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Pharmacological Management of Hypertension Guided by Central or Peripheral Blood Pressure Measurement: Comparison of Two Strategies on the Incidence of Intermediate Outcome

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Central blood pressure, hypertension, risk factors, evidence-based practice

Abstract

Background: Central blood pressure values and arterial stiffness have demonstrated to be a useful tool to stratify cardiovascular risk and also as a biomarker. A question that is still unanswered is if hypertension treatment guided by central blood pressure parameters will be even better to promote cardiovascular protection than peripheral one.

Methods: With this proposition we have designed an open prospective multicentric randomized protocol to compare central (G1) and peripheral (G2) blood pressure targets during 1 year follow-up concerning target organ damage (carotid intima media thickness, left ventricular hypertrophy, microalbuminuria and pulse wave velocity). OMRON 1100 will be used to access peripheral and Mobil O'Graph to access central blood pressure and pulse wave velocity, TOSHIBA Xsario with longitudinal linear transdutor 7.5 MHz bidimensional mode B to access carotid and left ventricular parameters.

Expected Results: This paper aims to describe methodological aspects concerning this research and we expect to find results to answer some open questions about hypertension treatment and cardiovascular protection.