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Use of medications by the elderly population – URGENT ACTION IS NEEDED!

Much has been said and continues to be said about population aging. This phenomenon represents, almost entirely, the positive result of improved living conditions, the advancement in health care knowledge and organization and, in large part, the emergence of new therapies, allowing an increase in life expectancy but also in quality of life. Unfortunately, population aging is increasingly associated with something negative and threatening, and society continues to resist facing the challenge posed to it, i.e., preparing to exist with a demographic structure in which approximately 1/5 or more of the people are elderly. It is estimated that in 2020, 20% of the European population is 65 years of age or older, with a particular prevalence of people aged over 80 years.

This challenge involves, among other things, the adoption of a new integrated approach to disease. This is because associated with the demographic transformation is a change in the morbidity and mortality profile of the population, who suffer an increased prevalence of chronic diseases and the consequent increased use of drugs, with the elderly population being the main consumer of drugs.

Even without disease, aging inevitably involves some degree of functional loss consistent with the physiology of senescence, expressed by a continuous decrease in vigor, strength, readiness, reaction speed and other functions⁽¹⁾. This functional decrease translates into a high prevalence of physical and mental disabilities – on average, 30 to 40% of elderly persons residing in the community require some type of help to perform at least one of the main activities of daily living (e.g., cleaning the house, dressing, eating, doing laundry, among others)⁽²⁾.

One of the activities of daily living is taking medications, typically multiple medications. For the most part, studies indicate that a large proportion of elderly individuals are polymedicated⁽³⁾. It is important to remember that despite the fact that polymedication often has a negative connotation and association with lack of safety, it may be imperative to ensure adequate therapeutic control and gains in health. It is thus urgent to change the established paradigm. It is necessary to improve the knowledge about the effects of medications on the elderly population, namely, through observational studies and therapeutic monitoring systems.

We already know that elderly persons are the age group that consumes the most drugs, particularly those who are 75 or older; however, as a rule, clinical trials do not systematically include the elderly population. The European Medicines Agency (EMA), in a document published in 2011 and revised in 2013, the EMA Geriatric Medicine Strategy, recommends that drugs that may be potentially used by the elderly population should, at

the time of approval, include data on the safety and efficacy profile in this age group. However, the EMA recognized in 2017 that even when these data are presented, the drugs were not tested in the presence of comorbidities or in polymedicated patients. This situation makes it absolutely essential to perform studies in a real context, particularly focused on the geriatric population, in order to better understand the actual safety and effectiveness of drugs widely prescribed to the elderly.

Prescribing drugs to the older population is a highly complex act that is not limited to selecting the most indicated drug but that also involves correctly adjusting doses and dosing schedules to the individual's physiological state, making the new prescription compatible with the rest of the patient's medication and identifying potential interactions and contraindications, thus avoiding prescribing inappropriate medications to elderly people. There are therefore multiple factors that can contribute to appropriate prescribing, making it essential to systematically monitor prescription quality in this age group, desirably through multifactorial indicators⁽⁴⁾.

Last, even with safe and effective drugs appropriate to each elderly individual, it is necessary that these individuals are able to take them correctly. Problems such as non-adherence to medication and the inability to properly manage medications are underlined here.

Chronic medication use can be affected by various types of systematic errors, associated not only with patients' lack of knowledge and illiteracy but also with their lack of physical and cognitive functional capacity to manage their medication. Decreased cognitive skills, visual acuity and/or manual dexterity significantly affect non-adherence and/or health problems due to the absence or incorrect administration of medications⁽⁵⁾.

It is thus necessary for health systems and society in general to organize themselves to be able to identify cases in which elderly persons no longer have the ability to manage their medication, so that these individuals can be supported through information or training, through health professional or caregiver intervention or by introducing specific devices to support this task.

Several studies show the efficacy of using technological devices to support medication intake by elderly persons, but the samples sizes have been limited thus far⁽⁶⁾. Data and experience are lacking to consolidate the results obtained.

Given the path that constitutes medication consumption by elderly patients, from drug development to its effective use, interdisciplinary approaches are highly relevant in the aging process and constitute a fundamental means in the search for solutions and responses that are integrated to the needs of an increasingly older population.

Although some of the current and future challenges related to medication use and population aging have been identified, it is urgent to act now! It is increasingly necessary to adapt health systems and adopt integrated and multidisciplinary approaches appropriate to the demographic change experienced daily, as knowledge about adequate prescription, clinical pharmacology and use of medications by elderly persons has become essential. The first step is always to raise awareness of this issue among decision-makers and political actors.

BIBLIOGRAPHIC REFERENCES

- 1. Ramos, Luiz Roberto. (2009). Saúde Pública e envelhecimento: o paradigma da capacidade funcional. BIS. Boletim do Instituto de Saúde, (47), 40-41.
- 2. Ramos, L.R. Fatores determinantes do envelhecimento saudável em idosos residentes em centro urbano: Projeto Epidoso. Rio de Janeiro: Caderno de Saúde Pública, vol.19 no. 3, 2003.
- 3. Pérez-Jover, V., Mira, J. J., Carratala-Munuera, C., Gil-Guillen, V. F., Basora, J., López-Pineda, A., & Orozco-Beltrán, D. (2018). Inappropriate Use of Medication by Elderly, Polymedicated, or Multipathological Patients with Chronic Diseases. International journal of environmental research and public health, 15(2), 310. doi:10.3390/ijerph15020310
- 4. Rochon, P.A. Drug prescrinbing for older adults. Up-to-date, Oct 2019. Available from: https://www.uptodate.com/contents/drug-prescribing-for-older-adults
- 5. Advinha, A. M., De Barros, C. T., Guerreiro, M. P., Nunes, C., Lopes, M. J., & De Oliveira-Martins, S. (2018). Cross-cultural validation and psychometric evaluation of the Self-Medication Assessment Tool (SMAT) for assessing and optimizing medication therapy management of older people. European Journal for Person Centered Healthcare, 6(4), 655. https://doi.org/10.5750/ejpch.v6i4.1568

6. Checchi KD, Huybrechts KF, Avorn J, Kesselheim AS. Electronic Medication Packaging Devices and Medication Adherence: A Systematic Review. *JAMA*. 2014;312(12):1237–1247. doi:https://doi.org/10.1001/jama.2014.10059

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