

Abstract

Department of Social and Clinical Pharmacy, Faculty of Pharmacy in Hradec Králové, Charles University

Pulse check in pharmacies III

Author: Ivana Vasilišínová

Supervisor: PharmDr. Anna Rejmanová, Ph.D.

Consultant: PharmDr. Kateřina Malá, Ph.D.

Introduction: Atrial fibrillation (AF) is the most common supraventricular arrhythmia. It is often asymptomatic. If left untreated, the patient is at significant risk of complications, especially of ischemic stroke (IS) and heart failure. These complications can be effectively prevented by early detection of AF and initiation of treatment. Population screening activities performed at pharmacies could serve as a useful tool for detection of latent arrhythmias.

Objective: The aim of this diploma thesis was to analyze the heart rate, blood pressure, selected symptoms and risk factors for IS in real patient population and to raise their awareness in the field of heart rate monitoring.

Methodology: The measurement took place in a public pharmacy at an outpatient clinic in Prague during the one-day campaign "Pharmacy Day" (18/6/2020) and subsequent data collection (12/2020–02/2021). During this time, education in atrial fibrillation, the heart rate and blood pressure measurement and also evaluation of the selected symptoms and risk factors for the possible future ischemic complication was offered to the people entering the pharmacy. Patients at age ≥ 40 years without chronic anticoagulant therapy and a diagnosis of atrial fibrillation were included in the analysis. Those with detected irregular pulse, tachycardia (> 100 beats/min) or bradycardia (< 55 beats/min) or estimated high risk of thromboembolic complications were sent to a physician.

Results: A total of 64 patients were examined. 2 patients were excluded from the analysis because of chronic use of anticoagulant therapy. The mean age of 62 included patients (82.3% women) was 58.1 ± 13.2 years. Their most frequently reported symptoms were fatigue (46.8%), palpitations (24.2%), and irregular pulse (24.2%); 33.9% of patients were asymptomatic. The most common comorbidities were arterial hypertension (35.5%) and peripheral arterial disease (16.1%). Both of them were more common in the patient population in age ≥ 65 years ($P = 0,004$ for arterial hypertension; $P = 0,007$ for peripheral arterial disease). The mean heart rate was 70.9 ± 10.1 beats/min (median 69 beats/min, min. 45 beats/min, max. 96 beats/min). Irregular pulse was identified in 3 (4.8%) patients (2 women and 1 man). The mean CHA2DS2-VASc score was 1.6 ± 1.1 . The mean blood pressure was 122/77 mmHg, the blood pressure higher than 140/90 mmHg was recorded in 3 patients. Based on the data from personal history and measurement results, 5 (8.1 %) patients were sent to a physician, CHA2DS2-VASc score ≥ 2 occurred in 1 of them. Feedback was received from 2 (3.2%) patients (1 with irregular pulse and 1 with high blood pressure).

Discussion and conclusion: A potential risk of atrial fibrillation has been identified in 4/62 patients (6.5%). Untreated atrial hypertension has been found in 1 patient. Screening activities held in pharmacies appear to be a potentially effective tool for capturing individuals at risk of possible atrial fibrillation and its complications. Thus, this type of screening method can substantially contribute to reduce morbidity and mortality of these patients.

Keywords: pulse check, atrial fibrillation, screening, pharmacist, pharmacy