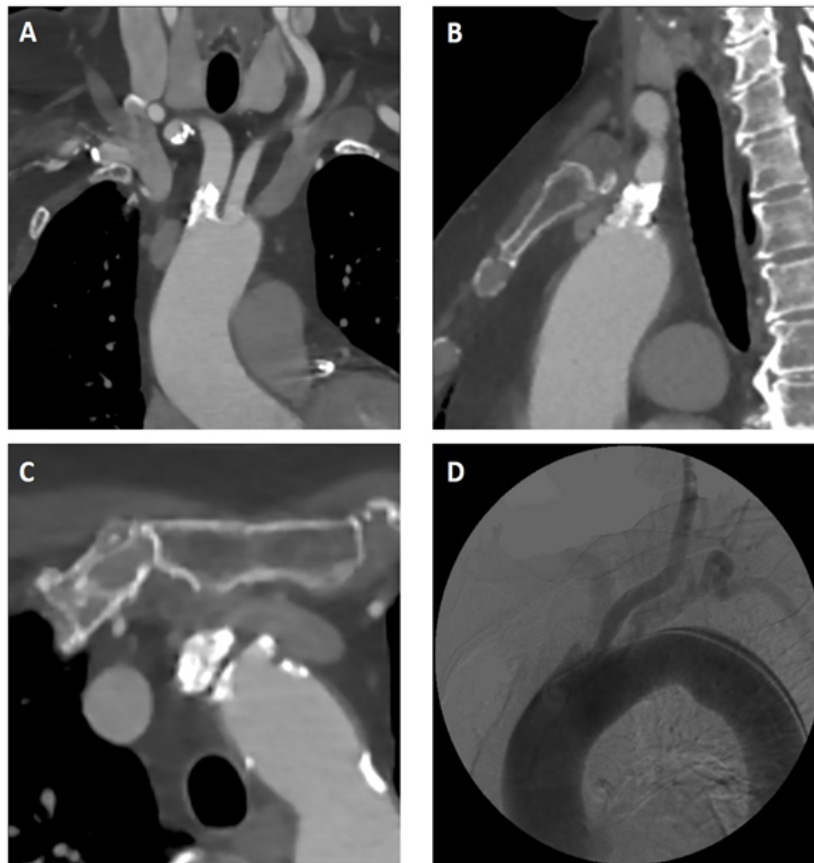


Clinical case blog

Title: Blood Pressure Difference of more than 100 mmHg between Arms caused by Stenosis of the Brachiocephalic Trunk

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A 78-year-old woman with hypertension and diabetes mellitus was admitted to the Department of Internal Medicine with fatigue. There was a profound difference in blood pressure between her right (116/97 mmHg) and left arms (231/126 mmHg). The patient's physical examination was otherwise unremarkable. A difference of 10 mmHg or higher, or of 15 mmHg or more, between arms can identify patients at a high risk of asymptomatic peripheral vascular disease and mortality who may benefit from further assessment [1]. Therefore, the patient underwent three-dimensional computed tomography (3D CT) and arch aortography to detect the presence of narrowing or hardening of the arteries. 3D CT revealed severe brachiocephalic trunk calcification (Panel A-C), and on contrast examination, 99% stenosis was observed in the brachiocephalic trunk, which was determined to be the cause of the blood pressure difference (Panel D).

Reference

1. Clark CE, Taylor RS, Shore AC, Ukoumunne OC, Campbell JL (2012) Association of a difference in systolic blood pressure between arms with vascular disease and mortality: a systematic review and meta-analysis. *Lancet*; 379: 905-914.