

ABSTRACT

Title:

Ageing of the population and specific aspects of prescribing of hypnotics in older adults (II.)

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Introduction: World population is ageing and rational geriatric pharmacotherapy receives increasing attention. In seniors, rational pharmacotherapy is complicated by many risk factors, especially by physiological and pathological changes accompanying ageing, polymorbidity, polypharmacy, higher risk of adverse drug events, drug interactions and other risk factors. Particularly psychotropics belong to drug classes where rational prescribing in seniors often requires respecting of different rules. This diploma thesis focuses on specific aspects of irrational prescribing of hypnotics in ambulatory geriatric patients, particularly in the area of use of nongeriatric doses and nongeriatric length of therapy.

Methodology: Data collection for this diploma thesis has been conducted between 2019-2020 years in the EUROAGEISM H2020 European project (2017-2021, 10 participating countries). In the Czech Republic, 563 ambulatory geriatric patients in the age of 65 years and older have been prospectively assessed using the EUROAGEISM H2020 project questionnaire that contained sections related to comprehensive geriatric assessment (sociodemographic characteristics, clinical and functional characteristics, acute and chronic disorders, geriatric symptoms and syndromes, nutritional status, subjective evaluation of health status, utilization of healthcare services, use of medicines and selected lab tests). In the Czech Republic, ambulatory health care facilities in Brno (N = 112 seniors), Hradec Králové (N= 151), Opava (N= 150) and Prague (N= 150 seniors) participated in the project. Data were obtained from the medical records and using interviews with prescribing physicians and patients. With the

help of basic descriptive statistics, prevalences related to the occurrence of insomnia, use of hypnotics, use of drugs that may induce or exacerbate insomnias and the prevalence of potentially inappropriate medication use in relation to the use of hypnotics according to Beers criteria from 2019 and the EU (7)-PIM criteria from 2015 have been analyzed. Statistically significant differences were described among healthcare facilities using Fisher's exact test ($p < 0,05$).

Results: From the whole sample, 172 of seniors suffered from insomnias (30.6 %). Nearly all patients were treated pharmacologically (24.0 %), nonpharmacologic procedures of the treatment were used rarely (0.5 %). Of hypnotics prescribed in the evening or at night, there were often prescribed Z-drugs (8.2 %) and benzodiazepines (7.6 %), from „off-label“ hypnotics also antipsychotics (17.8 %, of those 17 % for long-term) and antidepressants (9.2 %). The prevalence of hypnotic use in the evening or at night increased with the age and the highest values were described in the age group of 84 - 94 years (42.8 %). According to Beers 2019 criteria and EU (7)-PIM 2015 criteria, there were in nongeriatric doses and nongeriatric duration of therapy (> 4 weeks) most often indicated Z-drugs (6.0 % / 2,7 %, respectively) and benzodiazepines (2,7 % / 11 %, respectively).

Conclusion: Analysis of ambulatory sample of Czech seniors in the EUROAGEISM H2020 project proved problems associated with insomnias in one third of patients and minimally were applied nonpharmacological treatment methods. From nongeriatric procedures there were most commonly documented use of antipsychotics in the evening or at night, use of benzodiazepines longer than one month and nongeriatric doses of Z-drugs. In seniors, rules of safer geriatric treatment should be more respected to prevent clinically significant complications.

Key words: geriatrics, clinical pharmacy, potentially inappropriate medications in older adults, inappropriate prescribing, explicit criteria, insomnias, risk factors, hypnotics, ambulatory geriatric patients

Support:

This work has been financed by the European EUROAGEISM H2020 project that received funding from the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No 764632 (main ESR researcher ESR7 Jovana Brkič, MSc). It was supported also by grant SVV 260417 and thanks to the scientific programme PROGRESS Q42 of the Scientific group KSKFII, Faculty of Pharmacy, Charles University in Hradec Králové, Czech Republic (Chair of the scientific group: Assoc. Prof. Daniela Fialová, PharmD., Ph.D.). The work received also support from the European project INOMED reg. No. CZ. 02.1.01/0.0/0.0/18_069/0010046.