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Letter to the Editor

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Antimicrobial Practices and Geriatrics: Need for Periodic Surveillance Studies in Turkey

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Antimicrobials are among the most widely prescribed medicines in the world. Since the 2000s, there has been an increase of more than 20% in antimicrobial prescriptions in older patients.[1] Infectious diseases are more common in older populations than in younger adults and are a significant health problem. In addition, older patients are usually treated with polypharmacy regimens, which increase the risk of drug-drug interactions when an antimicrobial agent is administered.[1,2] Antimicrobial prescribing among elderly patients has been reported to be very common, with a prevalence of consumption ranging from 1.2% to 48%.[2] The use of antimicrobials indiscriminately over a long period of time may be a danger to public health and lead to more resistant microorganisms.[1]

Turkey is a developing nation that borders the continents of Europe and Asia, and the Turkish population has a diverse sociocultural framework, comprising people of a wide variety of races, languages, and religions. Worldwide, the human population is ageing at an astonishing pace and there were 703 million people aged 65 years or older in 2019. The number of geriatric people at a global level is estimated to double to 1.5 billion in 2050. It is also reported that by 2030, an estimated 12.3% of the population of Turkey will be aged 65 years and older.[3] A recent large-scale survey reported that infectious diseases are common in the elderly population in Turkey and infection rates are significantly higher than in developed countries.[4] Inappropriate medication usage, overconsumption, and resistance to antimicrobials also documented in Turkey.[5,6] There are major complications and potential adverse effects of inappropriate antimicrobial treatment in the elderly. Unnecessary antimicrobials result in a higher risk of adverse drug reactions, extended hospital stay, substantial economic burdens, and increased mortality and morbidity.[1,5]

The detection of antimicrobial-resistant pathogen is important, but the periodic surveillance of antimicrobial usage is necessary for best patient care. The World Health Organization stresses the importance of antimicrobial use and the need for multisectoral intervention.[7] In the United States of America, the periodic information on antimicrobial usage is provided by the National Healthcare Safety Network and the Global International Nosocomial Infection Control Consortium.[8,9] There is no such program for providing a periodic surveillance data on antimicrobial usage in Turkish hospitals. Periodic surveillance studies on antimicrobial usage and resistance in Turkey are also scare.[5,10]

Therefore, creation of health services policies related to antimicrobial surveillance as well as pharmacoepidemiological, pharmacoeconomic, and pharmacovigilance-based research studies to assess the irrational practices and adverse events of antimicrobials in the geriatric population in Turkey are crucial for better health care. Educational programs targeting physicians and geriatric patients is also beneficial to enhance antimicrobial prescribing practices and substantially reduce the use and costs of antimicrobials in the elderly population. Additionally, it seems beneficial for each hospital to perform surveillance studies on antimicrobial use to establish specific indications of inappropriate antimicrobial use that could be used as an educational tool to improve antimicrobials practices by physicians. Practicing culture stewardship and adopting guidelines recommendations by health care professionals is also crucial to maximize adherence to medications in this vulnerable patient population.

Declaration of Conflicting Interests

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