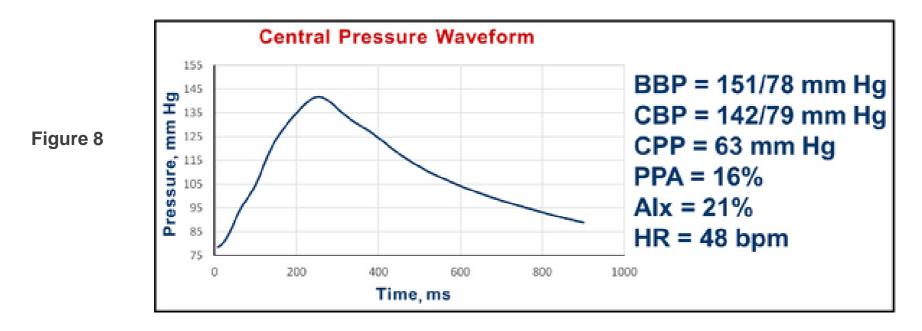
Clinical Case Example III: Hypertensive with Comorbidity

Clinical Question: Alter regimen?

- 64-year-old man
- Smoker
- History of heart attack and placement of two coronary stents
- Brachial BP is 151/78 mm Hg
- Current regimen: Metoprolol XL 200 mg daily, hydralazine 100 mg twice daily, lisinopril 20 mg daily, furosemide 20 mg daily, and atorvastatin 40 mg daily

Initial PWA is shown in Figure 8.

Clinical Case Example III



Interpretation:

The central pressure profile indicated a pulse pressure amplification of 16% (less than the desired value of 30%). The central systolic pressure of 142 mm Hg is more than 124 mm Hg. The Alx was 21%.

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

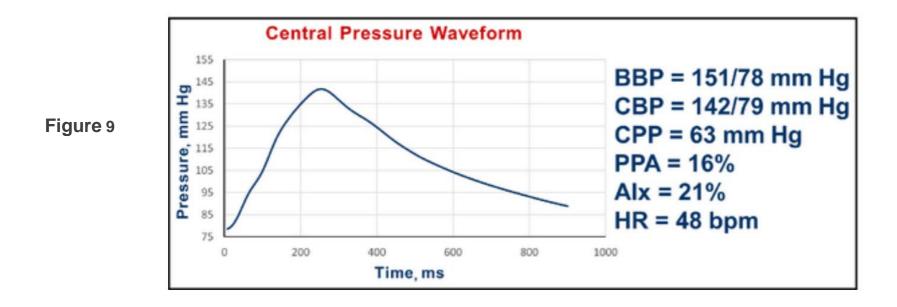
Townsend RR et al. *Journal of Clinical Hypertension.* 2015; 17:7, 503–513. DOI: 10.1111/jch.12574 http://bit.ly/2gc5mdD

Clinical Case Example III

Intervention:

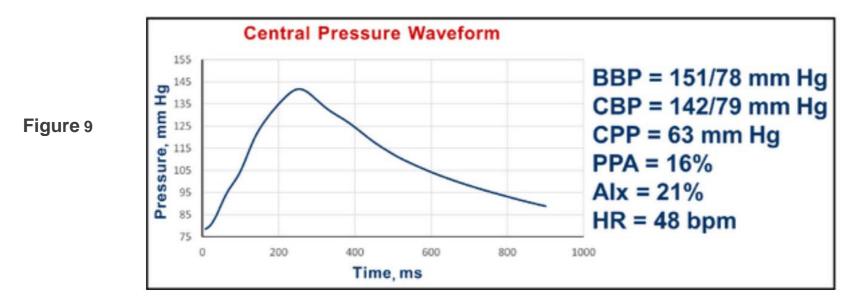
During follow-up, a number of changes in medications were made, as well as advice to stop smoking. The goal of the medication changes was to reduce brachial systolic to <140 mm Hg, increase pulse pressure amplification, and reduce central systolic pressure to <124 mm Hg. β -Blockers tend to blunt amplification and the dose of the β blocker was gradually reduced. Furosemide was changed to indapamide, a longeracting diuretic. A calcium channel blocker (CCB) was initiated and the ACE inhibitor was changed, with the dose increased and then merged with the CCB in a fixed-dose combination. In addition, counseling on cigarette smoking was provided. These changes were made gradually over the ensuing 8 months.

Clinical Case Example III



Rx at follow-up (8 months later): Metoprolol XL 25 mg daily, amlodipine / benazepril 10 mg/40 mg daily, spironolactone 25 mg daily, and indapamide 1.25 mg daily. The patient ceased cigarette smoking and a follow-up PWV study was obtained (Figure 9).

Clinical Case Example III



Interpretation:

The central pressure profile indicates that pulse pressure amplification has increased from 16% to 40%. The central systolic pressure of 128 mm Hg is closer to the desired value of 124 mm Hg. The Alx was lowered slightly from 21% to 19% (from the software, not shown in the figure). In the 8-month interval, the heart rate is now 65 beats per minute (increased from 48 beats per minute).

Clinical Case Example III

Summary:

The initial brachial pressures were in need of attention. Changes were made in the antihypertensive regimen with a goal of maintaining some β -blockade but to increase the vasodilatory aspect of the regimen, relying especially on the central pressure–lowering effects of ACE inhibitors and dihydropyridine CCBs.