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Letter to the Editor

Prevention of fall from the bed of spinal cord injury patients

A review of the relationship between a fall in the hospital and the administration of sedative/hypnotic or other psychotropic drugs revealed that patients who fell were approximately 2.7 times as likely to have received a psychotropic drug compared to control subjects matched for age, gender, and medical service. Orally administered temazepam, alprazolam, diazepam, and lorazepam were significantly associated with falls. Patients receiving two or three psychotropic drugs concomitantly were 3.7 and 9.5 times, respectively, more likely to fall compared to control subjects. We recently witnessed a 56-year old male with traumatic tetraplegia (C-5; ASIA scale C), who fell from the bed at 0150 hours while he was partly awake and partly asleep, probably due to the effect of 20 mg of temazepam taken at 2200 hours (Figure 1).

Hypnotics are widely prescribed to patients with spinal cord injury. Psychotropic drugs used in about 50% of



Figure 1 Photograph of a 56-year old male with incomplete tetraplegia who fell from his bed during the night: This person sustained a scalp laceration and bruising of his nose as a result of the fall.

residents of nursing homes and in 20% in the community, cause around 30% of falls in nursing homes and 20% of falls in the community.² Reducing falls in hospital requires an environmental as well as a patient-orientated approach.³ We suggest that side railings must be fixed routinely to the cots of spinal cord injury patients who are vulnerable to fall as specified below.

- Patients with severe degree of spasms
- Patients who receive two or more psychotropic drugs
- Those who have been prescribed large doses of benzodiazepines (e.g. temazepam 20 mg)
- Those who are agitated and restless due to any reason
- Elderly patients with spinal cord injury as people of advanced age do not tolerate an unfamiliar hospital environment and prolonged periods of confinement to bed, which may be recommended, for spinal immobilisation.

Physicians and other health professionals caring for spinal cord injury patients have moral and legal obligations to prevent falls occurring in the Spinal Injury Centres. Restricting the use of psychotropic drugs, especially benzodiazepines, and routine application of side railings to the cots of selected spinal cord injury patients will help to reduce serious falls of spinal cord injury patients from the bed.

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References

- 1 Mendelson WB. The use of sedative/hypnotic medication and its correlation with falling down in the hospital. *Sleep* 1996; **19:** 698–701.
- 2 Blain H, Blain A, Trechot P, Jeandel C. The role of drugs in falls in the elderly. Epidemiologic aspects. *Presse Med* 2000; 29: 673– 680.
- 3 Vassallo M *et al.* An epidemiological study of falls on integrated general medical wards. *Int J Clin Pract* 2000; **54:** 654–657.