

Abstract

Introduction: These days we encounter the rising trend of population ageing. Seniors belong to group of patients with specific health-social needs, in which is necessary in following decades support more health care using knowledge of geriatric and gerontology. One of the new approaches, applied in geriatric, clinical pharmaceutical praxis, is the method of deprescribing as well, based on decreasing of drug burden in elderly. The goal of this diploma thesis was to evaluate rationality of benzodiazepine prescription (one of the most frequently used potentially inappropriate medication in elderly) of seniors in European group of EuroAgeism ESR7 H2020 project, especially taking BZD in non-geriatric doses, non-geriatric length of use and risky drug combinations. Another goal of thesis was to specify, how many seniors would be potentially indicated to the method of deprescribing, and how difficult it would be for application of this method due to difficulty of medication misconduct and expected success/failure of this method.

Methodology: Data for this diploma thesis were collected between years 2019 and 2021 within the research project EUROAGEISM ESR7 H2020 based on the international cross-sectional study which was carried out in patients in age 65 years and more, examined in regionally different centres of the study in 7 European countries – in Bulgaria, Czech Republic, Estonia, Croatia, Serbia, Spain, and Turkey. Data collection was based on structured and standardised questionnaire, which contained sociodemographic characteristics, health status, indicators of health care service utilisation, clinical characteristics, clinical markers, and complex information about drug regimens. The prescribing patterns were evaluated (such as non-geriatric individual and daily doses, non-geriatric length of benzodiazepine use and use of benzodiazepine in risky drug combinations) and potential ability/risk of “deprescribing” method implementation. Methods of descriptive statistics were used for evaluation (χ^2 -test or Fischer test) and the level of statistical significance was set at p-value <0,05.

Results: In the group of 2865 seniors, there was 426 subjects identified as benzodiazepine users (14,9%). Most of them was found in Croatia (35,5%), in Spain (33,5%) and Serbia (31,3%). The most prescribed benzodiazepine was diazepam (27,9%), alprazolam (23,7%) and bromazepam (22,8%). More than two thirds of patients (70,7%) were taking benzodiazepines longer than a year, and potentially risky drug regimens (with non-geriatric doses, length of use and risky drug combinations) were used in 317 (74.4%) seniors. By evaluation of possibilities for implementation of “deprescribing” methods, the number of seniors potentially indicated to this approach was 317 (74,4%). The highest prevalence of seniors was in the group of high risk (43,5%) for implementation of deprescribing methods, little less in category of medium risk (41,1%).

Conclusion: Thanks to carried out analysis we concluded that benzodiazepines are still a group of drugs potentially inappropriate in elderly used in community elders in Europe, with the highest prevalence in Balkan region. Most of seniors taking BZD belonged to the group or medium of high risk for application of deprescribing methods; possible realization of these strategies would need longer, continuous effort in active involvement of patients, caretakers, and health care workers. The safest approach is therefore restriction of unnecessary usage of BZD in the future and to comply with practices of safe and short-term use in elderly.

Keywords: rational geriatric pharmacotherapy, seniors, deprescribing, benzodiazepines, potentially inappropriate drugs in elderly

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