

Polypharmacy in the aging population: Risks, benefits and alternatives

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INTRODUCTION

Polypharmacy, the practice of prescribing multiple medications to a patient, is an increasingly common phenomenon among the aging population. As individuals age, they often develop a variety of chronic health conditions that necessitate medication management. While polypharmacy is sometimes necessary for managing multiple diseases, it brings significant risks, especially in older adults. The risks of polypharmacy are compounded by the physiological changes associated with aging, such as altered drug metabolism and increased vulnerability to adverse drug reactions. However, there are also benefits to polypharmacy, as it can help control symptoms, prevent complications, and improve the overall health of the elderly when managed appropriately. This article delves into the risks, benefits, and alternatives to polypharmacy in the aging population, seeking to understand how healthcare professionals can balance treatment plans to ensure the best outcomes for elderly patients [1].

DESCRIPTION

As people age, they become more susceptible to a range of chronic health conditions like hypertension, diabetes, arthritis, and cardiovascular diseases. These conditions often require ongoing management, which typically involves taking several medications. Polypharmacy becomes common when multiple diseases require different medications, leading to an accumulation of prescribed drugs. According to statistics, approximately 40% of adults aged 65 and older take five or more medications regularly, qualifying them for polypharmacy. The goal of polypharmacy is to address the complexities of aging, where patients may experience multiple co-existing conditions that require pharmacological intervention. However, polypharmacy is not without significant challenges. The primary concern regarding polypharmacy is the risk of drug interactions. As people age, their organs, particularly the liver and kidneys, experience reduced efficiency in processing medications. This alteration in drug metabolism can lead to the accumulation of medications in the body, increasing the likelihood of toxicity or adverse effects. For instance, medications that are commonly prescribed to elderly patients for high blood pressure, diabetes, or heart disease may interact in ways that exacerbate one condition or lead to new health issues. Drug interactions can also cause one drug to nullify the effectiveness of another, which can complicate treatment plans and reduce the desired therapeutic outcomes [2].

Another risk associated with polypharmacy is the heightened potential for side effects. The aging body experiences changes in composition, such as reduced muscle mass and increased body fat, which can affect the absorption, distribution, and elimination of drugs. Older individuals are also more likely to experience comorbidities, which increases the likelihood of taking medications that target various organ systems. This polypharmacy may increase the chance of

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experiencing adverse side effects, particularly when multiple medications interact. For example, the use of sedatives or benzodiazepines can increase the risk of drowsiness, dizziness, and confusion, which can contribute to falls and accidents among elderly individuals. Cognitive decline and physical frailty are other contributing factors that increase the risk of complications arising from polypharmacy. Older patients may have difficulty remembering to take their medications on time or may forget to refill prescriptions, leading to gaps in treatment. Non-adherence to medication regimens is a significant concern in the elderly population, as it can undermine the effectiveness of treatment and worsen health conditions. Additionally, the financial burden of multiple medications can result in some patients forgoing treatment or not purchasing necessary drugs, further complicating their healthcare management [3].

Despite these risks, polypharmacy can be beneficial when used appropriately. Many older adults experience multiple health conditions that cannot be effectively managed with a single medication. Polypharmacy allows healthcare providers to tailor treatment plans to address the complexities of aging, with the goal of improving symptoms and enhancing the quality of life. Medications can prevent complications from chronic diseases, manage pain, regulate blood sugar levels, control blood pressure, and reduce the risk of stroke or heart attack. In such cases, polypharmacy becomes a vital part of managing chronic health conditions and preventing the exacerbation of diseases that would otherwise impair the individual's functionality. Additionally, the advent of modern pharmacology has provided safer medications that are more effective in treating the elderly population. Specialized drugs with fewer side effects and better tolerability have been developed, offering hope for elderly individuals who require multiple medications. When prescribed carefully and monitored regularly, polypharmacy can contribute to the overall well-being of aging individuals by providing symptom relief and improving their ability to function in daily life. However, the key to optimizing polypharmacy lies in careful management. Healthcare professionals must regularly

assess the medications prescribed to older adults, ensuring that the drugs are necessary, effective, and appropriate for the patient's current health condition. Deprescribing, or the process of gradually reducing or stopping unnecessary medications, has gained recognition as an essential strategy in reducing polypharmacy-related risks. Deprescribing should be a collaborative effort between the healthcare provider and the patient, ensuring that both understand the implications of reducing medication use. By reviewing each patient's medications, healthcare providers can eliminate drugs that are ineffective or harmful, thus decreasing the risk of adverse effects and drug interactions [4,5].

CONCLUSION

Polypharmacy in the aging population is a complex issue that requires careful consideration of both its risks and benefits. While polypharmacy can help manage chronic diseases and improve quality of life in older adults, it also carries the potential for adverse drug interactions, side effects, and medication non-adherence. It is essential that healthcare professionals regularly assess and monitor the medications prescribed to older patients to ensure that they are receiving the most appropriate treatments. Through careful management, including deprescribing unnecessary drugs, healthcare providers can reduce the risks associated with polypharmacy while still delivering effective and tailored care. Ultimately, finding a balance between the benefits and risks of polypharmacy is crucial in promoting the health and well-being of the aging population, helping them maintain independence and improve their overall quality of life.

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CONFLICT OF INTEREST

None.

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