Abstract

Pulse check in pharmacies V

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Introduction: Pharmacists are in close contact with patients on daily basis and can thus be involved in the detection of several diseases including atrial fibrillation (AF), the prevalence of which is still increasing.

Aim: The aim of this study was to raise awareness of the possibility and meaning of heart rate monitoring to detect dysrhythmias, especially atrial fibrillation, to analyze the symptoms and risk factors of heart rhythm disorders, and to monitor blood pressure. A sub-objective was also to demonstrate the possibility of pharmacist involvement in measuring heart rate (HR) and searching for patients with previously undiagnosed heart rhythm abnormalities.

Methods: The design was a prospective cross-sectional bicentric study. People aged ≥ 55 years without a history of chronic anticoagulant therapy were addressed between July 26 and August 6, 2021 at the regional hospital pharmacy, and on September 8, 2021, as part of the public awareness-raising campaign. Participants were asked about the presence of selected symptoms, associated diseases, pharmacotherapy related to arrhythmias and awareness of heart rate and methods of its measurement. HR was measured by palpation as well as by the Veroval ECG instrument, by which blood pressure (BP) was also measured 3 times using the same device at the pharmacy. Patients at high risk of developing AF or with BP above 140/90 mm Hg, resp. over 160/90 mm Hg (subjects over 80 years of age) were referred to a physician for further examination. The data were stored anonymously in the password-protected web application of the Faculty of Pharmacy of Charles University in Hradec Kralove and processed by descriptive statistics.

Results: A total of 89 people (mean age 64.3 ± 8.7 years, 62.9% women) participated at the pharmacy. Most of them (73.0%) knew that they could measure their heart rate on their own and almost a half (49.4%) knew how. The most frequently reported symptoms were fatigue (46.1%) and palpitations (32.6%); 33.7% of participants were asymptomatic. The average CHA_2DS_2-VASc score was 2.0 ± 1.4; the most common diagnoses were arterial hypertension (43.8%) and diabetes mellitus (14.6%). The average HR was 72.6 bpm as measured by palpation and 74.2 bpm as measured by the Veroval ECG. 4 subjects had a frequency < 55 bpm

and 2 subjects had a frequency > 100 bpm. Irregular HR was found in 5 participants. The highest measured blood pressure was 187/97 mm Hg, the lowest 100/58 mm Hg. A total of 14 patients (15.7%) were referred to a physician. The public awareness-raising campaign involved 28 people with an average age of 69.6 ± 9.1 years (P <0.05 vs. pharmacy). The most common symptoms were fatigue (64.3%) and palpitations (60.7%); 14.3% reported no symptoms. The average CHA_2DS_2-VASc score was 2.6 ± 1.6 and the most common diagnosis was arterial hypertension (53.6%). The average HR was 79.5 ± 16.5 bpm as measured by palpation and 83.2 ± 16.0 bpm as measured by the Veroval ECG (P <0.01 vs. pharmacy). Six people (21.4%) were sent to a physician.

Discussion and conclusions: As part of this occasional screening, 15.7% of respondents from the pharmacy and 21.4% of the awareness-raising campaignin participants in the square were referred to a physician. This study showed that involvement of pharmacists in awareness and detection of AF in the primary healthcare system can contribute to early management of such patients and minimize the disease complications. Screening appears to be effective not only in the pharmacy setting, but also in preventive campaigns outside them.

Key words: atrial fibrillation, screening, pharmacist, risk factors, drug induced arhythmias