EDITORIAL

Special Issue: Current evidence and perspectives for hypertension management in Asia



The eighth installment in Asian perspectives, salt, pregnancy, and masked hypertension

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This month's edition of Hypertension Research and the Special Issue on Hypertension in Asia includes three original articles. The results from the INTERnational study of MAcro- and micronutrients and blood Pressure (INTER-MAP) study with 1145 Japanese participants reveal that a urinary sodium-to-potassium (Na/K) ratio of 2 could be an appropriate cutoff value for recommended dietary intake in middle-aged Japanese men and women accustomed to Japanese dietary habits [1]. Recently, Na/K ratio is reported to be 4.14 in Chinese hypertensive patients [2]. The INTERMAP study previously reveals that Na/K ratio is higher in the Asian diet due to higher sodium intake and lower potassium intake, especially for Chinese samples than in the western diet [3]. Na/K ratio has been highlighted to be predicted as a risk factor for home hypertension [4], the renal outcome in patients with chronic kidney disease [5], and screening tools for hyperaldosteronism [6] in recent articles of Hypertension Research. Thus, the population approach considering the Na/K ratio in daily intake is important for preventing and controlling hypertension and cardiovascular diseases in Asia. Next, Ohkuchi et al. demonstrated that there were no "dual peaks" in the prevalence of women with preeclampsia (PE) from the COPE study [7]. Prevalence of PE/super-imposed PE (SPE), PE, PE with severe hypertension, and gestational hypertension shows only one peal at 36-37 or 38-39 weeks of gestation. This study suggests that the previous rationale for early-onset (EO) PE is denied and contributes to providing a rationale for the suitable definition of EO-PE/SPE in Asian ethnicities. Finally, Xia et al. exhibited the association between obesity and a higher

Masaki Mogi mmogi@m.ehime-u.ac.jp prevalence of masked uncontrolled hypertension in Chinese [8]. Previously, Asayama et al. demonstrated from the Ohasama study that waist circumference, body mass index, and waist-to-hip ratio are significantly associated with masked hypertension [9]. Overweight or obese people have significantly increased in Asia, which is called the "obesity epidemic". As the authors suggested, Asian clinicians should take care of blood pressure management in obese hypertensive patients who tend to show appropriate office blood pressure levels. Now, please enjoy the eighth story of the Special Issue for Hypertension in Asia.

Compliance with ethical standards

Conflict of interest The authors declare no competing interests.

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References

- Salman E, Kadota A, Okami Y, Kondo K, Yoshita K, Okuda N, et al. Investigation of urinary sodium-to-potassium ratio target level based on recommended dietary intake goals in Japanese population: The INTERMAP Japan. Hypertens Res. 2022;45 https://doi.org/10. 1038/s41440-022-01007-x.
- Sun N, Jiang Y, Wang H, Yuan Y, Cheng W, Han Q, et al. Survey on sodium and potassium intake in patients with hypertension in China. J Clin Hypertens. 2021;23:1957–64.
- Zhou BF, Stamler J, Dennis B, Moag-Stahlberg A, Okuda N, Robertson C, et al. Nutrient intakes of middle-aged men and women in China, Japan, United Kingdom, and United States in the late 1990s: The INTERMAP Study. J Hum Hypertens. 2003;17:323–30.
- 4. Hirata T, Kogure M, Tsuchiya N, Miyagawa K, Narita A, Nochioka K, et al. Impacts of the urinary sodium-to-potassium ratio, sleep efficiency, and conventional risk factors on home hypertension in a general Japanese population. Hypertens Res. 2021;44:858–65.
- Matsukuma Y, Nakayama M, Tsuda S, Fukui A, Yoshitomi R, Tsuruya K, et al. Association between the urinary sodium-topotassium ratio and renal outcomes in patients with chronic kidney disease: a prospective cohort study. Hypertens Res. 2021;44: 1492–504.

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- Segawa H, Higashi A, Masuda I, Yoshii K, Iwahori T, Ueshima H. Urinary sodium/potassium ratio as a screening tool for hyperaldosteronism in men with hypertension. Hypertens Res. 2021;44:1129–37.
- Ohkuchi A, Suzuki H, Matsubara K, Watanabe K, Saitou T, Oda H et al. Exponential increase of the gestational-age-specific incidence of preeclampsia onset (COPE study): a multicenter retrospective cohort study in women with maternal check-ups at <20 weeks of gestation in Japan. Hypertens Res. 2022;45 https://doi.org/10.1038/ s41440-022-01013-z.
- Xia JH, Zhang DY, Kang YY, Guo QH, Cheng YB, Huang JF, et al. The prevalence of masked hypertension and masked uncontrolled hypertension in relation to overweight and obesity in a nationwide registry in China. Hypertens Res. 2022;45 https://doi. org/10.1038/s41440-022-01005-z.
- Asayama K, Sato A, Ohkubo T, Mimura A, Hayashi K, Kikuya M, et al. The association between masked hypertension and waist circumference as an obesity-related anthropometric index for metabolic syndrome: the Ohasama study. Hypertens Res. 2009;32:438–43.