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Antibiotic Resistance: Overprescription and Vulnerability of Geriatric Population

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Abbreviations: MDR: Multidrug-Resistant; LTCFs: Long-Term Care Facilities

Introduction

Antibiotic resistance is an alarming public health issue, particularly among the geriatric population, who are often more vulnerable to infections and have a higher likelihood of receiving antibiotics. The overprescription and misuse of antibiotics in this demographic significantly contribute to the development of resistant bacterial strains. Research indicates that inappropriate antibiotic prescribing is prevalent in primary care settings, with unnecessary prescriptions being a major contributor to antimicrobial resistance [1,2]. In elderly patients, the risk of adverse outcomes from antibiotic resistance is worsened due to age-related physiological changes, including impaired immune function and the presence of multiple comorbidities [3,4].

The geriatric population frequently stays in long-term care facilities (LTCFs), which have been identified as reservoirs for multidrug-resistant (MDR) pathogens. The close quarters and shared environments in these facilities facilitate the transmission of resistant bacteria [3]. Moreover, the high rates of antibiotic use in LTCFs are associated with increased rates of infections caused by resistant organisms, leading to higher morbidity and mortality rates among older adults [4,5]. For instance, antibiotic-resistant infections are linked to greater healthcare costs and prolonged hospital stays, further complicating recovery in this vulnerable group [5].

Education and awareness among healthcare providers regarding appropriate antibiotic prescribing practices are crucial in combating resistance. Studies have shown that many physicians, including those treating older adults, lack adequate knowledge about antibiotic resistance and its implications [6,7]. This gap in understanding can lead to continued overprescription of antibiotics, particularly for conditions where they are ineffective, such as viral infections [8]. Furthermore, the influence of senior doctors and local prescribing cultures can perpetuate inappropriate antibiotic use, highlighting the need for targeted interventions and stewardship programs [9].

Conclusion

the issues surrounding antibiotic resistance in the geriatric population are complex, involving overprescription, the unique vulnerabilities of older adults, and gaps in healthcare provider education. Addressing these challenges requires a comprehensive approach that includes improving prescribing practices, enhancing awareness of antibiotic resistance, and implementing effective stewardship programs in both community and long-term care settings.

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