Patient Case Study #4

Personalized Treatment Regimen Following Pulse Wave Analysis

33-Year-Old Male with Persistent Systolic Hypertension*

Patient Medical History

- Prescribed an ACE inhibitor for systolic and diastolic blood pressure management
- Diagnosed with hypertension 1 year ago
- No comorbidities
- Nonsmoker
- Results from electrocardiography were normal 1 year ago

Digital Vascular Biomarker Assessment

Brachial Blood Pressure†	**144/74 mmHg**
Central Blood Pressure	**114 mmHg**
Central Pulse Pressure Amplification	**79%**

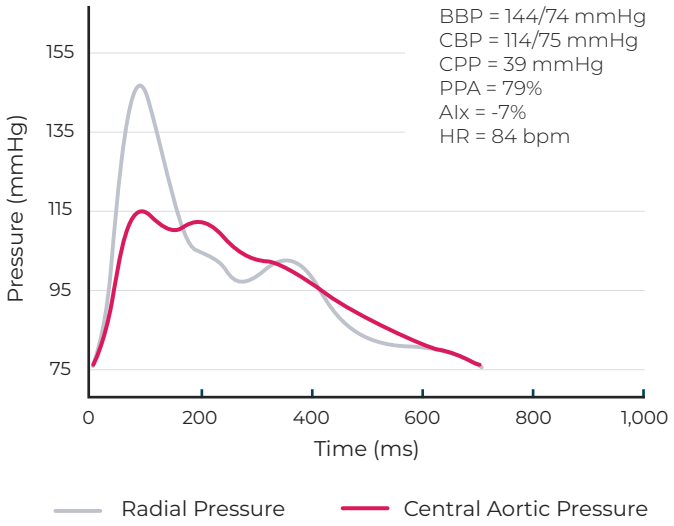
† Average of three readings, seated

Interpretation

This male patient's central systolic blood pressure of 114 mmHg is 10 mmHg less than the proposed upper limit of 124 mmHg. He has a pulse pressure amplification of 79%. The central pressure profile was interpreted as supporting current management, and his medication was not increased.

This instance shows a case of persistent brachial systolic hypertension on therapy with acceptable central pressure readings. The central pressure readings provide support for not altering current management. As acknowledged by the authors, the intent here is not to overrule brachial blood pressure management, but to allow the use of clinical judgment in decision-making in select clinical scenarios, as recommended in the JNC 8 document.[1]

Figure 5. Peripheral and Central Pressure Waveforms



BBP indicates brachial blood pressure systolic/diastolic; CBP, central blood pressure systolic/diastolic; CPP, central pulse pressure; AIx, augmentation index; HR, heart rate; bpm, beats per minute.

*Townsend RR et al. Journal of Clinical Hypertension. 2015; 17:7, 503–513. DOI: 10.1111/jch.12574: http://bit.ly/2gc5mdD
Reference 1: JNC 8 Guidelines for the Management of Hypertension in Adults | AAFP

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