Comparison of International Hypertension Guidelines: JNC-7, WHO/ISH, and ESH/ESC Guidelines

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Hypertension is one the most important risk factors for atherosclerosis-related mortality and morbidity. It produced the largest global mortality burden in year 2000, accounting for about 7 million deaths in that year. The prevalence rate of HT is growing. There will be a 60% increase in the number of patients with HT from 2000 to 2025, reaching 1.5 billion in the whole world. In a recent publication, WHO identified hypertension as the single most important preventable cause of premature death in developed countries.

According to the Prospective Studies Collaboration, the risk of CVD, beginning at 115/75 mm Hg, doubles with each increment of 20/10 mm Hg; every 2 mmHg decrease in SBP translated into a 7% reduction in ischemic heart mortality and a 10% reduction in stroke mortality. Thus, every mmHg matters. However, the control rate for hypertension, i.e., SBP <140 mmHg and DBP < 90 mmHg (< 130/80 mmHg for patients with diabetes or chronic renal insufficiency), with one anti-hypertension agent is at best about 30%. In 70% of patients, 2 or more drugs are needed for controlling hypertension. According to the ASCOT trial, 3 drugs were needed in about 50% of patients to achieve better control of hypertension.

International guidelines have advocated ever more aggressive screening and treatment strategies. Indeed, many HT guidelines have been published in recent 5 years. Among them, "The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure" (JNC 7), and WHO/ISH HT guidelines were both published in 2003, while ESH/ESC HT guideline (2007) were published just months ago. There were some differences in the classification and management in these guidelines, and will be discussed in this talk.