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24-hour Holter as a method for correlating symptoms and arrhythmic events

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Introduction: Complaints of palpitations are widespread in clinical practice and, in most cases, require 24-hour Holter or prolonged monitoring. When the symptom is due to an arrhythmia, the possibility of obtaining an electrocardiographic record of the moment of the complaint is very useful and can help direct therapy. **Objective:** To evaluate the relationship between symptoms and arrhythmic events in a large 24-hour Holter sample. **Methods:** 6,585 24-hour Holters were selected in a tertiary cardiology hospital in 2018. Of these, 483 (7.33%) were excluded. They did not contain information about symptoms in the report, and 363 (5.5%) because they did not have data from the event diary. The remaining 5,739 exams were analyzed for the relationship between symptoms (data provided by the patient) and electrocardiographic changes. Results: Of the 5,739 Holters and event diaries analyzed, 46% were from male individuals. The average age was 58.2 years. Of the total sample, 93.18% (5348 patients) did not report symptoms in the event diary. However, 68.6% (3668 patients) of the exams contained significant changes. The main changes were frequent extrasystoles (>30/h) and non-sustained tachycardias. Frequent atrial ectopy and frequent ventricular ectopy occurred in 913 and 1412 patients, respectively. Ventricular tachycardia and supraventricular tachycardia occurred in 1,879 and 1,166 patients. Symptoms were reported by 391 patients (6.81%). The sensitivity for positive clinical ECG correlation was 24.8%. Men reported fewer symptoms (31% of reports), with a lower rate of positive clinical correlation (33% among men). In women, the clinical correlation was 66%. **Conclusion:** 1) Although sensitive for detecting asymptomatic arrhythmic events, the traditional 24-hour Holter has significant limitations, even in populations with known arrhythmias, correlating symptoms with electrocardiographic changes. The high rate of altered exams without reporting symptoms may reflect the limitation of applying the event diary used. 2) More accessible and practical monitoring methods could reduce the discrepancy between arrhythmic events and symptoms, facilitating doctors' understanding of the factors that motivate patients to seek health services.