

Risk factors for falls in elderly anything new?

Abstract

Falls are a main problem among elderly; they are common and have serious consequences but are an opportunity to identify patients at risk and prevent new events through several interventions. There are classical risk factors but it is interesting to focus in new ones like sarcopenia, frailty and diabetes all of them clearly linked.

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Introduction

Falls are a main problem among older people, being one of the most important Geriatric Syndromes like delirium, cognitive impairment or functional disability. They are very common not only in nursing homes or hospitals but also in the community; one third of elderly people fall each year in the community and half of them will fall recurrently.¹ They also have very adverse outcomes with high morbidity and disability like fractures, pain and fear of falling or depression that leads to institutionalization in many cases.² But making an early multidimensional assessment on them give us the opportunity to reverse these outcomes.

Fall is defined as “an event which results in the person coming to rest inadvertently on the ground or other lower level, and other than as a consequence of the following: sustaining a violent blow, loss of consciousness, sudden onset of paralysis, or an epileptic seizure”.³

Rubenstein described falls as a consequence of a complex combination or interaction of many different circumstances; some intrinsic factors and other extrinsic ones. Patients with many intrinsic factors need less extrinsic factors to have a fall, and those with few intrinsic factors will need more extrinsic circumstances to fall.⁴

The most described risk factors for falling are history of previous falls, drugs, especially those with sedative effects like opioids, hypnotics, narcoleptics, antidepressants, antiepileptic drugs or antihypertensive. Polypharmacy is also important and increases the risk for falls in an exponential manner.⁵ Other risk factors are cognitive impairment or dementia,⁶ Parkinson disease and other neurological problems that affect gait and balance, depression, visual or hearing problems, cardiovascular diseases like arrhythmias or postural hypotension and the number of risk factors.

But recently there are new emerging fall risk factors: sarcopenia, frailty and diabetes. Sarcopenia is defined as a loss of muscle mass plus the presence of low muscle strength or low physical performance. Sarcopenia is a risk factor for weakness and falls and it is intrinsically associated to frailty being the core of this process.⁷ Frailty is a syndrome characterized by a decreased in physiological reserve of multiple organs which leads to a less resistance to stressors. This condition makes the subject in special vulnerability for adverse outcomes as disability, hospitalization, loss of independence, death and falls.⁸

Both syndromes impact on muscular strength (mainly in lower extremities) and on the mobility or functional performance. In these

circumstances, gait, balance problems and falls more common.^{9,10} Diabetes is increasing specially among ageing population and it has a clear negative impact on muscle and function which predispose to sarcopenia and frailty.

Diabetes accelerates changes described in muscle ageing: structural changes like reduction in muscle mass and fat infiltration especially in lower extremities, functional changes with lower strength or gait speed which predispose to sarcopenia and frailty. Many of the late complications associated to diabetes (visual deficits, cognitive impairment, foot problems or neuropathy) are concomitant risk factors for falls.^{11,12} Hyperglycemia or hypoglycemia can be causes of falls, and among treatments, insulin and sulphonylureas are main contributors of hypoglycemia events in falls.

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Conflict of interest

The author declare that no conflicts of interest concerning this article.

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