Factors associated with nonunion in conservatively-treated type-II fractures of the odontoid process

Sir,

We read with interest the article by Koivikko et al1 in the November 2004 issue entitled ‘Factors associated with nonunion in conservatively-treated type-II fractures of the odontoid process’. The purpose of the study was to identify the risk factors which increase the probability of not achieving bony union in patients with type-II fractures of the odontoid process who are treated conservatively in a halo vest. Although the paper is based only on patients who were treated conservatively, we agree with the majority of the arguments regarding the different factors involved in the possible development of a type-II fracture of the odontoid process to a pseudarthrosis.

There are, however, many factors involved in the prognosis of a fracture of the odontoid process that have to be considered. All these factors have been studied either separately2 or in conjunction.3,4 Each one is important, so all have to be considered. In a study from our institution we classified all these factors and introduced the concept of a fracture of the odontoid process as being at ‘risk of pseudarthrosis’.3

Furthermore, recent work on the peripheral quantitative CT scan analysis of the axis vertebra to show its internal architecture and structural properties5 revealed that this is the most important factor to be taken into account when dealing with these fractures. It is strongly related to the age of the patients and also to type-II fractures.6

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suggested protocol for prevention and treatment should be strictly adhered to by all hospitals. It is correctly stated that “the focus must be on adequate prophylaxis” and that “hand hygiene is thought to be the cornerstone of the prevention of MRSA infection”. In view of this we feel that the main priority is the need to enforce effective hand hygiene within the hospital environment. Compliance with regulations has traditionally been poor, but this cannot be tolerated. In a study of our staff we found that the technique of hand disinfection with alcohol-based gel was generally ineffective, although following training with an ultraviolet light box and fluorescent gel performance improved significantly. Regular training and testing of staff should be part of normal clinical practice and hand washing should be strictly enforced by an ethos of open observation.

While hand washing dispensers at every bed space may overcome some of these issues there needs to be a concerted effort to change practices. It should be unacceptable for staff not to wash their hands before and after contact with every patient. Discussion of the prevention of MRSA and hand hygiene will help to draw attention to the importance of this issue.

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Author’s reply:

Sir,

We would like to thank Messrs Macdonald and Gray for their interest in our paper. Prevention of Methicillin-resistant Staphylococcus aureus should be of the utmost importance. It is clear that compliance with regulations for hand hygiene has been poor over the years. As stated in our manuscript some of the reasons for non-compliance include lack of knowledge or forgetfulness, understaffing and heavy workloads. The policy of placing hand-hygiene dispensers at every bed and around the wards has been helpful. However, the strategy for the prevention should also include frequent educational meetings and audit cycles. This should overcome the issue of poor compliance.

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