Anaesthetic for Colles’ fracture

EDITOR,—I was surprised to read in the paper on Colles’ fracture reduction by Kendall and his colleagues’ that the trend is veering away from the use of general anaesthetics. The authors state that this may be owing to the cost and resource implications of admitting patients. I have now worked in two departments where virtually all Colles’ fractures are manipulated under a general anaesthetic. The patients have their fractures splinted and are asked to return after having been nil by mouth for six hours. If this is later than 5 pm then they are asked to return the next morning, having been nil by mouth from midnight. The procedure is performed in the A&E theatre with a fully trained anaesthetist and a senior A&E doctor either manipulating the fracture or supervising a junior. The patient is given intravenous propofol alone with subsequent increments of propofol if instant check radiographs are required. The patient is usually fit for discharge from the department within a few hours. This method does not require the patient to be admitted. Patient satisfaction is high and the procedure is no more hazardous than a Bier’s block. The only requirement is a user friendly anaesthetic department, which we are blessed with in Dewsbury.

Kendall et al quote their survey of large A&E departments in 1994, asking what techniques are used. It would be interesting to see which way the goal posts have shifted in 1997.

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The authors reply

Lignocaine was used as the local anaesthetic for the haematoma block because this was the current practice in both departments before the onset of the study. It is also the standard local anaesthetic against which others are measured in terms of efficacy; it has a rapid onset of action, and fracture reduction is performed during its recognised duration of efficacy. There are alternatives, but we are not aware of any definite proven benefits of these.

We have no evidence to support the belief that haematoma block works better in older patients; it would, however, seem unlikely, bearing in mind that the majority of patients suffering Colles’ fractures are elderly (mean age 64 years overall), and that anaesthetic effects in the haematoma group overall was significantly worse.

Performing general anaesthetics within the accident and emergency department for these patients is presented by Andrew Lockey as an alternative. This may present a practical difficulty, even if one had an extremely user friendly anaesthetic department, which we also have. The whole “treatment episode” is lengthened by the need to starve patients, and requires patients to be very compliant in terms of accessing the department, depending on whether they saw their doctor and the time of day that they present. These patients, who are often elderly and frail, may have difficulty with this.

There is no doubt (certainly up until 1994, and these are against recent data that we have) that there has been a marked trend in the anaesthetic management of Colles’ fractures away from general anaesthesia and towards local/regional anaesthesia. At that stage 66% of patients who had a general anaesthetic were in fact admitted; there surely must be a significantly greater resource implication in these patients compared with those who have a local/regional procedure performed within the accident and emergency department by accident and emergency doctors.

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The authors reply

We find Moulton and Dark’s comments on our article of interest, but would like to further clarify several points. Sevoflurane is a relatively new volatile agent and there is little published experience of its use for inhalational induction of anaesthesia in the emergency situation. However, in this circumstance we are not suggesting that it replaces halothane at present.

Halothane causes more hypotension than sevoflurane, and sensitises the myocardium to the effects of catecholamines. This may be a serious problem in a patient with 40% carboxyhaemoglobin level and possible volume depletion from burns, as opposed to respiratory depression for which a patient can be ventilated following successful intubation.

Recovery from anaesthesia with sevoflurane is more rapid than with halothane. Should warning signs of impending airway obstruction develop, the process can be expediently reversed and an alternative technique selected. Complete airway obstruction should be avoided if the procedure is carried out with vigilance, but if it does supervene further action will be required regardless of the volatile agent used. 

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