CLINICAL CHARACTERISTICS OF PATIENTS WITH COGNITIVE IMPAIRMENT AND DEMENTIA ATTENDING A CASUALTY DEPARTMENT WITH FALLS

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Patients with cognitive impairment and dementia account for 25% of casualty attendances due to falls in people aged 65 and over. Our aim was to identify the clinical characteristics of these patients. 30 patients, aged 65 and over, who presented to casualty with a fall and met recognised criteria for cognitive impairment (Mini-mental state examination (MMSE) < 24) underwent a multidisciplinary post-fall assessment. The mean age was 84 (SD 6.4) and 87% (n=26) were female. The median MMSE score was 13.5; 87% (n=26) met the International Classification of Diseases, Revision 10, (ICD-10) criteria for dementia. 83% (n=25) sustained significant injury; 63% (n=19) required inpatient admission. 60% (n=18) had ≥ 3 falls in the previous year. 83% (n=25) co-operated with investigation; a diagnosis was reached in all patients. The median number of diagnoses was 5, range 1-7. Diagnoses included: 90% (n=27) impairment of gait or balance; 53% (n=16) cardiovascular problem; 47% (n=14) medication contributing to falls; 27% (n=8) untreated medical problem, and 13% (n=4) environmental hazard. All had diagnoses in which intervention has been shown to reduce falls in cognitively normal patients. In conclusion, patients with cognitive impairment and dementia were able to co-operate with multi-disciplinary investigation of falls. A diagnosis was reached in all patients. There is the potential for intervention to reduce the risk of further falls in patients with cognitive impairment and dementia.

AGE-ASSOCIATED ENDOCRINE DEFICIENCIES AND MUSCLE FUNCTION IN ELDERLY WOMEN - A CROSS-SECTIONAL STUDY

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In view of the fact that muscle receptors and selected anabolic effects have been identified for 1,25-dihydroxyvitamin D (1,25(OH)_2D_3) and insulin-like growth factor-I (IGF-I), it is tempting to speculate that the decreasing concentrations of these endocrine factors might be involved in the decline in muscle function that characterizes normal human ageing. The aim of the present cross-sectional analysis was to test this hypothesis in a well-defined community-based sample of 245 healthy elderly women aged 70-90 years. To this end, quadriceps strength was related to the following potential determinants: age, height, weight, habitual physical activity, serum 1,25(OH)_2D_3, and IGF-I. Quadriceps strength was evaluated using a isokinetic dynamometer (Cybex II, Lumex Inc.). A standardized questionnaire (Sallis et al. 1985, Am J Epidem 121: 91-106) was used to assess habitual physical activity. IGF-I and 1,25(OH)_2D_3 were measured by radioimmunoassay. Vitamin D binding protein (DBP) was measured by single radial immunodiffusion and the free 1,25(OH)_2D_3 index was calculated as the molar ratio of total 1,25(OH)_2D_3 to DBP. The differences in isometric and isokinetic strength over the age range were equivalent to losses of 0.9-2.4% per year. However, no relationship was found between vitamin D status or the somatotropic axis and quadriceps strength, despite markedly decreasing serum concentrations of free 1,25(OH)_2D_3 and IGF-I with age. Although limited by its cross-sectional design, the present study suggests that levels of circulating IGF-I and free 1,25(OH)_2D_3 are not involved in the age-related loss of muscle function.