

## RELATIONSHIP BETWEEN ADHERENCE TO ANTI-HYPERTENSIVE MEDICATIONS AND OCCURRENCE OF CARDIOVASCULAR EVENTS IN A REAL-LIFE SETTING

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**Background:** The extent to which adherence to antihypertensive medications may affect cardiovascular morbidity in a community-setting remains unclear, in part because morbidity differences may be attributable to the differential probability to receive appropriate treatments, more so than to pharmacological benefits.

**Objective:** To explore the relationship between drug adherence and acute myocardial infarction (AMI) or stroke morbidity in incident hypertensive patients.

**Design, Setting, and Participants:** Population-based, observational, longitudinal study of 19,871 hypertensive (HYP) patients diagnosed between 2000 and 2001 from 400 Italian general practitioners providing data to the Health Search/Thales Database. All patients filled a first prescription for alpha-blockers, beta-blockers, diuretics, ACE-inhibitors, angiotensin receptor-blockers or calcium channel blockers, within 90 days from the date of diagnosis. Patients were excluded if they were diagnosed with AMI and stroke prior to the diagnosis of hypertension.

**Main Outcome Measures:** Patient adherence was subdivided a priori into 3 categories: high (proportion of days covered [PDC],  $\geq 80\%$ ), intermediate (proportion of days covered, 40%-79%), and low (proportion of days covered,  $< 40\%$ ). They were then compared with long-term cardiovascular (CV) morbidity (mean of 2.8 years of follow-up) using multivariable survival models adjusted for sociodemographic factors, blood pressure (BP), comorbidities, and concomitant use of evidence-based therapies.

**Results:** At baseline, only 8.2% of hypertensive patients received appropriate antihypertensive treatment (i.e. PDC  $\geq 80\%$ ), whereas 41.1% resulted with intermediate, and 50.7% with low adherence. Compared with low adherent, patients with high adherence were more likely to be diabetic (9.8% vs. 13.7%), and dyslipidemic (10.9% vs. 14.8%). On the other hand, patients with severe hypertension (i.e. SBP/DBP  $> 180/110$  mmHg) did not significantly differ according to low (8.0%) and high adherence (7.8%). At the end of the follow-up, 3 cases/1000 HYP/year of AMI and 13 cases/1000 HYP/year of stroke were retrieved. The proportion of patients with concurrent diseases, such as diabetes and dyslipidemia increased in all groups, as well as the proportion of patients with high adherence to antihypertensives (19.9%).

**Conclusion:** Preliminary results indicate that among patients newly-diagnosed with hypertension, the adherence to antihypertensive medication at baseline is low and significantly associated with the prevalence of predisposing CV risk factors, rather than with the single BP-values.