

Preventing Falls in Orthogeriatric Patients by Changing Their Therapeutic Profiles

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Background

Elderly people nowadays are poly-medicated due to their multiple comorbidities. The risks of polypharmacy can be higher than the benefits. Some medicines, labelled *Fall Risk Increasing Drugs* (FRIDs) (fig.1), such as benzodiazepines, antidepressants, antipsychotics, are among the major causes of falls. Thus, in order to prevent unnecessary falls and their consequences, there is an urgent need to review patients' therapeutic profiles and to adapt it to the real needs of each patient. The Orthogeriatric Unit of the hospital was created to provide a multidisciplinary care to patients over 65 years with a hip fracture admitted to the hospital.

	FRIDs
High Risk	Antidepressants Antipsychotics Anxiolytics and hypnotics Antiparkinsonics
Moderate risk	Opiates Antiepileptics Antihypertensives Antivertigo agents Antihistamines

Fig.1 – Fall Risk Increasing Drugs

Objectives

To review and optimize the therapeutic profile of patients admitted to the Orthogeriatric Unit, during hospital admission and follow up appointments to prevent the reoccurrence of falls and fractures.

Materials & Methods

Observational retrospective cohort study of patients:

- Over 65 years;
- Admitted to the emergency service;
- Diagnosed with a hip fracture;
- Between the 1st of January and the 30th of June 2019.

These patients were admitted to the Orthogeriatric Unit during hospitalization and scheduled to follow up appointments. Their medication profile was obtained via digital medical record and national platform of healthcare. Descriptive statistics was used to summarize the data.

Results

A total of 162 patients met the criteria:

- 75% women (N=121);
- Median age was 84 years;
- Average time of hospitalization was 11,25 days;
- 90,1% were taking *FRIDs*.

Although every fall is multifactorial, in 30% (n=48) of the patients, medicines were appointed as the most likely cause of the fall (fig. 2). Obstacles, inappropriate shoes and the absence of light were considered other likely causes of falls.

% of falls due to medicines vs other causes

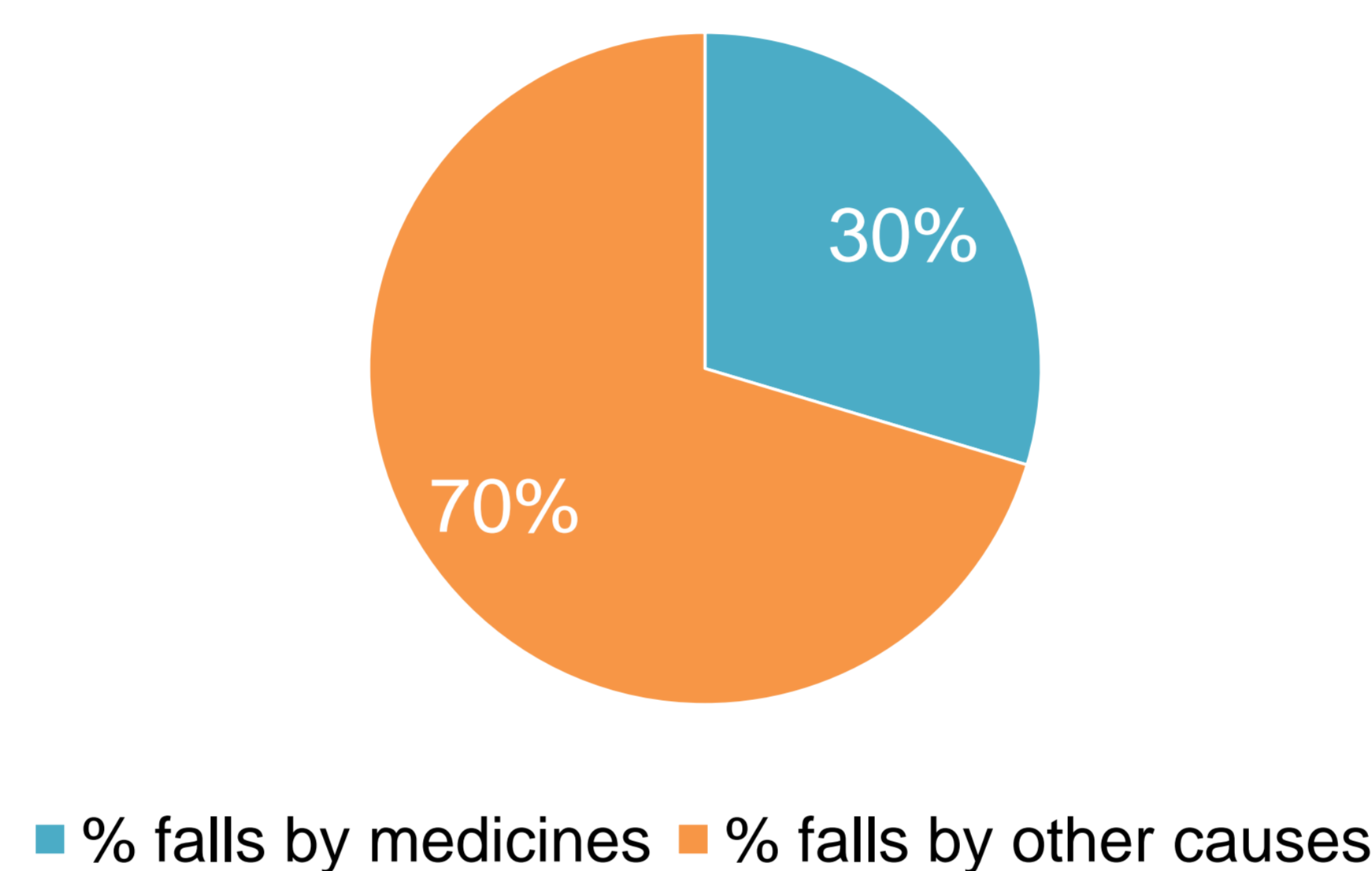


Fig.2 – % of falls due to medicines vs. other causes

Patients taking FRIDs had higher percentages of falls due to medicines when compared with patients that were not taking any FRIDs (table 1).

With FRIDs		Without FRIDs	
Falls due to medicines	Falls due to other causes	Falls due to medicines	Falls due to other causes
32,88%	67,12 %	0 %	100 %

Table 1 – % of falls due to medicines or other causes in patients with and without FRIDs

During hospitalization (fig.3):

- 316 unnecessary drugs were stopped;
- 516 were initiated.

On average, per patient:

- 1,95 drugs were discontinued;
- 3,19 drugs were initiated.

From the 162 patients, 80 had already attended follow up appointment by the general practitioner, around 1 month after discharge. From these, 19% (n=15) restarted the inappropriate drugs.

Changes in therapeutic profile

Started medicines
Stopped medicines

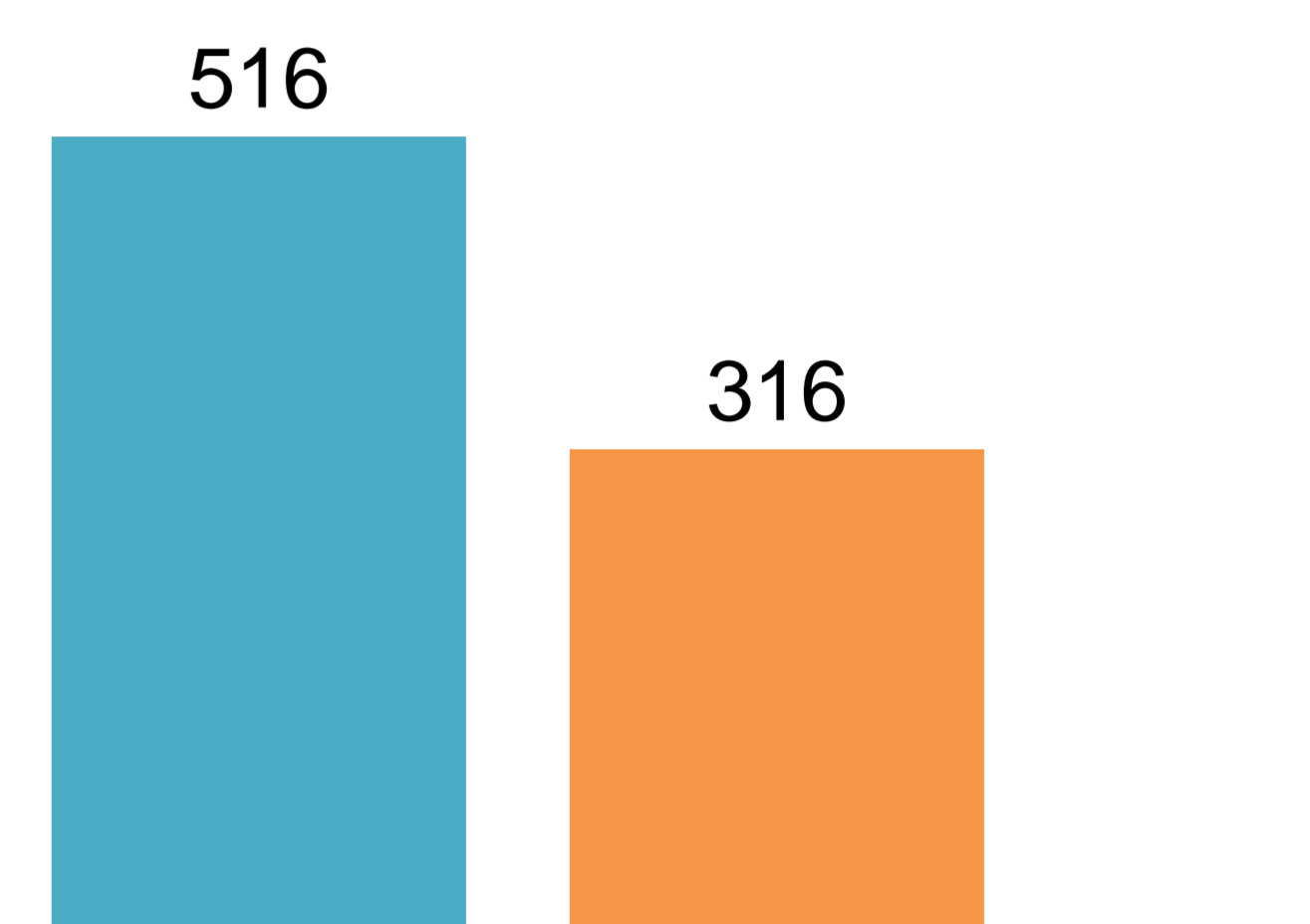


Fig.3 – Changes in therapeutic profiles

Conclusions

It was possible to conclude that the majority of patients had inappropriate drugs in their therapeutic profile. Although, only 30% of the patients had medicines as a precipitant factor for the fall, almost every patient had 1 or more *Fall Risk Increasing Drugs* in their therapeutic profile. When possible, these drugs were discontinued to prevent the occurrence of new falls. Some medicines, like benzodiazepines, were not stopped abruptly but rather tapered during hospitalization and the follow up appointments until discontinuation.

In the course of hospitalization, a lot of patients were appointed with vitamin deficiencies, thus needed to start supplementation with folic acid, cyanocobalamin and cholecalciferol, for example.

For this reason, it was possible to understand that more drugs were initiated than stopped.

In follow up appointments, a high percentage of patients had restarted the suspended drugs, specially benzodiazepines. So, it was possible to realize that there is a need to explore a better strategy to prevent this occurrence. With this analytical study it was possible to characterize the geriatric population of the Hospital and understand its needs, enabling the Orthogeriatric Unit to improve its actions and methods in order to achieve better results in preventing falls.

References

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