

ABSTRACT

INTRODUCTION: In the world population, the number of seniors with very heterogeneous health care is increasing. Because of the aging of the organism they are much more sensitive to adverse effects of drugs, therefore geriatric care is more visitors and safety pharmacotherapy. It thus seeks to prevent risky medicines available in geriatric patients. Many explicit targets have been disclosed that can be reserved for the potentially endangered by the elderly. Diuretics are among the classes of drugs that are often prescribed in the geriatric population but which pose significant risks to the geriatric patient. Problems with their unpleasant effects, but also poor indication or combination with minimal drugs.

OBJECTIVE: The main aim of this thesis was to describe the frequency and rationality of prescribing diuretics in seniors treated in geriatric outpatient clinics. The use of diuretics in appropriate and potentially inappropriate indications, the occurrence of changes accompanying adverse reactions (including laboratory changes in electrolytes and metabolic parameters) and whether these problems are controlled were monitored. The risks of hyponatraemia associated with diuretic therapy and the use of SIADH-inducing drugs were also assessed in more detail.

METHODS: This thesis was based on the European study called FIP7 program of the European project EUROAGEISM H2020 and is focused only on ambulatory geriatric care. The data were collected in geriatric ambulatory in Hradec Králové and Brno from early September 2018 until the end of January 2019. A protocol approved by the Ethics Committee was prepared and precisely defined criteria for inclusion of the patient in the study. In addition to the Czech Republic, several European countries participated in the project, where data collection is still under the same conditions. The data were collected from patients' medical records with their informed consent, supplemented with information from interviews with patients and the attending physician, and recorded in a paper form of the protected protocol of the EUROAGEISM H2020 project containing more than 350 items. Pilot analyzes of the Czech sample, which will be further elaborated on a large international sample, were processed and compared between centers by descriptive statistics using Fisher's exact test ($p < 0,05$).

RESULTS: 263 patients with the highest representation in the 85–94 age group ($N=149$, 56,7 %) were examined, of which 69,2 % were women and 30,8 % were men. 134 (52,3 %) outpatients used diuretics, most furosemide ($N=91$, 35,5 %). The results of analyzes focused on the appropriate and inappropriate use of diuretic treatment in seniors in outpatient geriatric care showed that diuretics were administered only when necessary, when a diagnosis was justified for their indication (at least according to records from the patient's documentation). Laboratory metabolic changes and electrolyte values were generally not adequately controlled during long-term diuretic therapy. Higher

prevalence of hyponatraemia has not been demonstrated with the use of SIADH-inducing drugs of inappropriate antidiuretic hormone secretion. More than 52, 20,3 % of patients used diuretics in combination with drugs that may induce or worsen SIADH (ACE-I, SSRI, SNRI, antipsychotics and others).

KEYWORDS: ambulatory care, geriatric patient, diuretics, inappropriate therapy, side effects, SIADH-inducing drugs, hyponatraemia

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