In the new US Hypertension Practice Guidelines – presented two weeks ago at the annual meeting of the American Heart Association (AHA) in Anaheim, CA – hypertension is defined as a blood pressure (BP) of 130/80 mm Hg and above (mean of two or more recordings at two or more visits). Those with 120–129 mm Hg in systolic BP and below 80 mm Hg in diastolic BP have “Elevated BP”. Treatment should start with non-pharmacological intervention followed, if needed (BP 140/90 mm Hg and above for the general population, 130/80 mm Hg and above for high-risk patients), by combined drug treatment. Primary drugs are: Thiazide or thiazide-type diuretics, ACE-inhibitors, ARBs, and both types of Calcium-channel-blockers. Beta-blockers are not first-line drugs, unless the patient has ischaemic heart disease or heart failure. The new target blood pressure is BP below 130/80 mm Hg for most patients; systolic BP below 130 mm Hg for those aged 65+.

An estimated 46% of US adults have hypertension when the new practice guidelines are applied to the 2011-2014 National Health and Nutrition Examination Survey (NHANES) population (n=9 623); 76% in the age group 65–74 and 82% in those aged 75+ (ref.). These figures are considerably higher than when the JNC-7 guidelines were applied to the same population (ref.). The estimated percentages of US adults recommended antihypertensive medication are: 36% (all), 74% (65–74 y.), and 82% (75+ y.). Interestingly, two of these treatment figures are only slightly higher than when the JNC-7 guidelines were used (ref.). A comprehensive discussion of the new guidelines, written by Ernesto Schiffrin, Canada, can be found on page 5.

At the same time as the new US guidelines were released, Bo Carlberg (former member of the Hypertension News team) and his young co-worker Mattias Brunström, Sweden, published a comprehensive meta-analysis in JAMA Internal Medicine of 64 unique BP trials comprising more than 300 000 patients. Primary preventive BP lowering...
was associated with reduced risk of death and cardiovascular disease only if baseline systolic BP was 140 mm Hg or higher. At lower levels of baseline BP, treatment was not associated with any significant benefit in primary prevention, unless the patients suffered from coronary heart disease.

A discussion of this elegant meta-analysis written by Thomas Kahan can be found on page 8.

The new US guidelines are comprehensive (122 printed pages), well written, easy to read, and interesting. The treatment goals (see above) are prudent and would have been more draconic, had the project group used the SPRINT target (systolic BP below 120 mm Hg).

Moreover, the project group should be commended for applying them to a large study population to get estimates of the prevalence of hypertension as well as the percentage of patients in need of treatment in the US (ref.). One may ask, however, if the recommendations are realistic, when about 80% of people aged 65+ get a diagnosis of hypertension and almost all of them are to be treated. Time will tell, if these recommendations are accepted by American practitioners, hypertension and other specialists as well as by the population.

Finally, the new US recommendations are likely to influence coming European and other guidelines, where the results of the meta-analysis, discussed above, and other new trials will be taken into account. Until then, let us follow the outcome in the US with interest – it is indeed “America First” now!

- Lars Lindholm

REFERENCES:

Muntner P et al. Potential U.S. population impact of the 2017 American College of Cardiology/American Heart Association High Blood Pressure Guideline. Published online. DOI: 10.1161/CIRCULATIONAHA.117.032582

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