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Prevalence of risk of falls in a permanent geriatric stay

Abstract

Aging or also called the normal process of changes that are related to the passage of time starts from when we are born and continues throughout life, and old age is the final phase of life. It is a gradual and adaptive process of a biological, psychological and social type, produced as a consequence of genetically programmed changes, history, lifestyles, environment and social conditions in which the elderly live. On the other hand, old age is a stage of life whose beginning is established by society, which is why the United Nations Organization agreed that, in developing countries, people aged 60 and over are classified as older adults.

Within the present work, it is intended to obtain a diagnosis on the prevalence of falls in which the current situation of patients in a permanent geriatric stay located in Irapuato, Guanajuato is shown. This is considered important because during aging structural and functional changes occur in different organs and systems. For this reason, as health professionals, we must know the normal morphological and functional changes of physiological aging, and thus guide the elderly to adapt and improve their lifestyle.

Keywords: fall, elderly, geriatric stay, coronary diseases

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Introduction

Elderly

Aging is called the process of morphofunctional changes that occur in living beings in relation to the passage of time. The aging process can be studied from two points of view, that referring to the physiological changes or expected for all individuals regardless of their life experiences, or that referring to the pathological changes, specific to each individual and that are related to the alterations of the organic balance in relation to the development of morbid processes.

It is estimated that only between 20 and 25% of the variability in the age of death will be determined by genetic factors, some of which will become survival factors, while others will be predisposing factors for suffering from certain chronic diseases, among which we could highlight coronary diseases, some types of cancer, diabetes mellitus or some dementias such as Alzheimer's disease.

Socioeconomic determinants exert a great influence on the aging process, in such a way that in developed and, therefore, wealthier societies, life expectancy at birth is twice that of the poorest countries, including conditions and safety at work, aspects related to retirement or the level of education achieved.

Another factor of great relevance in the aging process as referred to by Calenti,[1] will be the one referring to habits or lifestyles; thus, they would be considered abnormal habits and, therefore, with a negative influence on ageing, sedentary life, tobacco or alcohol consumption, unbalanced diets, lack of social relationships or activity in some job sectors that generate stress (managers, health professionals or air traffic controllers, among others), or very demanding from the physical point of view (dock workers or laborers, among others). It is necessary to point out the important difference in longevity in terms of gender, since, in women, for example, in Spain, they live almost seven years longer on average than men and, in some way, they are conditioning a feminized society of the elderly.

Aging is the set of transformations and/or changes that appear in the individual throughout life; it is the consequence of the action of time on living beings. These changes are: biochemical, physiological, morphological, social, psychological and functional.[2]

The meaning of Geriatrics, according to Nicola 1985, is the medicine of the elderly. This definition includes, in a modern sense, medical care; that is, prevention and treatment of diseases of old age and psychological and socioeconomic assistance.

Gerontology was defined by Calenti in,[1] as the science that studies aging and all the phenomena associated with it, divided into three branches according to the aspects it includes: social gerontology, whose objective is the study of all socioeconomic and cultures that influence aging; experimental gerontology, referring to the research aspects that would allow us to advance in the knowledge of aging and, finally, clinical gerontology, which would refer to everything that has to do with the disease, its prevention, diagnosis and intervention and social readaptation. In this sense, clinical gerontology would include all the actions that must be carried out at the bedside of the patient by the different professionals in the field of health.[2–5]

The effective age of a person can be established taking into account various considerations that allow us to differentiate four types of ages: chronological age, physiological age, mental age and social age.[6–7]

Chronological age

It is defined by having completed a certain number of years; regarding old age, it has been agreed so far, 65 years. It is objective to the extent that all people born on the same date share the same chronological age. The advantage of the objectivity of chronological age becomes inconvenient when verifying the different impact of time but the quality of the time elapsed, the events experienced and the environmental conditions that have surrounded it.

Physiological age

It is defined by the aging of its organs and tissues, that is, the physical affectation of the individual. Organic changes occur gradually: slow and imperceptible at the beginning of the process, until they affect the normal development of daily life activities or interfere with them.[8–11]

Mental age

It is difficult to establish, but the external events of each person's life, social and affective, make each one react according to their personality, circumstances and vital experience.

Social age

This is established with the individual role that must be played in society. This way of classifying can be considered discriminatory since it does not take into account personal aptitudes and attitudes towards the resolution of activities of daily living. However, the limits of the social age change according to the economic and political needs of the moment.[2]

Stays

One of the life options for the elderly who are dependent is that the elderly are at risk of becoming institutionalized, although it is a minority that they make various expenses to the health system requiring care by personnel who in many cases are not well prepared, and although many lack social security and do not have adequate family support, many of them with chronic diseases with medical requirements, many of them have social isolation and low economic resources. Quality of life is a difficult aspect to address in terms of care, since a good service depends on the attention and perception of the person attended, since it depends on two basic factors: the personal, internal subjective description of the patient and, secondly, First, the objective determination of the external parameters.[12–15]

Infrastructure

Given these social changes and the vision of proposing day stays for the elderly, they must be supported by NOM-001-SSA2-1993, which refers to the architectural requirements to establish the requirements for the disabled regarding access, transit and permanence facilities, receiving adequate medical care that must include handrails, ramps, stairs, emergency exits, fire extinguishers, visible signs, and to function they must be based on NOM-167-SSA-1-199 on the provision of social assistance services for minors and older adults, which tells us about the adequate infrastructure for the provision of services, offering clinics where they work with a multidisciplinary team such as a doctor, nurse, psychologist, gericultist and physical-occupational therapist, they could also have activities for recreation and training such as workshops and crafts whose objective is to keep the elderly active, even being able to sell these items, a library, a religious service that provides support since aging is a stage of loss of beings. loved ones and a vision closer to death, multipurpose room that can be used as areas to offer talks and even activities such as dancing, for the rest area we find the bedrooms that can be individual or shared with no more than 6 beds matrimonial, the toilets must be for men and women with sinks, urinals and showers, there must be an administrative area for the entry of the elderly, having the function of receiving complaints and suggestions for users and family members to follow up and solve.[16]

Drop

A fall is defined as the consequence of any event that precipitates the individual to the ground.

In the elderly, falls represent one of the great geriatric syndromes and are an important cause of morbidity and mortality and, therefore, affect the quality of life of the elderly. It has been considered a syndrome due to its complexity, multicausality and need for an interdisciplinary approach and due to the multiple signs and symptoms they present.[3]

Factors that predispose to falls

1) Instability and rocking when walking.
2) Alterations in postural reflexes.
3) Reduced brain flow
4) Auditory alterations
5) Visual disturbances

Main diseases associated with falls

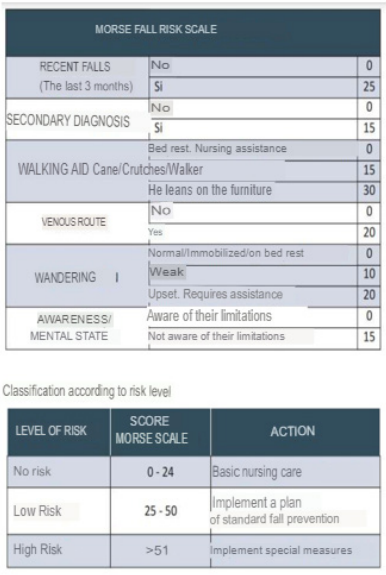
1) Arrhythmias
2) Myocardial infarction
3) Blood pressure changes
4) Myopathies
5) Cognitive alterations
6) Osteoporosis
7) Osteomalacia
8) Gonarthrosis
9) Hypoglycemia
10) Anemias

Consequences of a fall in the elderly

In 80% of the injuries they can be minor, but 1% of the patients who presented a fall presented fractures of the femur, forearm, humerus and pelvis, according to Hazzard.[4] As age advances, there is a greater risk of falls that can cause rib fractures, head trauma, as well as post-fall syndromes, losing the security of the elderly to carry out activities independently, causing the elderly to be disabled.[17–19]

Material and methods

We work with geriatric patients ranging from 45-90 years, which in turn are divided into Percentile 45-60 years, Gradual Senescence 60-70 years, declared Old Age 70-90 years, long-lived more than 90 years, which are the patients who are in a permanent geriatric center, to determine the risk of falls (Figure 1).[20]



MORSE FALL RISK SCALE		
RECENT FALLS (The last 3 months)	No	0
	Si	25
SECONDARY DIAGNOSIS	No	0
	Si	15
WALKING AID Cane/Crutches/Walker	Bed rest. Nursing assistance	0
		15
	He leans on the furniture	30
VENOUS ROUTE	No	0
	Yes	20
WANDERING	Normal/Immobilized/on bed rest	0
	Weak	10
	Upset. Requires assistance	20
AWARENESS/ MENTAL STATE	Aware of their limitations	0
	Not aware of their limitations	15

Classification according to risk level

LEVEL OF RISK	SCORE MORSE SCALE	ACTION
No risk	0 - 24	Basic nursing care
Low Risk	25 - 50	Implement a plan of standard fall prevention
High Risk	>51	Implement special measures

Figure 1 Morse risk scale.

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Morse scale

The Morse fall scale is a quick and simple tool to assess the probability that a patient will fall. Scores are assigned according to the following definitions:

History of recent falls

25 points are assigned if the patient has fallen during the current hospitalization or has a history within the last three months of physiological falls as a result of situations such as seizures or gait disturbances. If the patient has not fallen, 0 points are assigned. Note: If a patient falls for the first time, then the patient's score automatically goes up to 25. If the patient can only walk on furniture, 30 points are assigned.

Secondary diagnosis

15 points are assigned if there is more than one diagnosis in the medical history. If not, it is scored 0.[21–23]

Walking aid

A 0 is scored if the patient walks without any assistive device (even being helped by a nurse), is in a wheelchair or is resting and does not get out of bed at all. If the patient uses crutches, a cane or a walker, 15 points are assigned. If the patient only walks leaning on the furniture, 30 points are assigned.

Intravenous route

20 points are assigned if the patient has an IV line, otherwise the score is 0.

Gait (Balance and/or transfer)

A normal gait is defined as when the patient walks with the head erect, arms swinging freely at the sides, and with sure steps. No points (0) are assigned to this march. With a weak gait (score 10) the patient walks hunched over, but is able to raise his head while walking without losing balance. The steps are short and you can drag your feet. With an altered gait (score 20) the patient may have difficulty getting up from the chair, being able to make several attempts by resting their arms on the arms of the chair or "gaining IMPULSE" (e.g., making several attempts to sit up). The patient's head is low, looking at the floor Because of very poor balance, the patient holds on to furniture, a support person, or canes/walkers and cannot walk without this assistance).[24]

Consciousness -mental state

When using this scale, the patient's mental state is assessed by checking the patient's own assessment of his ability to walk. The patient is asked: "Can you go to the bathroom on your own or do you need help?" If the patient's response is consistent with her real possibilities, 0 points are assigned. If the patient's response is unrealistic, it is considered that he overestimates his own abilities and is not aware of his limitations, thus assigning 15 points.

Final score and risk level

The scores of the 6 items are added and documented in the clinical history. This identifies the level of risk of falls and the recommended actions according to the risk.[25]

To measure the risks of falls, the data will be emptied into graphics in Excel to show the demographic data and the state of health. The work is transversal, descriptive.

Results

When taking the general data of the elderly, the following results were obtained: 13 male patients representing 45% and 16 female patients representing 55% (Figure 2).

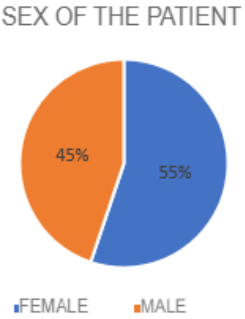

Figure 2 Patient sex.

AGE

When obtaining the data of the 29 geriatric patients, the following results were obtained; 3 patients (10%) are within the age group of 40-59 years, 8 patients (28%) are within the age group of 60-79 years, and 18 patients (62%) are within the age group from 80-99 years (Figure 3).

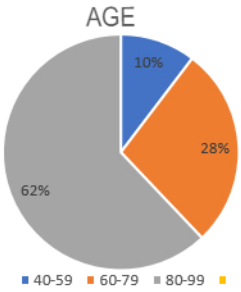

Figure 3 Age.

When collecting the general data of the elderly who are within the institution of the permanent geriatric stay, the following results were obtained regarding their religion: there is a higher prevalence of patients with a Catholic religion with a number of 28 patients representing 95% in comparison with the Christian religion presenting 5% with 1 patient (Figure 4).[26–28]

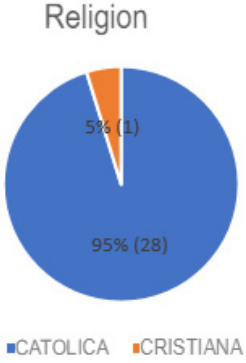

Figure 4 Religion.

When interviewing patients about the medical service they have, it was found that 16 people (56%) have IMSS, 11 people do not have rights (38%), 1 person has a military hospital (3%) and another 3% to ISSSTE (Figure 5).

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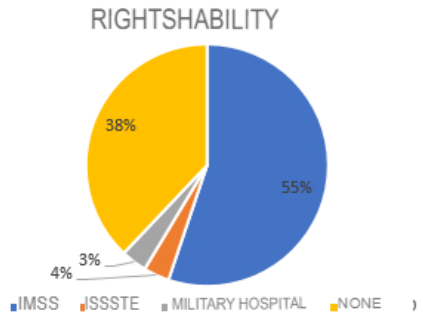

Figure 5 Legal holding.

With respect to the data obtained in the investigation of the elderly, the following data was obtained regarding their marital status: representing the majority, 19 people are single, representing 66%, 7 people are widowed with 24%, 2 people are divorced, with 7% and 1 person is married to 1% (Figure 6).[29–32]

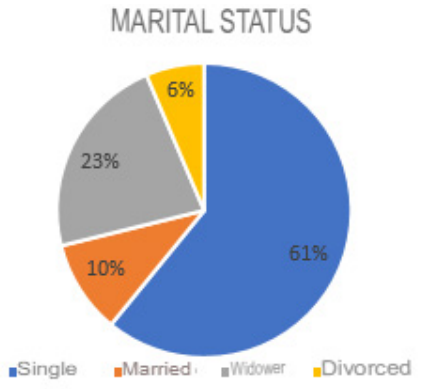

Figure 6 Civil status.

The Morse scale was applied to 29 patients, yielding the following results; 8 patients (8.28%) have a high risk of falls, 18 patients (18.62%) a low risk and 3 patients (3.10%) without risk (Figure 7 & Table 1).[33–35]

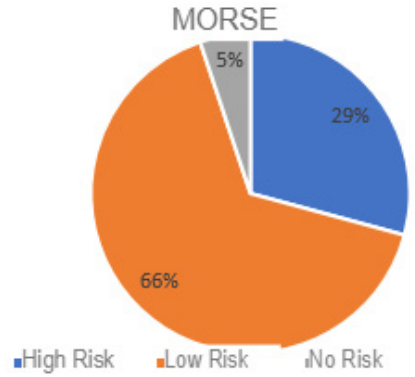

Figure 7 Morse scale.

Table 1 Fall risk classification by gender

Fall risk classification by gender			%
Women	Low risk	9	31%
	Moderate risk	5	17%
Men	Low risk	eleven	37.90%
	Moderate risk	2	6.89%

Conclusion

It is observed that the majority of women have a low risk of falls, just like men, falls can trigger a series of consequences for the elderly from tissue injuries, fractures, loss of autonomy and even death, which is why the Risk identification helps us make decisions for the intervention of this vulnerable group to provide security and reduce costs in secondary and tertiary care.[36]

This research coincides with the results of Martínez,[5] in his Update study on the prevention of falls in the elderly, where he found the importance of preventing falls using effective and safe strategies, techniques and interventions, as well as the use of a diet balanced, and complete, nutritional support, assessment of physical condition, reduction of environmental risks, and training of personnel who are in charge of care.[37]

Inclusion criteria

Adults older than 65 years who signed informed consent.

Exclusion criteria

Adults older than 65 years who refused to participate in the study.

Ethical considerations

In accordance with the General Health Law on research for health and the research lines of the Department of Nursing and Obstetrics of Irapuato of the University of Guanajuato, Helsinki Standards and the basic principles of clinical research, as well as the law overall health. The human rights of each person who participated in the research were respected, the objective of which was to assess the risk of falls, in addition to the fact that the risk is zero, since no invasive procedures were performed, therefore the research was considered "without risk". . Likewise, informed consent was granted to explain what the investigation consisted of and where the person could withdraw from the investigation at any time, if they considered it necessary.

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None.

Conflicts of interest

None.

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