Antihypertensive Prescriptions in China

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To the Editor: In their article, “Hypertension Control in Community Health Centers Across China: Analysis of Antihypertensive Drug Treatment Patterns,” Wang et al.\(^1\) reported baseline information on antihypertensive prescriptions from 1,000 community health centers in China from March 2007 to the end of 2010. The number of treated hypertensive patients was 92,325 out of 249,830 patients with hypertension, and the prescribed percentages of diuretics, centrally active drugs, calcium channel blockers, vasodilators, and angiotensin-converting enzyme inhibitors were 56.0%, 38.3%, 36.8%, 26.5%, and 23.3%, respectively. These data include both mono- and combination therapies; therefore, the sum total of these percentages exceeds 100%.

A remarkable change in the percentage of antihypertensive prescriptions in Hong Kong, China, has occurred during the first 21 century.\(^2\) A total of 223,268 patients with hypertension, who were prescribed antihypertensive medications during this period, were included in their study, and the percentage of prescriptions of beta-blockers, calcium channel blockers, angiotensin-converting enzyme inhibitors, diuretics, and alpha-blockers in 2001 were 41.5%, 31.8%, 14.1%, 5.9%, and 4.7%, respectively. In 2010, the corresponding percentages were 21.5%, 27.1%, 12.7%, 2.2%, and 3.6%, respectively. The percentage of 2-drug prescriptions increased dramatically from 3.9% in 2005 to 26.9% in 2010.

In Japan, angiotensin receptor blocker prescriptions accounted for >60% of antihypertensive prescriptions, and calcium channel blocker prescriptions accounted for >50% of the prescription in 2010.\(^3\) In addition, the percentage of diuretic prescriptions for hypertensive patients increased from 4% in 2005 to 8% in 2010.

I have a concern about the applicability of Wang et al’s study to patients with hypertension of different ethnicities or to patients of the same ethnicity but with different social development. For example, Martinez-Garcia et al.\(^4\) reported the effect of continuous positive airway pressure (CPAP) on blood pressure in Spanish patients with obstructive sleep apnea (OSA) and resistant hypertension. In their study, the most frequently prescribed medication for hypertension was diuretics, which accounted for 184 of the 194 prescriptions (94.8%). Martinez-Garcia et al. conducted a randomized controlled study, and adequate adjustment for antihypertensive medication was made. On the other hand, the percentages of diuretic prescriptions in Hong Kong and Japan were <10%, and the percentage in the study of Wang et al. was 56%, differing from the data reported by Martinez-Garcia et al. Lifestyles in Europe have come to be adopted in Asian countries, and the prevalence of obesity or OSA is expected to increase in the near future. OSA causes resistant hypertension, and appropriate treatment, including antihypertensive medication and CPAP, is recommended for preventing cardiovascular events. Although the improvement of OSA by thiazide diuretics is controversial, caution should be exercised in respect of the discrepancies of antihypertensive prescriptions among clinical studies.

Antihypertensive prescriptions do differ in different districts, and I recommend that Wang et al. carry out monitoring of the percentages of antihypertensive prescriptions in the same population, as conducted by Wong et al.\(^2\)

DISCLOSURE
The authors declared no conflict of interest.

REFERENCES