobility. The broad arm sling has the disadvantage of completely covering the upper limb to which it is applied, and additionally it may apply direct pressure over the site of a clavicular fracture. The double collar and cuff does not cross the fracture site, and allows more access to the arm for washing and dressing (fig 1).

The authors may be correct that there is no literature comparing the use of collar and cuff or sling in simple clavicular fracture, but perhaps this is to be expected because the right question was not asked. Readers are left with an unsatisfactory conclusion and an impression that "local advice" might legitimately include the use of a collar and cuff for clavicular fracture. It would, perhaps, have been of more benefit to compare the efficacy of the broad arm sling and figure-of-eight bracing, since I am sure that most of the readers of this journal would not have seen the evidence for and against laid out in the skilful way normally adopted by the series authors.

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1 Carley S, Mackway-Jones K (Mackway-Jones K, ed). Collar and cuff or sling after fracture of the clavicle. *J Accid Emerg Med* 1999;16:140.

Best evidence topics reports: shaft of humerus fractures

EDITOR,—The best evidence topic report on the above by Drs K Herren and S Carley may cause misunderstanding among some readers.¹ It is not clear whether they are discussing broad arm sling/collar and cuff (sling supports) in conjunction with a primary plaster support or the sling supports just on

their own in an uncomplicated shaft of humerus injury.

If the former were the case, then it is collar and cuff which definitely has a greater mechanical advantage.² The two common methods of plaster support in these fractures are either hanging arm cast³ or the coaptation splint⁴ (commonly called U slab/sugar tong splint).

The distinct advantages of using a collar and cuff are that by adjusting the length (or the "drop") of the sling one can correct the anteroposterior angulation—shortening corrects the anterior angulation while lengthening corrects the posterior angulation. Placing the loop of the cuff on the dorsal aspect of the wrist corrects the lateral angulation and placement of the same on the volar aspect of the wrist corrects the medial angulation. While a broad arm sling can definitely provide a support, it does lack the finer advantages provided by the collar and cuff.

There is no scientific basis for discussion of management/prognosis of these fractures treated just with cuff and collar or broad arm sling. It is not a surprise that particular evidence is lacking on a literature search based on the entry criteria in the report.

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- 1 Herren K, Carley S (Mackway-Jones K, ed). Support for uncomplicated shaft of humerus fractures. *J Accid Emerg Med* 1999;16:141.
- 2 Rockwood CA, Green DP. *Fractures in adults*. Vol 1. 2nd Ed. Philadelphia: JB Lippincott, 1984: 655-61.
- 3 Caldwell JA. Treatment of the fractures of the shaft of humerus by hanging cast. *Surg Gynaecol Obstet* 1940;70:421.
- 4 Charney J. *The closed treatment of common fractures*. Baltimore: Williams & Wilkins, 1961.

Kevin Mackway-Jones replies

I am grateful for the opportunity to reply to the letters that comment on the best evidence topic reports (BETs) about the support of upper limb fractures.^{1,2} These letters argue that the outcomes of the literature reviews are at best irrelevant and at worst misleading. The letters argue for particular treatments on biomechanical grounds, and the authors clearly have well formed views about how these fractures are best managed.

The two BETs were not undertaken for purely academic reasons. As previously reported BET topics are selected because they seek to answer questions that arise in clinical practice.³ In both instances junior staff had been told to instigate the alternative treatments being considered (broad arm sling or collar and cuff) by different specialists at different times. Each specialist had "good reasons" for the advice they gave and each felt that their advice offered the best approach to care. The BETs were undertaken to establish what evidence there was for this conflicting advice.

The fact that rigorously applied searches revealed no evidence does not imply that one or other of the alternatives is not the best, but rather that there is no direct comparative evidence to support one or the other. In such cases our recommendation can only be that practitioners must make up their own minds using other means—in other words, for junior and non-specialist staff, local advice must be followed.

It is of great interest to me that the first comments on the BETs are about negative reports. There are of course two reasons why a