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Mini Review Article

Assessing falls in the elderly

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Abstract

The incidence of falls is increasing proportionally with age and is related with high rates of disability and frailty. Falls are considered the leading cause of death in the elderly and are often multifactorial in origin. They are also linked with older adults losing their confidence and independency. Furthermore they are associated with increased funding spent for hospital extended stays, carer time and absence from work. Taking into account that the population is ageing, thus the number of people older than 65 will increase considerably in the near future, it is easy to understand that costs are really likely to increase further. It is therefore important to address that problem and instead of focusing especially on treatment to concentrate on prevention as well.

Keywords: Falls, Prevention, Elderly

The risk of falling increases significantly in the elderly and is considered a major social problem. It is the second leading cause of accidental or unintentional injury deaths and alters the national health system's financial plan due to increasing costs. The risk of death, after sustaining a fall, is 40 times higher in people aged between 65 and 69 years, whereas hospital admission is nine times more probable. Literature suggests that even if falls are not related with injuries they can still alter the confidence, mobility status and lifestyle of the elderly. This underlines how important it is to prevent old people from falling, irrespective of the result.

Approximately 30% of community dwelling people over age 65 and 50% of those older than 85 years[1] will fall at least once. The prevalence of falls is even higher in long-term care facilities, occurring in more than 50% of people over age 65[2]. It is noteworthy that despite the increasing mortality, only less than half of the elderly patients, who sustain a fall, actually seek medical help or report it to their family doctors. Furthermore, women are more prone in seeking medical care after sustaining a fall[3]. These numbers highlight the necessity for family doctors to make a plan about screening and identifying patients who are more likely to sustain falls. While various screening tools have been proposed and used, there is debate about their usefulness[4]. Nevertheless, using the Elderly Falls Screening Tool (EFST) could be helping towards that goal[5]. EFST is documenting:

1) walking disorders,
2) low walking pace (less than 30 meters per minute),
3) the number of falls,
4) prevalence of falls reported by the elderly,
5) injuries resulting from these falls.

This test has high sensitivity and specificity whilst the presence of at least two from the abovementioned factors is related with high risk of falling.

Further attention should be given to those who seek assistance after sustaining a fall or had more than 2 falls per year. Moreover, elderly who suffer from balance or walking disorders, have high EFST scores, show signs of fatigue or weakness and are afraid of falling, merit close medical attention. Scrutinizing deficits in motion and sensation, body balance, muscular strength and reaction time is also advised.

Predisposing factors for falls can be either extrinsic or intrinsic. Extrinsic factors are associated with changes in the physical environment and activities that increase the chances of falling. In contrast, intrinsic factors are related with physical, sensory, and cognitive changes associated with ageing, disorders of the nervous and musculoskeletal system and use of medication[6,7] such as diuretics, antidepressants, sedatives, digoxin and type1 antiarrhythmic drugs. These predisposing factors can be

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classified as significant, moderately significant or slightly significant. For instance, Parkinson's disease is linked with significantly increased risk of falling[8], whereas gender (women are more susceptible to falls[9], vision impairment[10,11] and arthritis are considered moderately significant etiologic factors. Moreover, orthostatic hypotension is a mildly significant independent risk factor related with falls[12].

Reducing the number of people who fall, the incidence of falls and the severity of injury, should a fall occur, is incremental. Keeping the elderly in good health condition reduces the risk of them falling and getting injured. It is therefore essential that most health issues are being addressed and an uninterrupted doctor-patient relationship is kept in order to reduce that risk. A systematic review of the prescribed type and dosage of medication, combined with reducing the use of psychotropic drugs and arranging vision assessments on a regular basis can be beneficial. Mild exercise is also helpful in keeping a good health and preventing falls[13]. Tai Chi-type exercises, strength training, dynamic balance and community-based programs that incorporate fall prevention education can also be helpful. Making living space modifications and removing furniture that can work as obstacles is also important in the prevention of falls.

Hospital admissions due to fractures and falls are linked with high incidence of syncope and symptoms of dizziness. It is therefore important that their etiopathogenic factors are investigated and treated. In addition, good nutrition and use of orthopedic shoes and walking aids, such as canes and walking frames, can also assist in the prevention of falls.

There is no doubt that prevention of falls is better and more cost effective than trying to address its consequences. Therefore, reducing the risk of falling and assessing strategies to minimize its consequences is essential. Literature suggests that vitamin D and calcium supplements reduce the risk for fracture[14]. Moreover, vitamin D has a good effect in musculoskeletal function while reducing the risk of falling[15,16]. It also decreases independently the risk of sustaining another fracture in elderly women that had already suffered a hip fracture[15]. Hip protectors are also believed to be decreasing the probability of fracture in high-risk patients, without their use being associated with increased risk of falling[17], whilst anti-osteoclastic and anabolic agents are recommended for the osteoporotic population[11].

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