

White Coat Hypertension: Benign or not so...

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Abbreviations

ABPM: Ambulatory Blood Pressure Monitoring; TOD: Target Organ Damage; WCH: White Coat Hypertension

White coat hypertension (WCH) was originally defined by Pickering as presence of elevated office blood pressure with normal daytime blood pressure measured by Ambulatory Blood Pressure Monitoring (ABPM). Diagnosis of white coat hypertension avoids unnecessary lifelong medication and multiple social, professional, medical and psychological consequences of being hypertensive. Till recently, only daytime blood pressure was used, for comparison with office readings, for purpose of diagnosing WCH. In 2018 European Society of Cardiology recommended use of awake as well as night time blood pressure for establishing diagnosis of WCH. Initial studies examining the effect of WCH on target organ damage (TOD) suggested more TOD in subjects with WCH as compared to normotensives (NTs). However, there were shortcomings like absence of standard definition of WCH and inclusion of those receiving medication for hypertension [1,2].

In current issue of this journal, Polonia, *et al.* have studied pulse wave velocity as well as morning surge of blood pressure in subjects with WCH who have normal night time blood pressure [3]. Thus, the studied population truly confirms to current definition of WCH. The subjects were followed up for a period of 37 - 150 months. They not only examined the cardiovascular adverse event rate in these subjects but also studied pulse wave velocity as well as morning surge as markers of target organ damage and cardiovascular prognosis. Cardiovascular event rate was 0.61% per year in subjects with WCH, 0.66% per year in NTs and 2.2% per year in hypertensives. Both morning surge and pulse wave velocity were higher in hypertensives as compared to normotensives as well as subjects with WCH. There was no statistically significant difference in these parameters between NTs and those with WCH. The study not only highlights the relevance of including nighttime blood pressure in definition of WCH but also clearly demonstrates the benign nature of correctly diagnosed WCH. They have used ABPM as a standard technique for estimation of blood pressure at home. These findings are in tune with findings of IDACO study as well as other studies [1,4]. Though, this is somewhat reassuring but there are other aspects of WCH which require attention and further studies. This includes patient with WCH and metabolic syndrome. This subgroup of patients with WCH was found to have increased risk of TOD and cardiovascular events in some studies. Increased risk of diabetes mellitus was seen in subjects with untreated WCH in IDACO as well as PAMELA studies [4,5]. The incidence of cardiovascular events and markers of increased cardiovascular risk such as pulse wave velocity and morning surge should be evaluated in this subgroup to further differentiate between subjects with a truly benign course and those requiring appropriate intervention.

I congratulate the authors of paper for doing this work in basic cardiology which is becoming uncommon these days.

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