Hypertension Research (2024) 47:833–834
https://doi.org/10.1038/s41440-024-01625-7

EDITORIAL

Salt and seasonal variation research in Asia

Kazuomi Kario[1] · Satoshi Hoshide[1] · Masaki Mogi[2]

Keywords Hypertension · Asia · Seasonal variation

Received: 13 February 2024 / Accepted: 14 February 2024 / Published online: 5 April 2024

The purpose of Asia issue is to feature Asian researches in Asian countries with different ethnic characteristics from Western countries. In the April issue, various unique research papers have been published in the Asia-specific issue.

There are significant seasonal variations in blood pressure and cardiovascular event risk with the peak in the winter. Especially, morning BP is more closely increased with decreasing room temperature than evening BP [1]. This pressor effect of lower temperature, a slope of systolic BP against temperature, is termed as thermosensitivity, which is higher in the elderly [1, 2]. The morning home BP is more closely associated with stroke risk than evening BP. The study investigated the associations of vascular function (Flow-mediated vasodilation [FMD] and nitroglycerine-induced vasodilation [NID]) with season and outdoor temperature in 2190 outpatients and found that there was no significant association of FMD or NID with season or outdoor temperature [3]. Instead of outdoor temperature, the effect of lower indoor temperature on vascular function would be interesting to explain the winter increase in morning home BP.

The ENaK study demonstrated that esaxerenone, an non-steroidal mineralocorticoid receptor antagonist with the longest half-live in this class, significantly reduced morning home, bedtime home, and office blood pressure (BP) independent of baseline urinary sodium/potassium ratio in Japanese patients with hypertension [4]. All the recent clinical studies demonstrated that esaxerenone significantly lower 24-h BPs including nighttime and morning BPs [5–7].

✉ Kazuomi Kario
kkario@jichi.ac.jp

[1] Division of Cardiovascular Medicine, Department of Medicine, Jichi Medical University School of Medicine, Tochigi, Japan

[2] Department of Pharmacology, Ehime University Graduate School of Medicine, Ehime, Japan

The other unique clinically meaningful studies are as follows:

An analysis of a nationally representative cohort comprising 13,477 long-lived older adults individuals ranging in age from 65 to 116 years in China, systolic BP < 120 mmHg was the risk factor of mortality among the frail oldest old (≥85 years) while systolic BP ≥ 150 mmHg was that among the robust young-old (65–84 years) [8].

The VCOHP study in Japan investigated brain volume and its annual change in peritoneal dialysis patients ($n = 42$), comparing them with hemodialysis patients ($n = 25$), and demonstrate a significantly higher decline in the ratio of gray matter volume in peritoneal dialysis patients compared to hemodialysis patients [9].

In the retrospective study, the higher BP variability in patients with large vessel occlusion in anterior circulation treated with endovascular treatment was associated with poor functional outcome and an elevated risk of suffering intracerebral hemorrhage, while no such association was observed in large-artery atherosclerosis patients [10].

The study on the effects of superselective adrenal artery embolization on renal function in 182 patients with primary aldosteronism demonstrated a beneficial impact on renal function [11].

Compliance with ethical standards

Conflict of interest K Kario reports lecture fees and scholarship from Daiichi Sankyo outside the submitted work. The other authors have no conflict of interest.

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