

# Letters to the Editor

## Six month outcome of extremely old (≥95 years) trauma patients

SIR—Trauma in the elderly is an issue of escalating importance in health care. The proportion of the 6 billion individuals born in the twentieth century surviving to age 65 in the twenty-first century will continue to increase because of improvements in public health, medicine and economic conditions in developed as well as emerging developing countries.

In extremely old (≥95 years) trauma patients, clinical management must strike a balance between potentially detrimental aggressive treatment and an inappropriately conservative approach [1–3]. The cost of trauma care for elderly patients will continue to increase due to the proportional increase in the ageing population. The National Trauma Database in the US has stated that elderly trauma patients account for 25% of all trauma and use about one-third of the total trauma health care resources [4]. Although trauma in elderly patients has been studied previously, there are no such reports detailing outcome in patients aged 95 years or older [5, 6].

Our emergency department in Bern, Switzerland, is a level 1 trauma referral centre serving a population of about 1.5 million people. All cases were collected from a computer database using defined key words (trauma, age ≥95 years). A total of 57,248 case histories of patients presenting to the department of emergency medicine between January 2002 and December 2003 were reviewed using the ‘Qualicare’ database. This yielded 50 consecutive patients meeting the entry criteria of incurring a trauma injury and being ≥95 years. Their six-months outcome after the injury was assessed by phoning the patients themselves and by contacting their relatives or general practitioners. Patients were questioned about their general health and their ability to undertake activities of daily living compared with their pre-morbid state, including dressing, self-hygiene and preparing meals.

Fifty consecutive patients (42 females) ≥95 years presented with trauma during the study period. Their mean age was 97 years (range 95–103). The presence of pre-existing cardiovascular disease was noted in 64% and diabetes mellitus in 28% (Table 1). Forty-two (84%) of injuries occurred indoors, the remainder outdoors. Twenty were treated on an out-patient basis, eight of them had isolated fractures of the distal arm (e.g., Colles fracture). All trauma was blunt and consisted largely of lower limb fractures ( $n = 32$ , 64%). Among admitted patients, the median hospital stay was 6 days (range 1–27 days). In  $n = 22$  (44%) patients, surgery was necessary. No intraoperative death

had been noted. Four patients died due to pre-existing co-morbidity between 8 and 16 days after hospitalisation. Two patients died within 24 h of admission due to severe head injury. All 44 patients who were discharged after treatment returned to their pre-morbid home environment. No discharged patient died within the first 6 months after trauma (Table 1).

Our results could imply that once the elderly have survived the initial injury, their prognosis for a good outcome is similar to that of younger patients concerning their functional status. Comparisons between the studies of trauma can be difficult, because of differences in the severity of the injuries observed.

Ours is a sizeable patient cohort of extremely old trauma patients, with injuries ranging from minor Colles fracture, managed on an out-patient basis, to fractured neck of femur, which is associated with significant morbidity. Despite this, 88% of our patients had not only survived but also recovered to their pre-injury standard of living.

In summary, this retrospective review of over 57,000 emergency department attendances identified 50 patients 95 years or older presenting with trauma. Notwithstanding their advanced years and pre-existing co-morbidity, 88% had resumed their pre-injury state at 6 months, suggesting that extremely old trauma patients merit consideration of definitive treatment as for younger patients.

**Table 1.** Details of patients, trauma and treatment [data shown is  $n$  (%) unless stated]

| Patient characteristics                | $n$ (%)     |
|--|-------------|
| Age in years [median (range)]          | 97 (95–103) |
| Females                                | 42 (84)     |
| <i>Pre-existing morbidity</i>          |             |
| Coronary heart disease                 | 20 (40)     |
| Diabetes                               | 14 (28)     |
| Hypertension                           | 12 (24)     |
| Cerebrovascular episodes               | 2 (4)       |
| Asthma                                 | 2 (4)       |
| Antiplatelet agents/Warfarin dependent | 44 (96)     |
| <i>Anatomical site of injury</i>       |             |
| Lower limb                             | 32 (64)     |
| Upper limb                             | 8 (16)      |
| Head injury                            | 4 (8)       |
| Pelvis                                 | 6 (12)      |
| <i>Treatment</i>                       |             |
| Conservative non-surgical              | 28 (56)     |
| Surgical                               | 36 (44)     |

A. K. EXADAKTYLOS<sup>1,2\*</sup>, D. J. BUGGY<sup>1</sup>,  
G. SCLABAS<sup>3</sup>, H. ZIMMERMANN<sup>3</sup>

<sup>1</sup>University Department of Anaesthesia, Mater Misericordiae  
University Hospital, Eccles Street, Dublin 7, Ireland

<sup>2</sup>Departments of Anaesthesia, Intensive Care Medicine,  
University Hospital, Inselspital, Bern, Switzerland

<sup>3</sup>Department of Emergency Medicine, University Hospital,  
Inselspital, Bern, Switzerland

\*To whom correspondence should be addressed

Tel: (+353) 1 803 2281

Email: aristomenis@exadaktylos.ch

1. Kohn RK. Cause of death in very old people. *JAMA* 1982; 247: 2793–7.
2. Fazeny-Dorner B, Wenzel C, Berzlanovich A *et al.* Unexpected out-of-hospital deaths in persons aged 85 years or older: an autopsy study of 1886 patients. *Am J Med* 2003; 114: 365–9.
3. van der Sluis CK, Klasen HJ, Eisma WH, ten Duis HJ. Major trauma in young and old: what is the difference? *J Trauma* 1996; 40: 78–82.
4. The Major Trauma Outcome Study. Establishing national norms for trauma care. *J Trauma* 1990; 30: 1356–65.
5. Baker SP, O'Neill B, Haddon W *et al.* The injury severity score: a method for describing patients with multiple injuries and evaluating emergency care. *J Trauma* 1974; 14: 187.
6. van Aalst JA, Morris JA, Yates HK *et al.* Severely injured geriatric patients return to independent living: a study of factors influencing function and independence. *J Trauma* 1991; 31: 1096.

doi:10.1093/ageing/afj022

Published electronically 16 January 2006

## Another case of missing dentures

SIR—I read with interest ‘Mystery of the missing denture: an unusual cause of respiratory arrest in a nonagenarian’ published on 19 June 2005 [1] and have a similar case to report.

Having recently commenced employment as a physical care practitioner working in mental health for older people on continuing care wards, I was asked to see a lady who had suffered a recent choking event. Following the incident, the patient was generally unwell, but the main concern was that she was unable to eat or drink despite being both hungry and thirsty. A local general practitioner saw the patient but could find no reason for her difficulty in eating or drinking and confirmed that she did not appear to have aspirated. Nursing staff had noticed that the patient’s top set of dentures were missing and had enquired if she could have swallowed them, but this was not considered to be possible.

On examination, I found that the patient had recently developed a very hoarse voice. Whilst the patient had the ability to swallow, she then had to expel any food or fluid from her mouth. There was only very mild tenderness in her throat on examination. No foreign body could be seen in the mouth or throat. I discussed the case with an ENT colleague and escorted the patient to the local ENT

department. The patient was seen and examined under local anaesthetic, and the initial diagnosis was either a residual food bolus or a tumour. On further examination, the consultant confirmed that he could see teeth and that this was only the second time he had ever seen this. The offending denture was removed under local anaesthetic. The patient developed no complications and was eating and drinking within a couple of hours.

I agree with the author that asking about loose-fitting dentures should be part of comprehensive assessment of all older people and, following this incident, I now include a dental assessment as part of my routine physical assessment. Many older people in long-term care receive suboptimal dental care. Locally, I am leading a working group to improve all aspects of oral care for older people in mental health wards, and I have little doubt that this work should be replicated by all long-term care providers.

LESLEY CHAPMAN

Physical Care Practitioner, Auckland Park Hospital,  
Bishop Auckland, County Durham, UK

Tel: (+044) 7785304067

Email: lesley.chapman@cddps.northy.nhs.uk

Note: This work was carried out for Mental Health Services for Older People, County Durham, and Darlington Priority Services NHS Trust.

1. Arora A, Arora M and Roffe C. Mystery of the missing denture: an unusual cause of respiratory arrest in a nonagenarian. *Age Ageing* 2005; 34: 519–20.

doi:10.1093/ageing/afj034

Published electronically 16 January 2006

## Post-fall syndrome: a matter to study in patients with hip fractures admitted to orthopaedic wards

SIR—We have read with pleasure Dr Martín *et al.*’s [1] very interesting paper about fear of falling limiting activity in young-old women being associated with reduced functional mobility. We would like to contribute our experience.

A prospective study was carried out for 2 years (2003 and 2004). All patients with hip fractures admitted to orthopaedic wards of a teaching hospital and referred to the geriatrician were included. The geriatrician makes a daily ward round taking medical control of the patients, and a study record was completed for each of the patients. In this study, all the independent predictive variables of functional recovery after hip fracture in the elderly were collected [2]. One of them was the presence of post-fall syndrome detected by the geriatrician during in-hospital stay. Follow-up outcome data were collected by telephone, 3 and 6 months after injury.

A total of 196 patients were recruited. The mean age was 84 years and post-fall syndrome was identified in 5.1% of patients. These patients were older (86.1 versus 82.7) and had a greater number of past medical diagnoses (5.6 versus