2-1-2018

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Recommended Citation

Aronow, W. S. (2018). Initiation of Antihypertensive Therapy. *Annals of Translational Medicine, 6* (3), 44. https://doi.org/10.21037/atm.2018.01.06

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Submitted Dec 19, 2017. Accepted for publication Dec 27, 2017.

doi: 10.21037/atm.2018.01.06

View this article at: http://dx.doi.org/10.21037/atm.2018.01.06

Hypertension is the most common modifiable risk factor for cardiovascular events and mortality in the world (1). The 2017 American College of Cardiology/American Heart Association hypertension guidelines published online on November 13, 2017 stated that a normal blood pressure is less than 120/80 mmHg (2). Elevated blood pressure is 120–129/<80 mmHg. Stage 1 hypertension is a systolic blood pressure of 130–139 mmHg or a diastolic blood pressure of 80–89 mmHg. Stage 2 hypertension is a systolic blood pressure of 140 mmHg and higher or a diastolic blood pressure of 90 mmHg and higher (2). Automated validated devices should be used for measuring blood pressure. According to the 2017 American College of Cardiology/American Heart Association guidelines, the overall prevalence of hypertension in United States adults is 49% in non-Hispanic white men and 47% in non-Hispanic white women, 59% in non-Hispanic African-American men and 60% in non-Hispanic African-American women, and 46% in Hispanic men and 41% in Hispanic women (2).

The 2017 American College of Cardiology/American Heart Association hypertension guidelines stated that the absolute cardiovascular risk reduction from lowering of blood pressure is greater at higher absolute levels of cardiovascular disease risk (2). These new guidelines recommend that drug therapy of hypertension should be guided by predicted cardiovascular disease risk in conjunction with blood pressure (2-5). Persons who have hypertension and a 10-year atherosclerotic cardiovascular risk less than 15% with a systolic blood pressure of 120–159 mmHg and a coronary artery calcium score greater than 100 also have an increased risk for cardiovascular events and should be considered for intensive lowering of blood pressure (6).

Lifestyle measures should be used for treating a systolic blood pressure between 120–129 mmHg with a diastolic blood pressure less than 80 mmHg (2,7). Adults with an untreated systolic blood pressure of 131–159 mmHg or diastolic blood pressure of 81–99 mmHg should be screened for white coat hypertension by either home blood pressure monitoring or by daytime ambulatory blood pressure monitoring (2,8).

The 2017 American College of Cardiology/American Heart Association hypertension guidelines recommended antihypertensive treatment using lifestyle measures plus blood pressure lowering drugs for secondary prevention of recurrent cardiovascular disease events in persons with clinical cardiovascular disease (coronary heart disease, congestive heart failure, and stroke) in adults who have an average systolic blood pressure of 130 mmHg and higher or an average diastolic blood pressure of 80 mmHg and higher (2,9-11). These new hypertension guidelines recommended antihypertensive therapy using lifestyle measures plus blood pressure lowering drugs for primary prevention of cardiovascular disease in adults who have an estimated 10-year risk of atherosclerotic cardiovascular disease greater than or equal to 10% using a risk calculator (12) with an average systolic blood pressure of 130 mmHg and higher or an average diastolic blood pressure of 80 mmHg and higher (2,13-16).

The 2017 American College of Cardiology/American Heart Association hypertension guidelines also recommended antihypertensive therapy using lifestyle measures plus blood pressure lowering drugs for primary prevention of cardiovascular disease in adults who have an estimated 10-year risk of atherosclerotic cardiovascular disease of less than 10% using a risk calculator (12) with an average systolic blood pressure of 140 mmHg and higher or an average diastolic blood pressure of 90 mmHg and higher (2,13,14). These recent guidelines also recommended initiating antihypertensive drug therapy with two first-line drugs from different classes either as separate agents or in a fixed-

dose combination in adults who have a blood pressure of 140/90 mmHg and higher or who have a blood pressure more than 20/10 mmHg above their blood pressure target (2,17). White coat hypertension needs to be excluded before starting antihypertensive drug therapy in adults with hypertension at low risk for atherosclerotic cardiovascular disease (2).

The target blood pressure goal in adults with hypertension treated with antihypertensive drugs should be less than 130/80 mmHg (2). A subsequent editorial will discuss which antihypertensive drugs to use for treating different clinical conditions and the target blood pressure goal for treating these different clinical conditions.

Acknowledgements

None.

Footnote

Conflicts of Interest: The author has no conflicts of interest to declare.

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Cite this article as: Aronow WS. Initiation of antihypertensive therapy. Ann Transl Med 2018;6(3):44. doi: 10.21037/atm.2018.01.06