Evaluation of the diagnostic validity of isolated blood pressure readings in community pharmacies in Andalusia

Jose Espejo Guerrero, Alberto Virues Avila, Francisco Marín Magan, Emilio García Jimenez, Amparo Torres Antiñolo, Juan Pedro Vaquero Prada.

Background Isolated office blood pressure readings are commonly used to diagnose and check blood pressure (BP). A number of studies have validated measurements taken at community pharmacies for checking BP figures. However, the validity of isolated measures is threatened by both random and systematic errors, which can arise from the observer, the measuring process or the person observed, and that is the question that this study aims to verify.

Purpose To evaluate the diagnostic validity of isolated blood pressure readings carried out on the population attending community pharmacies in Andalusia, using 24-hour ambulatory BP monitoring (ABPM) as the gold standard.

Method A cross-sectional analytical observational study performed in community pharmacies in Andalusia registered in the accreditation programme of the MAPAfarma project promoted by the Andalusian Council of Professional Associations of Pharmacists (CACOF), carried out between June 2015 and June 2017. The sample size was calculated by assuming that 27% of the population has uncontrolled hypertension, so that 474 patients were needed (confidence, 95% and absolute precision, 96%). To cover losses due to absence of data and incomplete and/or incorrect records, the size was increased by 10% and adjusted to a minimum of 522 people.

Findings A total of 1170 patients were included 1120 in the MAPAfarma study. Of these, 46.58% were men, 55.38% were receiving antihypertensive treatment and 40.60% showed isolated office hypertension at the start. Correctly classified: 69.02%. Incorrectly classified = 100 ? 69.02 = 30.98% (95% CI, 26.73%-35.35%).

Conclusion It was observed that one in every three patients (30.98%) whose isolated office blood pressure is taken in community pharmacies will be diagnostic errors. The test produces a sensitivity of 59.18% and a specificity of 79.89%.