

**EFFICACY OF HIP PROTECTORS IN DECREASING THE RATE OF HIP FRACTURES
IN ELDERLY PATIENTS IN DEMENTIA SPECIALIZED UNITS**

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Purpose:

There is an alarming increase in the incidence of hip fractures in the elderly, particularly in patients with dementia, making hip fractures the commonest reason for admission of elderly people to orthopedic wards, accounting for 0.1% of global burden of disease. Hip protectors (HP) consist of specially designed padding worn around the hip and are supposed to decrease the risk of hip fractures as a result of falls. We evaluated the efficacy of HP in preventing hip fractures, in physically independent patients with dementia hospitalized in dementia specialized departments.

Methods:

Between January 1, 2001 and September 30, 2006, the teams of 4 dementia specialized units, at the Shoham Geriatric Medical Center in Israel, began to monitor falls in all patients with dementia. Each patient with a "Fall" was immediately checked by a physician, and the details recorded. Since January 2004, we recommended the use of HP to each family/guardian of all patients in these departments. The study group was defined as patients who put on regularly HP. The control group included patients treated by the same teams who were not using HP. We compared the number of fractures per falls between patients who were or were not wearing HP. Patients in whom the use of HP was discontinued after less than 2 months were excluded from final analysis, as well as patients with expected or actual life expectancy of less than 6 months.

Results:

We evaluated the medical records of 228 patients (152 women, 76 men). 149 patients had at least one fall during their hospitalization. The study group was composed of 107 patients who were wearing HP for a total period of 1945 months. The control group was composed of 153 patients not using HP, who have been followed for a total period of 3095 months. The study and control groups were comparable regarding age, gender, co-morbidities, routine laboratory findings and medications. The rate of falls was comparable in both groups. However, in the control group there were 324 falls resulting in 14 hip fractures and in the study group 269 falls and two hip fracture (4.3% Vs. 0.7% respectively, $p=0.007$, $\chi^2(1)=7.16$).

Conclusions:

Hip protectors significantly decrease the risk of hip fractures as a result of falls, in patients hospitalized in dementia specialized departments. Therefore, wearing HP in patients in this setting is recommended; it should also be considered in independent elderly people particularly with dementia, in the community as well.