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Invited Commentary

Are the guidelines of the ISH devoted to a population not contemplated in the ACC/AHA guidelines?

High blood pressure (BP) is the leading cause of death globally [1]. Guidelines devoted to the management of hypertension are tools containing the most adequate advices based on existing evidences and the opinion of experts to be used by doctors involved in the management of arterial hypertension. Theoretically, a unique and complete Guideline, should be sufficient to obtain an adequate control of BP in patients living in the different continents of this planet. However, this has not been the case and different Guidelines like the one devoted to hypertensive patients in Europe ([2]-European Society of Cardiology (ESC)/European Society of Hypertension (ESH) Guidelines), or in United States ([3]-American College of Cardiology (ACC)/American Heart Association (AHA) Guidelines) the two most widely followed in clinical practice, or Guidelines developed to be preferentially be used in a single country as those from Canada [4], United Kingdom [5], Japan [6] and China [7]. Many more Guidelines exist, many representing a single country, but in general are imitations from the European and American models [1,2].

Recently, the development of a worldwide practice Guideline concise, simplified and easy to use for adults aged 18 years and above, has been developed by the International Society of Hypertension (ISH) [8]. Using evidence extracted from recently published Guidelines the ISH Guideline Committee established a practical format easy to be used in low and medium as well as in high income countries (LMIC and HIC respectively) and not only by clinicians, but also by nurses and community health workers. The Committee recognized that evidences from LIC were limited or absent and as a consequence a part of the established standards should be based only in the opinion of experts selected from both LMIC and HIC countries.

The motivation of the new global Guidelines is based on the fact that more attention has to be paid to hypertension in LMIC where recent estimations show that 1.04 million of subjects present with high blood pressure (BP) compared to only 349 million in HIC [9] where best management of hypertension takes place. Poor awareness, treatment and control are present in hypertensives in LMIC compared to HIC [9] and require a prompt improvement. Simultaneously and in order to clarify the situation of these three parameters, the ISH has organized a global campaign to increase awareness of raised BP, namely the May Measurement Month initiative [10,11].

The last American Guideline published in 2017 presented with major novelties that introduced relevant changes in the definition of arterial hypertension (BP $\geq$ 130/80 mmHg) and its stages (stage 1 $\geq$ 130/80–139/89 mmHg and stage 2 $\geq$ 140/90 mmHg) and leaving prehypertension as systolic BP values 120–129 mmHg. As a consequence of these definitions a new threshold (BP $\geq$ 130/80 mmHg) and goal (BP $<$ 130/80 mmHg), to start pharmacological treatment and to define an adequate BP control were defined. The recommendations are accompanied by Class of recommendation and level of evidence and global risk influence treatment decisions.

The ESH-ESC Guidelines, unlike the American maintain the definition and threshold of hypertension in 140/90 mmHg, albeit admitting that patients with high-normal BP can receive pharmacotherapy if high global risk is present. Goal BP is $\leq$ 130/80 mmHg in subjects aged less than 65 years and 140/90 mmHg in the rest. Pharmacological treatment must be initiated like in US with combination therapy.

The ISH Guidelines [8] criteria ressemble those of ESH-ESC differentiating from the American by a less aggressive treatment when BP is 130/139 mmHg and in subjects aged more than 65 years. The use of out-of-office BP measurement is contemplated but the goals of BP are higher and similar to those of ESH-ESC. Clinical history, physical examination, additional diagnostic test, cardiovascular and other risk factors and attitude with associated comorbidities or diagnosis of secondary hypertension are in ISH Guidelines quite similar as in American and European Guidelines.

Optimal therapy in ISH Guidelines [8] contemplates, angiotensin converting enzyme inhibitors-aldosterone receptor blockers, calcium channel blockers and diuretics followed by spironolactone as in US and Europe but when drug availability is limited and this is very frequent in LMIC any drug could be used.

In summary, the attempt of ISH to create a Guideline to be globally used is laudable principally for the interest of a global use. However and principally in LMIC the application of these Guidelines will require a tremendous effort in education, personnel and tools.

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Declaration of competing interest

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