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Review Article

Therapeutic Obstinacy and Palliative Care in the Elderly

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Abstract

Introduction: Decision-making for the prescription of drugs in the elderly at the end of life deserves ethical reflection and constitutes the foundation of palliative care.

Objective: to characterize the main potentially inappropriate prescriptions of drugs in the elderly at the end of life for their warning in the Cuban healthcare context.

Material and Methods: A systematic bibliographic review was carried out with reflective critical analysis of documents, books and review articles, from 2008 to 2020. The search criteria were made in SciELO, Cochrane Library, PubMed, Hinari, MEDLINE and publishers such as Elsevier, which allowed the final document to be drawn up with qualitative methodology.

Development: The evolutionary course of chronic diseases in the elderly at the end of life is complex, polypharmacy and inappropriate prescriptions are encouraged; the palliative approach should focus on the needs of the patients and the family and not on the prognosis of the disease. It is imperative to take into account the symptomatic situation and the real possibilities of therapeutic response. The instruments for detecting potentially inappropriate prescriptions make it possible to establish a treatment that does not prolong suffering, adjusted to the needs and preferences of the patients.

Conclusions: The published criteria provide guidance to rationalize prescription in the elderly at the end of life. Inappropriate prescriptions are those drugs that have been used for a long time for the control and prevention of chronic diseases. The decision to start or end treatment should be based on the patient's well-being and the benefit / risk balance.

Keywords: Elderly; End of Life; Palliative care; Potentially inappropriate drug prescriptions.

Introduction

The demography of aging attracts special attention in the scientific community and this process breaks into the world at a higher rate than in the past. Between 2015 and 2050, the percentage of the planet's population over the age of 60 will nearly double, from 12% to 22% [1].
Published data reveal that in Cuba 21.3% of the total population corresponds to people aged 60 and over [2].
As a result of the aging process, the elderly emerge where its negative effects are structured, the appearance of chronic diseases, the use of many medications, physical, mental and social dependence and its influence on the family and the community [3].
These particularities contribute to the completion of the life cycle, a moment considered the end of life, caused by the presence of an incurable, advanced and irreversible disease with a prognosis of life limited to weeks or months [4].
A recent definition of elderly people at the end of life conceives them as: Person 60 years of age or older, with deteriorating health, loss of autonomy and total irreversible biological, psychological, economic and social dependence, who requires family care and growing professionals, due to the gradual and intense affectation of their human needs [5].
This progressive and irreversible organic and functional deterioration generates the demand for palliative care.
Palliative care consists of comprehensive, individualized and continuous care provided to the family and the elderly who are at the end of life. The needs must be competently addressed by a multidisciplinary team with the aim of relieving suffering, improving comfort, well-being and quality of life for patients and their families in accordance with their values, preferences and beliefs [6].
In accordance with the above, discernment is required in decision-making for the prescription of medications in the elderly at the end of life.
The great advances in medicine, both technical and pharmacological, predispose to polypharmacy in the elderly: consumption of five or more medications [7] and the immediate consequences of potentially inappropriate prescriptions (PPI) and adverse effects [8].
Several scientific articles publish systematic reviews where they report that the elderly at the end of life suffer from polypharmacy and receive drugs considered inappropriate [9,10]. These PPIs are continued even in the few months of their

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lives [11]. Traditionally, patients receive multiple treatments for their illnesses throughout life and receive treatments that guarantee less distress for only a few weeks, when death is imminent.

Sometimes these medications are prescribed without providing the patient with adequate information about the nature of the benefits and the preferences and aversion to the risks of each medication are not taken into account [12].

With these PPIs, the moment of death can be postponed and suffering prolonged, an attitude that should never be adopted in the situation of an elderly person in the final period of his life.

The theme of this review is inserted in the current problem of population aging in Cuba.

The prevalence of polypharmacy and PPI of drugs in the elderly is high and the results show the magnitude of the problema [13,14].

There is not enough information on PPIs in elderly Cubans at the end of life, which has an undoubted impact in a country with limited resources facing a fierce and brutal economic crisis.

The objective of this review is to characterize the main potentially inappropriate drug prescriptions in the elderly at the end of life present in the detection instruments for their warning in the Cuban healthcare context. This contributes to optimizing health services and reducing costs for unnecessary use of medications, improving the quality of life and well-being of the elderly.

Material and Methods

A bibliographical review was carried out to develop a reflexive critical analysis on the main and most up-to-date instruments for detecting PPI of drugs in the elderly at the end of life, as well as the recent definition of the elderly in this period.

The author's expertise as a geriatrician and pharmacologist, with vast experience in the pharmaco-therapeutic management of the elderly, was considered. The search strategy adopted was the use of keywords or descriptors, connected through the Boolean operator AND.

Information present in databases such as SciELO, Cochrane Library, PubMed, Hinari, MEDLINE, publishers such as Elsevier and Pharmacology and Geriatrics treatises was consulted, where original articles, systematic reviews, meta-analysis, clinical trials were considered as search criteria. available from 2008 to 2020 in Spanish and English and the keywords identified through DECs: elderly, end of life, palliative care, potentially inappropriate prescription of medications. After identifying 72 articles, of which 46 of the preselected studies were useful, the titles of the publications, abstracts and keywords were read, verifying their relevance to this work as they corresponded to the subject to be investigated.

Developing

Epidemiological aspects of the elderly who require palliative care

Prolonging life has been and is a constant interest of the human species and seen in this way aging constitutes an achievement, however, aging not only means reaching a certain age, but this natural, progressive and irreversible process undermines physiological freshness with implications clinical, social and functional. Its confrontation constitutes a challenge for any society [15] and in turn a challenge for public health in particular [16].

It is published that around 80.0% of the elderly are diagnosed with more than one chronic disease [17]. Contel Segura et al [18] affirm that these diseases will be the greatest cause of disability and that by 2030 their prevalence will double. incidence in those older than 65 years. These authors report that 20.0% of patients with two or more chronic diseases (comorbidity) constitute 60.0% of the elderly who are admitted at least twice in a year.

In Cuba, most of the illnesses and deaths that occur in the group of 60 and over correspond to chronic diseases such as heart diseases, malignant tumors and cerebrovascular diseases [19]. Special mention deserves the dementia that has become in one of the most significant public health problems, as it constitutes the second cause of disability and the greatest contributor to care needs in the Cuban elderly [20].

The accumulation of multiple chronic diseases follows a long course of gradual decline with a high risk of functional deterioration, disability, dependency, institutionalization, hospitalization, poor quality of life and death [21].

Clinical indicators of gravity or severity of the disease have been proposed that relate more to the patient himself than to the underlying diseases, which are strongly associated with mortality, they are: malnutrition, functional impairment, cognitive impairment and symptoms that are difficult to control [22].

In the elderly at the end of life, the presence of symptoms is almost constant, which causes a great emotional impact on family members and the care team and has a negative impact on the quality of life and well-being of the patient. It is then necessary to design a strategy to control the symptoms, recognize them, evaluate them and treat them appropriately.

Palliative care

The relief of suffering in the final period of life, recognized in recent years as a universal human right, is one of the missions of medicine. It is palliative care that guarantees active and comprehensive care for patients whose disease does not respond to curative therapies and its foundation is the relief of pain and other accompanying symptoms that are intense, multifactorial, changing and lead to the suffering of the family and the patient. Patient [23].

It is very complex to face all the nuances when a human being is at the end of life; conflicts are established that involve family members, the patient and the doctor's decisions, which may vary with different patients and even at different evolutionary moments of the terminal phase of the same patient.

More frequently than desired, in clinical practice an irrational attempt is made to fight against death that is close and inevitable, this has been defined as cruelty, cruelty or therapeutic obstinacy. In this way, the principle of non-maleficence is violated since, many times, what is done when adopting these measures is to harm the patient unnecessarily, applying insubstantial treatments that cause inconveniences [24].

Palliative care translates a Good medical practice» at the end of life, this implies the application of proportionate therapeutic measures, avoiding therapeutic obstinacy, abandonment and unnecessary lengthening of life [25].

It is wrong to establish protocols for care at the end of life since this process is individual and different for each patient and is conditioned by a series of factors related to the diseases, the family environment and the characteristics of each patient.

Care for the elderly at the end of life still has important areas for improvement. One of the most striking is the inappropriate use of medications, well demonstrated in different countries and in different palliative care settings [26].

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Therefore, clinical guidance is a priority to start, continue or suspend pharmacological treatments at the end of life in the elderly.

Potentially inappropriate prescriptions. detection instruments

The drug-therapeutic management of the elderly is convoluted and constitutes a critical point for any professional who pays attention to this age group, as they are high consumers of medications, particularly very susceptible and vulnerable to their undesirable effects.

Various factors support the above, age-related changes in pharmacokinetics and pharmacodynamics [27,28], as well as the increase in situations of clinical complexity that characterize the elderly with the consequent uncertainty and difficulty in making therapeutic decisión [29].

Since the last two decades, the scientific community has shown growing interest in finding mechanisms to define the adequacy of pharmacological treatments in the geriatric population. For this reason, different instruments are developed and applied for the detection of PPI.

A PPI is considered when the risk of adverse effects is greater than the clinical benefit and drugs are used with a dose or duration greater than that required according to the patient's comorbidity or condition [30,31].

The most used instruments include the Beers criteria, updated in 2019 [32] and the STOPP/START criteria (Screening Tool of Older Person's potentially inappropriate Prescriptions – Screening Tool to Alert drivers to the Right Treatment) validated in 2008 [33] and updated in 2015 [34].

The latter are applied to hospitalized Cuban elderly and a high number of PPIs are detected [35].

The purpose of these instruments is to improve the quality of medication use in the elderly, however, it is also imperative to adapt treatments in people who are nearing the end of life and thus avoid therapeutic blunders and the use of unsuccessful medications that cause harm rather than benefit.

In 2017, an article was published for the first time that validates the application of the STOPP criteria in frail adults with limited life expectancy [36], considered those elderly in the final and irreversible state of their disease, with a one-year survival prognosis, with severe functional and cognitive damage and where the priority of treatment is symptom control, rather than prevention of disease progression.

This novel instrument includes important aspects that are related to the principles of drug selection [37] by taking into account the convenience of the drug, the comfort of the administration schedule, the pharmaceutical form and the administration time.

- Laroche et al [38] in 2018 list a set of medications that they classify as: often adequate, questionable or often inappropriate both for the continuity of treatment and to start their prescription in elderly people 75 years of age or older who are at the end of life. life with estimated survival equal to or less than three months.
- Very recently, in 2020, the development and validation of another instrument was revealed: STOPPFrail in its second versión [39], with the aim of re-evaluating and updating the STOPPFrail criterio [36] and attempting greater patient-centered efficiency. In this case, the elderly candidates to apply this deprescription guide would be those with functional dependency for basic activities of daily living and/or severe chronic illness and/or terminal illness; high risk of acute medical complications and clinical deterioration, with estimated survival of one year.
- In general, these instruments use the Delphi method to obtain expert consensus based on up-to-date scientific evidence. These instruments are permeated by deprescription criteria, aimed at improving decision-making in the elderly at the end of life, to reduce morbidity and suffering due to inappropriate use of medications. These criteria illustrate the complexity of pharmacotherapy in the elderly due to the high number and type of medications to which they refer.

Considerations on PPI referred to in different instruments

The underuse of beneficial drugs in treatments is also considered inappropriate, hence the relevance of the START [33] criteria, which means starting a prescription, as it is considered appropriate. These criteria collect the most common errors in treatment when detecting the omission of medications necessary for the elderly.

When performing their analysis, of 33 START criteria, almost all of them constitute PPI for the elderly at the end of life, excluding in section B (respiratory system) what refers to home oxygen therapy and in section H (analgesics) the prescription of potent opioids in moderate or severe pain when acetaminophen, nonsteroidal anti-inflammatory drugs, or low-potency opioids are not appropriate for the severity of the pain.

This reveals the singularity that gravitates in the stage at the end of life, where

The objective of the therapeutic plan is not to improve or lengthen the prognosis of the disease, but to minimize the impact of the disease on the patient and their environment, guaranteeing comfort and well-being.

As for the PPIs referred to in the deprescribing instruments in the elderly at the end of life [36,38,39], statins, calcium and vitamin D supplements, antihypertensives, antiresorptives and medications for dementia treatment.

Statins play their main role in the treatment of hyperlipidemia and in the prevention of arteriosclerotic disease due to their beneficial effects on endothelial function. Some of its undesirable effects include hepatotoxicity, myopathies, muscle weakness, rhabdomyolysis. They interact with calcium inhibitors, warfarin, digoxin, among other drugs [40,41]. Their prescription is completely inappropriate in these patients.

With the progressive increase in age, it is common to find autonomic imbalance that contributes to orthostatic hypotension, which increases the risk of falls, syncope and cardiovascular events [42]. The decrease in blood pressure is a predictor of death in the elderly at end of life, therefore, the prescription of antihypertensives could be unwise.

Calcium, vitamin D and antiresorptive supplements are prescribed for preventive purposes and are unlikely to produce short-term benefits, apart from their undesirable effects [43]. Before prescribing a drug for preventive purposes, it is necessary to consider life expectancy of the sick

Anticholinesterase drugs and memantine, whose purpose is to delay cognitive deterioration in dementia, do not seem to have a place in the phase at the end of life, in addition, the advanced nature of the disease or other terminal comorbidities make it difficult to assess the possible changes or benefits that these drugs they report. The use of antipsychotics is meritorious only if there are psychiatric and behavioral symptoms of dementia, they should not be prescribed permanently.

The STOPPFrail [36] and STOPPFrail criteria in their second versión [39] agree that platelet antiaggregants, oral antidiabetics, proton pump inhibitors and theophylline are PPIs, while

other authors [38] declare them as frequently questionable prescriptions .
The author considers that the prescription of these drugs is based on the control and prevention of diseases that do not immediately threaten life.
The prescription of oral antidiabetics is inappropriate, the elderly with significant functional impairment and comorbidities that limit life expectancy, a glycosylated hemoglobin goal of up to 8.0% can be considered, therefore strict glycemic control is not appropriate [44] Lo more important is to counteract the symptoms of possible hyperglycemia [39].
Proton pump inhibitors are often prescribed to counteract the undesirable effects of other treatments. Its prescription could be successful to relieve dyspeptic symptoms but not at full doses.
Decision making for the management of dyspnea in the elderly at the end of life is equally complex, palliative treatment is aimed at symptomatic relief.
Theophylline has a narrow therapeutic margin, requires monitoring of serum levels and interacts with other commonly prescribed drugs, putting the patient at risk of adverse reactions [45]. Its prescription is incorrect and other options are more reasonable.
The instruments available with the intention of improving the quality of medication prescription in the elderly use two types of criteria: the implicit ones, based on clinical judgment, and the explicit ones, based on criteria
of consensus and expert opinions that focus more on the drug and the disease than on the particularities of each patient [46].
When comparing the explicit criteria published for the detection of PPI in the elderly with the latest explicit criteria to be applied in the elderly at the end of life, the author estimates that the latter achieve a better approximation to the needs and characteristics of the patient, are more adherent to medical thought by taking into account aspects such as life expectancy, monitoring, follow-up and convenience of the medication, assessing in a particular way in each specific case the risk/benefit ratio of said prescription.
These instruments constitute an indicator of prescription safety and quality.
These lists of possible deprescriptions do not discriminate against the elderly who are at the end of their life, depriving them of therapeutic opportunities or promoting a deliberate shortening of it, but rather exempt the elderly from excessive, unsafe, ineffective and unnecessary medications that inevitably affect their well-being and the right to die with dignity.

Conclusions

The prescription of medications in the elderly at the end of life must be in accordance with the circumstantial clinical situation presented by the patient. PPIs are usually those drugs that have been used for a long time for the control and prevention of chronic diseases.
PPI detection instruments serve as an alert, support and guide for health professionals to make correct decisions regarding medications used in the elderly at the end of life. It does not mean limiting the therapeutic effort but rather reducing suffering and improving the quality of life of patients with advanced diseases and that of their families.

Recommendations

The STOPP-Frail tool in its version 2 needs to be validated by the experience of its use, in this sense it is proposed to apply it in the Cuban healthcare environment to know what are the errors that are made when prescribing medications in the elderly at the end of life. its consequences and the factors that are associated, specifically the condition of polypharmacy.

Conflicts of Interest: The authors declare not to have any interest conflicts.

Authorship Contribution

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