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Acute functional decline before hospitalization in older patients

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Aims: Acute diseases and related hospitalization are crucial events in the disabling process of elderly individuals. Most of the functional decline occurs in the few days before hospitalization, as a result of acute diseases in vulnerable patients. The aim of the present study was to identify determinants of prehospital components of functional decline.

Methods: This was a prospective observational study carried out in three acute geriatric units and two general medicine units of three Italian hospitals. The participants were 1281 patients aged 65 years or older admitted to hospital for acute illnesses and discharged alive. Functional status 2 weeks before hospitalization (preadmission) and at hospital admission was measured by the Barthel Index to identify patients with prehospital decline. In this group of decliners, the percentage extent of prehospital decline (PEPD) was also calculated.

Results: Prehospital decline occurred in 541 (42.2%) patients, who were hospitalized mostly in geriatric wards (55.6%). Older age (odds ratio [OR] 1.06, 95% confidence interval [CI] 1.04–1.08) and dementia (OR 2.8, 95% CI 1.4–5.4) were significant predictors of prehospital decline, whereas a high preadmission function was protective (OR 0.992, 95% CI 0.987–0.997). Pulmonary disease as primary discharge diagnosis was also associated with prehospital decline (OR 1.8, 95% CI 1.3–2.5) after adjustment for age, diagnosis of dementia and preadmission function. Amongst decliners, a low preadmission function and the origin of patients (from emergency rooms or other hospital units) were associated with larger PEPD.

Conclusions: Using a clinically meaningful change to define decline, disease-related prehospital disability is observed mainly in persons with low preadmission function, older age and dementia. **Geriatr Gerontol Int 2013; ••: ••–••.**

Keywords: acute diseases, functional decline, hospitalization.

Introduction

Acute illness and hospitalization are crucial events in the complex process leading to disability in elderly people.[1] Approximately half of new disabilities in the elderly is as a result of acute diseases and subsequent hospitalization.[2] It is calculated that approximately 30–35% of older adults are discharged from hospitals with worsened functional status compared with a pre-admission level of 2 weeks before hospitalization.[3–5] Most studies measured functional changes from the preadmission level to hospital discharge, and did not measure functional status at hospital admission.[3,6–10] The latter measurement, however, is important because functional trajectory around hospitalization includes two different and subsequent segments: a prehospital segment during which patients experience, mostly at home, the effect of the acute illness on the their general health and functional status; and the following in-hospital segment. Previous findings had emphasized the possible role of hospitalization per se in causing functional loss by a number of iatrogenic factors, such as excessive bed rest, sleep deprivation, isolation, poor

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