

*Editorial Comment***Diuretics Usage and Future Issues**Hirotsugu UESHIMA¹⁾*(Hypertens Res 2006; 29: 835–836)***Key Words:** diuretics, hypertension, treatment

The Japan Home *versus* Office Blood Pressure Measurement Evaluation (J-HOME) study reported the status of treatment with diuretics in 3,400 patients with hypertension (1). Of 7,354 physicians randomly selected in 2003, 1,477 physicians who agreed to the study participated in the survey (2). In 9.3% of 3,400 patients with hypertension (mean age: 66.9 years, ratio of males: 43.5%), thiazide diuretics were prescribed. The percentage was higher than those in other studies (3, 4) prior to the publication of the Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC-7) (5).

The JNC-7 was published based on the results of a randomized controlled study regarding hypotensive agents and agents for hyperlipidemia in the United States, the Antihypertensive and Lipid-Lowering Treatment to Prevent Heart Attack Trial (ALLHAT) (6). The ALLHAT showed that chlorthalidone was more useful and inexpensive than other agents (doxazosin, amlodipine, lisinopril). In the JNC-7, hypotensive diuretics are recommended as first-choice agents (6).

According to the status of treatment with hypotensive agents in Japanese patients with hypertension before 2003, hypotensive diuretics had been administered to approximately 4 to 5% of the patients (3, 4). Considering this, the percentage in this survey was 2 times higher. However, the frequency of treatment with hypotensive diuretics remains low, possibly because the side effects of these agents such as impaired glucose tolerance, lipid metabolism disturbance, and an increase in the uric acid level have been emphasized. However, in the JNC-7, the dose of chlorthalidone is recommended as about one-half of its standard dose prescribed in Japan, as indicated by the authors of the J-HOME study. At this dose, there were no serious side effects in the ALLHAT

results, and the agent is inexpensive. In 52% of the patients in whom thiazide diuretics were prescribed in the J-HOME study, the standard dose in Japan was employed (2 mg or more). The authors of the J-HOPE study propose the necessity of accurately describing the subsequent Guidelines for the Management of Hypertension (JSH 2004) and the sales promotion of low-dose thiazide in order to promote the prescription of low-dose thiazide diuretics.

The Board of Directors of the Japanese Society of Hypertension has submitted a proposal for promoting the sale of low-dose thiazide diuretics to the government. Simultaneously, it must be presented to many Japanese clinicians that the incidence of side effects related to administration of low-dose hypotensive diuretics is low. In this sense, the Diuretics in the Management of Essential Hypertension (DIME) study supported by the Japanese Society of Hypertension, an open label randomized control study regarding the safety of low-dose thiazide diuretics, that is, the initial onset of diabetes and other adverse metabolic reactions, should be accelerated (DIME trial: <http://www.jpns.org/trial.html> (Access Oct 30, 2006)).

For the widespread use of thiazide diuretics in Japan, low-dose thiazide diuretics acceptable for clinicians should be commercially available, and a low incidence of adverse reactions should be achieved.

References

1. Murai K, Obara T, Ohkubo T, *et al*, the J-HOME Study Group: Current usage of diuretics among hypertensive patients in Japan: the Japan Home *versus* Office Blood Pressure Measurement Evaluation (J-HOME) Study. *Hypertens Res* 2006; **29**: 857–863.

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2. Ohkubo T, Obara T, Funahashi J, *et al*, the J-HOME Study Group: Control of blood pressure as measured at home and office, and comparison with physicians' assessment of control among treated hypertensive patients in Japan: first report of the Japan Home *versus* Office Blood Pressure Measurement Evaluation (J-HOME) Study. *Hypertens Res* 2004; **27**: 755–763.
3. Yamamoto Y, Sonoyama K, Matsubara K, *et al*: The status of hypertension management in Japan in 2000. *Hypertens Res* 2002; **25**: 717–725.
4. Mori H, Ukai H, Yamamoto H, *et al*: Current status of antihypertensive prescription and associated blood pressure control in Japan. *Hypertens Res* 2006; **29**:143–151.
5. Chobanian AV, Bakris GL, Black HR, *et al*, the National High Blood Pressure Education Program Coordinating Committee: the Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure: the JNC 7 report. *JAMA* 2003; **289**: 2560–2572.
6. ALLHAT Officers and Coordinators for the ALLHAT Collaborative Research Group: Major outcomes in high-risk hypertensive patients randomized to angiotensin-converting enzyme inhibitor or calcium channel blocker *vs* diuretic: the Antihypertensive and Lipid-Lowering Treatment to Prevent Heart Attack Trial (ALLHAT). *JAMA* 2003; **288**: 2981–2997.