

WORLD HEART RHYTHM CONFERENCE

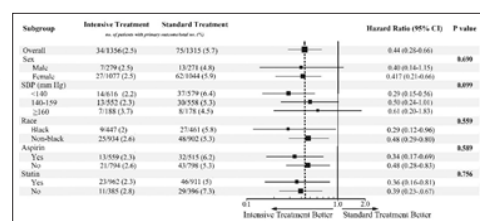
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Cardiovascular risk based intensive blood pressure reduction

Armin Attar

Shiraz University of Medical Sciences, Iran

Statement of the Problem: In the new ACC/AHA hypertension guidelines, individualized cardiovascular risk assessment is emphasized and aggressive management of blood pressure using a 10-year risk of cardiovascular events of more than 10% is recommended. However, this decision is being criticized as not being based on a trial results. **Methodology & Theoretical Orientation:** To perform a secondary analysis, we obtained the data of Systolic Blood Pressure Intervention Trial (SPRINT) from NHLBI Data Repository Center. In SPRINT, an open-label trial, non-diabetic participants with SBP of ≥ 130 mmHg were randomized to intensive and standard treatment groups with SBP targets of <120 and <140 mmHg respectively. The primary composite outcome was myocardial infarction, and other acute coronary syndromes, stroke, heart failure, or death from cardiovascular causes. Here, we have analyzed data from participants without CVD and chronic kidney disease aged below 75 years categorized based on baseline 10 years Framingham cardiovascular ($<10\%$ [low risk]; ≥ 10 [intermediate or high risk]).



Findings: A total of 4298 patients were included in the analysis. Throughout the 3.12 years of follow-up, the mean SBP level was 122.76 ± 8.19 and 135.31 ± 6.48 mmHg in the intensive and standard treatment groups, respectively (average difference, 12.55 mmHg; $P < 0.001$). In general, patients with a risk above 10% showed a significant benefit (HR with intensive treatment, 0.43; 95% CI, 0.28 to 0.66; $P < 0.001$). As is shown in the Figure this benefit was not affected by sex, age, BP level, race, and consumption of aspirin or statins. However, intensive BP reduction was not useful for those at low risk (0.75% per year vs. 0.57% per year; HR, 1.14; 95% CI, 0.55 to 2.38; $P = 0.714$).

Conclusion & Significance: Intensive SBP reduction is beneficial for primary prevention of cardiovascular morbidity and mortality in non-diabetic patients with more than low cardiac risk (above 10%).

Biography

Armin Attar is an interventional cardiologist from Shiraz University of Medical Sciences. He has founded Traditional and Advanced Heart Approaches (TAHA) clinical trial group and have guided several investigations in the field of primary prevention of cardiovascular diseases. He has also a Ph.D. on stem cell biology and technology and his main focus of research is mesenchymal stem cells in that field.

attar_armin@yahoo.com

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