

**A13308 SWITCHING FROM AN ANGIOTENSIN II RECEPTOR BLOCKER TO AZILSARTAN IMPROVED HEALTH-RELATED QOL SCORES BEYOND SUFFICIENT BLOOD PRESSURE-LOWERING IN PATIENTS WITH UNCONTROLLED HYPERTENSION**

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**Objectives:** Accumulated evidence suggests that achieving a therapeutic goal for blood pressure (BP) improves cardiovascular outcome. However, a large proportion of patients with hypertension do not achieve their target BP. It is therefore important to continue strict and long-term treatment with good compliance. The health-related quality of life (HR-QOL) plays a key role in maintaining long-term compliance with therapy. This study assessed the effects of switching from conventional angiotensin II receptor blockers (ARBs) to azilsartan on BP-lowering and HR-QOL in patients with uncontrolled hypertension.

**Methods:** Key eligibility for the study was patients with uncontrolled hypertension treated for at least 1 month with an ARB excluding azilsartan who had not reached their target BP. Changes in BP, HR-QOL scores, and several inflammatory or gonadal biomarkers from baseline to 3 months after switching were evaluated.

**Results:** A total of 147 patients (73 ± 15 yr) were recruited. Azilsartan reduced both systolic and diastolic BP significantly from 151 ± 16/82 ± 12 to 134 ± 17/73 ± 12 mmHg after 3 months. Although the comprehensive QOL scale (EQ5D) and the simplified menopausal index (SMI) did not change, the Pittsburgh sleep quality index (PSQI) and the geriatric depression scale (GDS) improved significantly in the female subgroup after 3 months. In addition, each of these four HR-QOL scores improved significantly in the subgroup with higher (in GDS, PSQI, and SMI) or less (in EQ5D) HR-QOL score than each median value at baseline. None of the biomarkers changed significantly after 3 months.

**Conclusion:** Besides sufficient BP-lowering, intensive anti-hypertensive treatment with azilsartan may have a favorable impact on the short-term HR-QOL in the specific patients with uncontrolled hypertension.

**Keywords:** ARB, azilsartan, quality of life

**A13320 ASSOCIATIONS BETWEEN GENE POLYMORPHISMS OF THE APELIN-APJ SYSTEM AND HYPERTENSIVE VASCULAR DAMAGE**

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**Objectives:** The aim of this study was to investigate the association of apelin-APJ pathway single nucleotide and hypertensive vascular damage through brachial ankle pulse wave velocity (baPWV).

**Methods:** A total of 556 hypertensive subjects, including 173 males and 383 females (aged 58 ± 11.0 years) were enrolled in this study based on a cross-sectional survey in Fujian coastal area. All subjects were given physical examination, laboratory test and baPWV measured. Genotypes of the apelin (rs56204867, rs3761581 and rs3115757) and APJ (rs9943582 and rs7119375) genes were determined by the TaqMan® MGB probe method.

**Results:** Participants were divided into two groups on the basis of baPWV values: control group (baPWV < 1400 cm/s) and arterial stiffness group (baPWV ≥ 1400 cm/s). The average baPWV value was (1266 ± 111)cm/s in the control group and (1764 ± 296) cm/s in the arterial stiffness group. The frequencies of mutant alleles in all five SNPs were not significantly different between the arterial stiffness and control groups (all P > 0.05). After adjusting for age, partial correlation analysis showed that male subjects carrying the apelin rs3115757-C mutant allele had a significantly higher baPWV value than those with the wild-type G allele [(1536 ± 375)cm/s vs (1383 ± 304)cm/s, P = 0.01] (Table 1). Logistic regression data demonstrated that female subjects with the apelin rs56204867-C mutant allele had an increased risk of developing arterial stiffness (OR = 2.087, 95%CI: 1.018 ~ 4.276, P = 0.04).

**Conclusion:** The apelin SNP rs56204867 was associated with reduced arterial elasticity in female hypertensive subjects, which indicates that gene polymorphisms of the apelin-APJ system are correlated with hypertensive vascular damage.

**Keywords:** Apelin-APJ pathway, Single nucleotide polymorphisms, brachial ankle pulse wave velocity, hypertensive vascular damage

**A13438 ALL TREATED HYPERTENSIVE PATIENTS IN PRIMARY HEALTH CARE: A CROSS-SECTIONAL STUDY IN WEST JAKARTA, INDONESIA**

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**Objectives:** In Indonesia, hypertension treatment relies on primary health care service, but the current data of blood pressure control and hypertension treatment in Indonesia's primary health care is nonexistent. In order to fulfill the need of data, this study aimed to examine hypertension treatment and its relationship with blood pressure control in Indonesia's primary health care.

**Methods:** We conducted a cross-sectional study including all hypertensive patients (n = 273) who visited the Tegal Alur II Community Health Center in 2017. All hypertensive patients' medical records containing latest blood pressure and antihypertensive treatment were examined by the authors. The primary outcome measured in this study was optimal blood pressure control according to Joint National Committee (JNC) VII guideline.

**Results:** Mean age of this study was 54.7 years (SD 10.7). Calcium channel blockers were the most frequent antihypertensive medication used in the Tegal Alur II Community Health Center (58.6%). Of all hypertensive patients, 27.1% achieved optimal blood pressure. In the bivariate analysis, there was significant association between antihypertensive agents and blood pressure control (p = 0.009). The multivariate analysis showed that calcium channel blockers were the strongest predictor of blood pressure control with adjusted odds ratio of 1.9 (95% CI 1.1 – 3.5; p = 0.022).

**Conclusion:** The majority of hypertensive patients given single drug medication with calcium channel blocker as the most frequent used antihypertensive agent. There was significant association between antihypertensive agents and blood pressure control.

**Keywords:** Hypertension Treatment, Blood Pressure Control, Primary Health Care, Indonesia

**A13448 PREVALENCE, AWARENESS, TREATMENT, AND CONTROL OF HYPERTENSION IN KOREA**

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**Objectives:** Hypertension is the most important risk factor for cardiovascular diseases and overall mortality. This study aimed to report the temporal trends in hypertension prevalence, awareness, treatment, and control in Korea from 1998 to 2015.

**Methods:** Data from 113,053 subjects aged 30 years or older in the Korea National Health and Nutrition Examination Survey, a nationally representative survey, were used to identify the rates of hypertension prevalence, awareness, treatment, and control.

**Results:** The prevalence of hypertension was 30.5% (95% confidence interval [CI], 29.3–31.7%) among Koreans aged 30 years or older, which remained grossly unchanged between 1998 and 2015. Hypertension was more prevalent among the elderly and men. Among the hypertensive subjects, 67.3% (95% CI, 65.4–69.1%) were aware of the diagnosis, 63.6% (95% CI, 61.7–65.4%) received treatment, and 46.2% (95% CI, 44.3–48.1%) had adequately controlled blood pressure during the period of 2013–2015. The awareness, treatment, and control rates showed remarkable improvement (23.5 to 66.3%, 20.4 to 60.3%, and 4.9 to 42.1%, respectively) from 1998 to the period of 2007–2009, at which point the numbers plateaued and showed no further significant changes. Moreover, among hypertensive subjects who were young and male, the awareness, treatment, and control rates remained low.

**Conclusion:** The overall prevalence of hypertension (30.5%) in Korea remained stable from 1998 to 2015. The awareness, treatment, and control of hypertension remarkably improved during the study period; however, the detection and management were suboptimal among hypertensive subjects who were young and male, which suggests that there is still room for improvement.

**Keywords:** hypertension, blood pressure, epidemiology, Korean National Health and Nutrition Examination Survey (KNHANES)