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Opinion Article

What are the Appropriate Pressure Values? USA Vs the Rest of the World

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Abstract

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Introduction

The management of Arterial Hypertension (HTN) continues to be a challenge in the daily practice of the doctors, despite the fact that there are management guidelines both their own and those of other countries and organizations; its use is difficult due to differences in Blood Pressure (BP) values that are considered pathological, degrees of severity, method to carry out the patient's risk assessment, time of initiation of pharmacological treatment and BP goals to be achieved. The other persistent barrier is its implementation, even after 6 years of publication the US HTA guidelines are still not adequately applied in that country [1].

An example of the long road traveled in the management of hypertension in the United States is the evolution of the reports of the Joint National Committee of the United States of America for the Prevention, Detection, Evaluation and Treatment of Arterial Hypertension (JNC) since its first publication in 1977 that recommended pharmacological treatment with diastolic pressures (DBP) ≥ 105 mmHg, and where systolic BP (SBP) was not taken into account [2]. until the HTA Guide of ACC/AHA in 2017 where BP values ≥ of 130/80 and initiation of pharmacological treatment in patients with moderate cardiovascular risk with these figures are considered HT [3].

The publication of the 2017 US HTA Guidelines generated worldwide controversy, which the 2018 European Society of Cardiology HTA Guidelines did not completely calm down [4]. The subsequent publication of the guidelines of the World Health Organization (WHO) [5]. and the International Society of Hypertension (ISH) [6]. with guidelines like those of the SEC, then created two currents in the management of hypertension: USA Vs the world.

Recently, the ESH/ISH 2023 guidelines [7]. were published, not endorsed on this occasion by the ESC, which maintains the same classification in grades of the ESH/ESC 2018 guidelines but introduces stages in all grades depending on the level of cardiovascular risk, target organ damage, renal failure, or presence of Diabetes Mellitus.

Differences in BP values for the diagnosis of hypertension

The first point is the cut-off point for the diagnosis of hypertension. The ESC/ESH, WHO and ISH Guidelines do not change the reference values; which were originally established by JNC 3, 4, 5 and 6, 30 years ago in the USA [8]. on the other hand, the ACC/AHA Guidelines drastically changed their cut-off point, arguing that BP values ≥ 130/80 are associated with more vascular events (Table 1)

Differences	2017 ACC/AHA Guide		Guide ESC/ESH 2018, ESH/ISH 2023	
PA values that define. HTA in different scenarios	Systolic and/or diastolic BP in mmHg		Systolic and/or diastolic BP in mmHg	
Consulting room(office)	≥130	≥80	≥140	≥90
Daytime Average (MAP)	≥130	≥80	≥135	≥85
Average night (MAP)	≥110	≥65	≥120	≥70
Average 24 hours (MAP)	≥125	≥75	≥130	≥80

Average AMPA	≥130	≥80	≥135	≥85

Table 1: Differences in BP diagnostic cut-off points between ACC/AHA vs ESC/ESH guidelines

HTN stage 1 (ACC/AHA) Vs Normal High Pressure (ES/ESH) how different are they really?The BP values contemplated by these two classifications are similar, but their denominations sound radically different, but when reviewing the management recommendations for these groups of patients in both guidelines we find similarities (Table 2)

	ACC/AHA 2017	ESC/ESH 2018, ESH/ISH 2023
	HTN stage I	High Normal BP
Systolic and/or diastolic BP in mmHg	130-139 80-89	130-139 85-89
Lifestyle modification recommended to decrease cardiovascular risk	Yes	Yes
Initiation of pharmacological treatment is recommended for all patients	No	No
Drug treatment determined by the patient's level of cardiovascular risk	Yes	Yes
Drug treatment for patients with low cardiovascular risk	No	No
Drug treatment for patients at moderate cardiovascular risk	Yes	No
Drug treatment for patients with high cardiovascular risk	Yes	Yes
Risk Scale to be used	ASCVD	SCORE

Table 2: Comparison between HT stage I Vs high normal BP

The most important message then is that in patients with blood pressure values of these categories, cardiovascular risk should be evaluated to define initiation of pharmacological treatment; it is not necessary to have BP values ≥ 140/90 to initiate drugs.

All the aforementioned guidelines (3,4,5,6,7) recommend pharmacological treatment in patients with blood pressure ≥ 140/90.

A very interesting document is the harmonization document published in 2022 by authors from Europe and the USA [9]. in which the authors also consider that in general there are more points of agreement than disagreement, such as:

1) The recommendation to start treatment with one of 4 classes of antihypertensive drugs: Calcium antagonists, Angiotensin Converting Enzyme Inhibitors, Angiotensin receptor blockers and Thiazide or thiazide-like diuretics.

2) Both Guidelines recommend the early use of fixed combinations in a single pill

3) The two guidelines agree on lifestyle change, the fundamental axis of hypertension treatment.

ACC/AHA (USA) Vs ESC/ISH, WHO (Rest of the World) Treatment Goals

At this point there are many more encounters than disagreements, the fundamental difference is given by the strictness of the goals in the ACC/AHA guidelines, while the other guidelines speak of goals according to individual patient tolerance (3,4,5,6,7). (Table 3)

Scenario	ACC/AHA 2017	ESC/ESH 2018, ESH/ISH 2023	ISH 2020	WHO 2021
Age ≥ 65 years	<130 /80	130-140/70-79	<140/80	<140/90
Post-stroke cerebrovascular event	<130 /80	<130/70-79 (or less, if the patient tolerates it)	<130/80 Or <140/80 in the elderly	<130/80
Diabetes Mellitus	<130 /80	<130/70-79 (or less, if the patient tolerates it)	<130/80 Or <140/80 in the elderly	<130/80
Chronic renal failure (GFR)< 60ml/min)	<130 /80	<130/70-79	<130/80 Or <140/80 in the elderly	<130/80
Coronary heart disease	<130 /80	<130/70-79	<130/80 Or <140/80	<130/80

		(or less, if the patient tolerates it)	in the elderly	

Table 3: Comparison between mmHg treatment goals between different HT guidelines

Conclusions:

Given the rapprochement between the positions of the US and European guidelines, which is evident in the 2022 harmonization document [8]. with authors from the ESC and the ACC/AHA; the ideal would be to reach a Universal definition and classification of Arterial Hypertension; similar to the Fourth Universal Definition of Infarction [10]. and thus achieve a unique language which would facilitate all the processes of research, education and implementation of the management guidelines on HTN, since the primary objective should be to reduce mortality and morbidity from cardiovascular disease in the world.

Conflicts of interest

None, tables made by the author.

Bibliography:

1. Updated hypertension guidelines: Implications for treatment? En: Medscape 2023.
2. Kotchen TA. (2014). Developing hypertension guidelines: An evolving process. Am J Hypertens [Internet]. 27(6):765–772.
3. Whelton PK, Carey RM, Aronow WS. (2017). PCNA guideline for the prevention,detection, evaluation, and management ofhigh blood pressure in adults: executive summary:a report of the American College ofCardiology/American Heart Association TaskForce on Clinical Practice Guidelines. J Am CollCardiol. 71:2199–2699.
4. Williams B, Mancia G, Spiering W. (2018). ESH guidelines for the management of arterial hypertension: the Task Force for the Managementof Arterial Hypertension of the EuropeanSociety of Cardiology and the European Society ofHypertension. J Hypertens. 36:1953–2041.
5. Noncommunicable diseases. Guideline for the pharmacological treatment of hypertension in adults [Internet]. Who.int. World Health Organization; 2021 [citado el 11 de septiembre de 2023].
6. Unger T, Borghi C, Charchar F, Khan NA, Poulter NR, Prabhakaran D, et al. 2020 International Society of Hypertension global hypertension practice guidelines. J Hypertens [Internet].38(6):982–1004.
7. Mancia (Chairperson) G, Kreutz (Co-Chair) R, Brunström M, Burnier M, Grassi G, Januszewicz A, et al. 2023 ESH Guidelines for the management of arterial hypertension The Task Force for the management of arterial hypertension of the European Society of Hypertension Endorsed by the European Renal Association (ERA) and the International Society of Hypertension (ISH). J Hypertens [Internet]. 2023;
8. 15. Whelton PK. (2019). Evolution of blood pressure clinical practice guidelines: A personal perspective. Can J Cardiol [Internet]. 35(5):570–581.
9. Whelton PK, Carey RM, Mancia G, Kreutz R, et al. (2019). Harmonization of the American college of cardiology/American heart association and European society of cardiology/European society of hypertension blood pressure/hypertension guidelines. J Am Coll Cardiol [Internet].80(12):1192–1201.
10. Thygesen K, Alpert JS, Jaffe AS, Chaitman BR, et al. (2018). Fourth universal definition of myocardial infarction. J Am Coll Cardiol [Internet]. 2018;72(18):2231–2264.

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