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Appendix

Databases searched

ISI Science Citation Index (on BIDS); BIOSIS (on Silver Platter); British Diabetic Association Database; CINAHL (on

OID CD ROM); CISCOR, the database of the Research Council for Complementary Medicine; Cochrane Database of Systematic Reviews (CDSR); Cochrane Wounds Group register of trials; Current Research in Britain (CRIB); Database of Abstracts of Reviews of Effectiveness (DARE); Dissertation Abstracts; DHSS Data (on Knight-Ridder Datastar); EconLit; Embase (on Knight-Ridder Datastar); Index to Scientific and Technical Proceedings (searched on BIDS); Medline (on OVID CD ROM); National Research Register (to locate ongoing research in NHS); NHS Economic Evaluation Database (NHS Centre for Reviews and Dissemination); Royal College of Nursing Database (CD ROM); System for Information on Grey Literature in Europe (SIGLE, on Blaise Line).

The beefburger injury: a retrospective survey

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Injuries to the hand in the home are common and form a substantial proportion of hand injuries seen in accident departments.¹⁻³ Two of us (AFSF and JS) recognised an increasing number of cases of a characteristic and preventable injury, caused by the person trying to separate stacked frozen food items with a sharp knife. We therefore reviewed the case notes of patients at three hospitals and also examined the Department of Trade's home accident surveillance system database for similar injuries.

Methods and results

Between February 1992 and July 1995 we identified 27 patients at four hospitals (Sunderland District General; Shotley Bridge; Withington, Manchester; and St Andrew's, Billericay). Cases were identified by alerted surgeons and by a review of the notes of patients with knife wounds, supplemented where necessary by telephone interview with the patient.

Three patients were treated in the accident and emergency department and the remainder admitted and treated by hand surgeons. All the patients injured their non-dominant hands. Eleven patients injured their palm and 16 their fingers. The injured structures varied from skin only to all structures on the palmar surface of a digit. There were 16 nerve injuries, nine tendon lacerations, and one volar plate injury. Two patients required revascularisation. Two patients ruptured their flexor tendon repairs: one was successfully re-repaired, the other needed tendon grafting. Two patients needed nerve grafting, one after infection, the other because of poor regrowth. Only six patients had skin lacerations alone.

Data from the home accident surveillance database for 1991 showed 32 patients with accidental injuries of a cutting or piercing type involving frozen articles. There were many similarities with our cases. In both our series and the database, beefburgers were the food most commonly responsible for the accidents (17 and 13 cases respectively), but chops, sausages, crumpets, and pastry featured in both series. The sex ratio (22 and 25 women respectively) and age profile (both mean age of 33 years) were also similar.

Comment

We probably missed some cases in our hospitals because the notes do not always record how injuries occur. Nevertheless, we have identified a substantial number of cases of hand injury caused by trying to separate frozen foods, and the data from the home accident surveillance system suggest the injury is common. Some 14-21% of the 3.5 million patients who attend hospitals or general practitioners for trauma have hand injuries.¹⁻³ The time off work after hand injury averages three weeks,⁴ though after tendon injury it may be as long as three months. Hands with nerve injuries rarely recover their previous level of function. The cost of hand injury is high,⁴ and poor treatment will prolong recovery times and costs. Even trivial hand injuries can leave the injured hand stiff and painful³ if treated incorrectly, so referral to experienced hand surgeons is important.

An understanding of the mechanisms of hand injury is important in injury prevention. The role of hand surgeons in preventing accidents has been emphasised.⁵ We have tried here to draw attention to a type of hand injury that can cause severe morbidity, yet is avoidable. Although the injured person may be mainly at fault in such accidents, manufacturers could mitigate the possibility of injury. Freezing items individually using non-adherent film between the items of food would probably prevent these injuries. We believe that packets of such frozen foods should at least carry a prominent warning of the risk of this injury and instructions on how best to separate frozen foods.

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