

# Bilateral Subclavian Stenosis as a Complication of Giant Cell Arteritis Manifesting as “Hypotension / Shock” in a Case of Syncope

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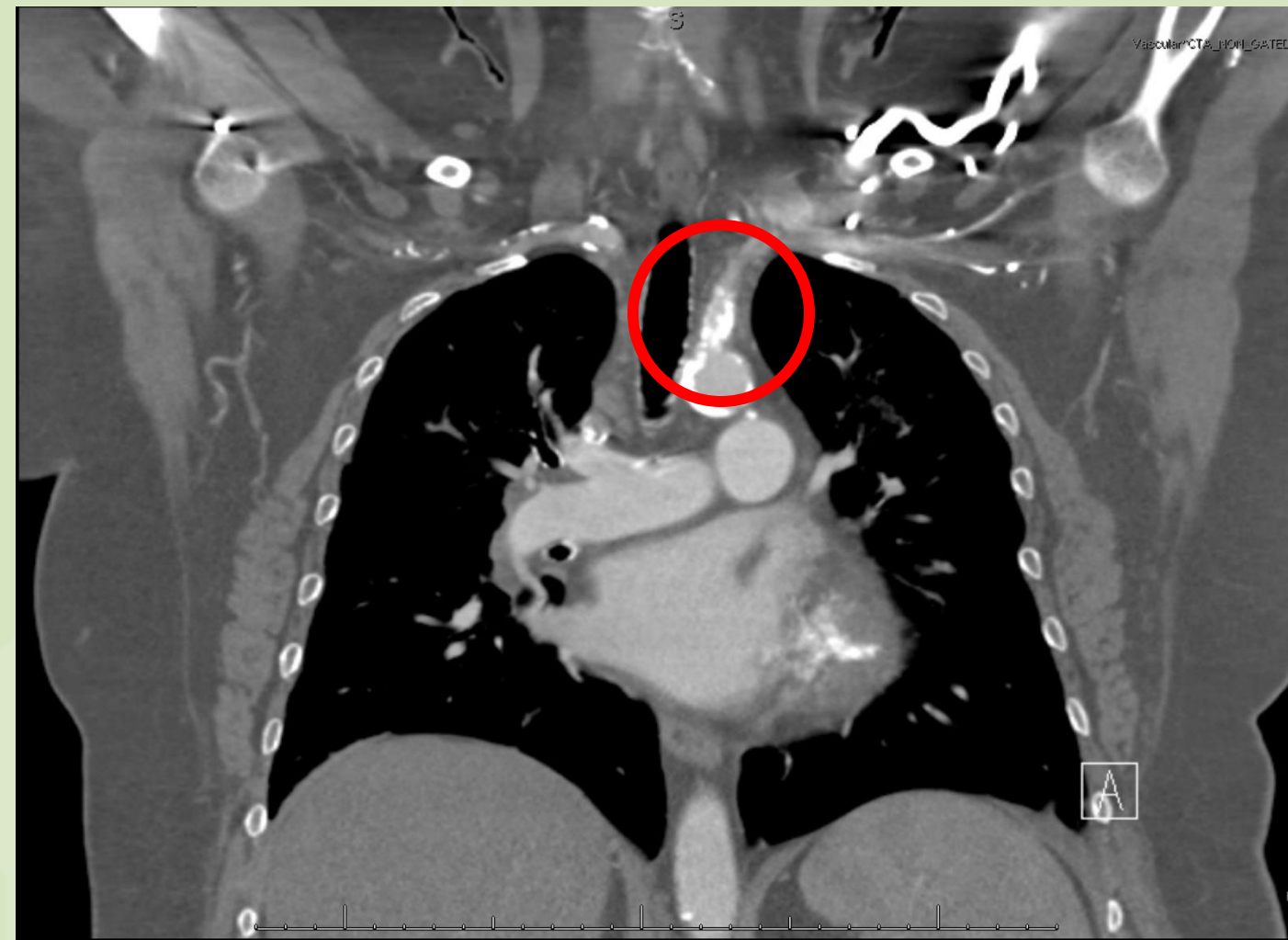
## Introduction

Bilateral subclavian stenosis is often asymptomatic but can manifest as hypotension and potentially confound other diagnoses. We present a case of hypovolemic syncope managed as “shock” due to incorrectly recorded hypotension.

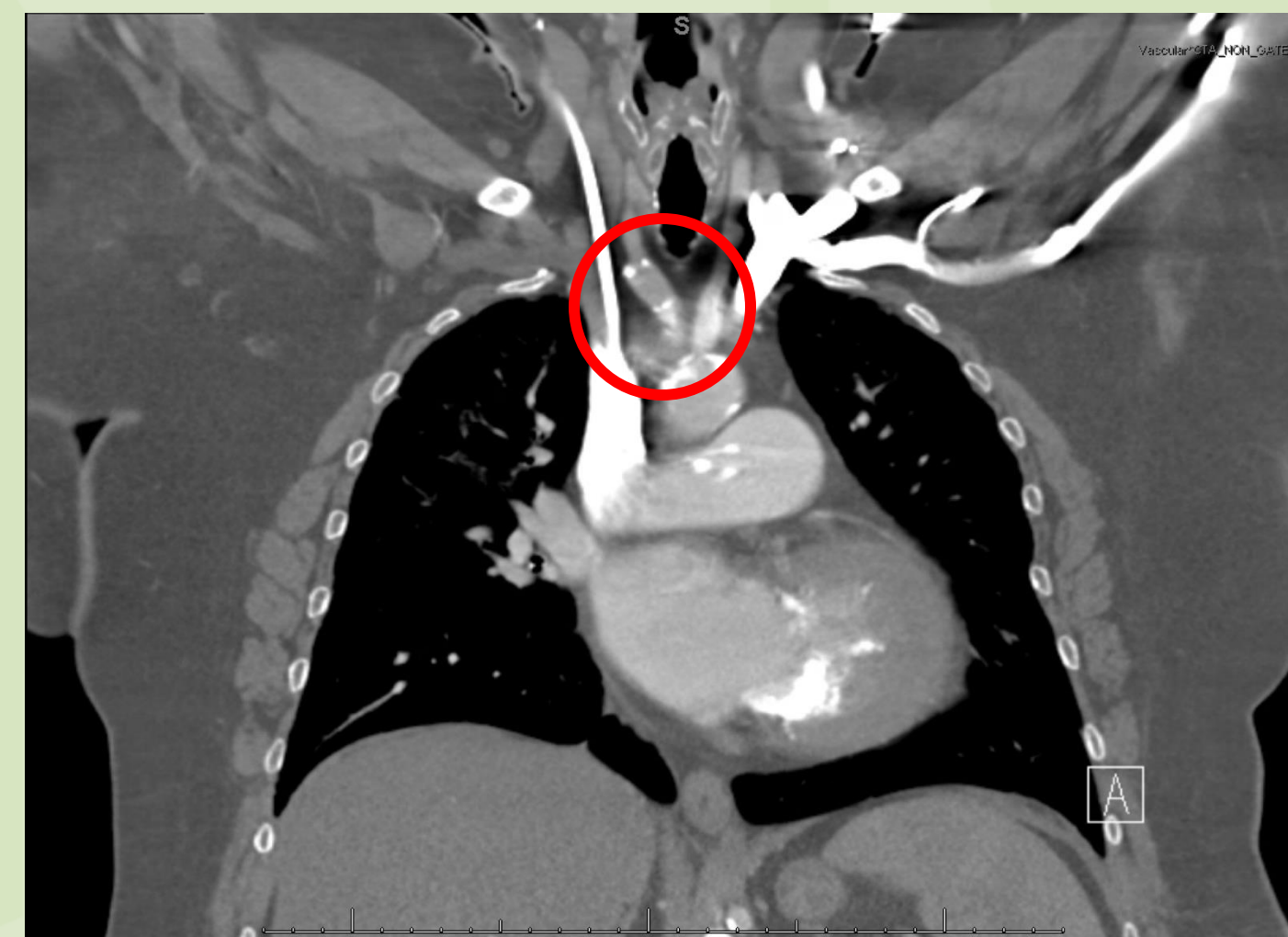
## Case Description

A 66-year-old female with history of giant cell arteritis in remission and HFpEF presented to the hospital following episode of syncope one week after her diuretic dose was doubled. She had recently completed a 6-month taper of prednisone. Non-invasive blood pressure (NIBP) monitoring on the right arm widely ranged with systolic 92-152, diastolic 58-76 mm Hg. Orthostatic vital signs were positive by both blood pressure and symptoms. Renal function and lactate were unremarkable. She was given IV fluid resuscitation with 250 cc of balanced crystalloid with resolution of symptoms. Repeat orthostatic vitals were persistently positive, and her resting blood pressure noted with MAP in the 60s.

The patient was taken for right-heart catheterization showing RA 25, PA 68/52 (51), PCWP 45 (mm Hg), thermodilution CO 7.1 L/min<sup>2</sup> and CI 3.5 L/min/m<sup>2</sup>. Chemistries revealed no elevations in renal or liver function, and cardiac biomarkers were unremarkable. Given persistent hypotension and elevated filling pressures, the patient was taken to the ICU for pressor-assisted diuresis with Swan-Ganz catheter left in place. A right radial arterial line showed MAP in the 60s, congruent with NIBP readings. She was started on norepinephrine, vasopressin, and furosemide infusions with no significant improvement in blood pressure. Eight AM cortisol level was adequate at 14.4 mcg/dL (5.3-22.5) and subsequent ACTH stimulation test demonstrated an appropriate response.



Left subclavian stenosis at the ostium



Calcifications and stenosis at the origin of the brachiocephalic trunk

## Case Description (cont'd)

Throughout her ICU stay, cardiac output and index remained unchanged, and she remained asymptomatic. On hospital day 9, NIBP monitoring was switched to the left lower extremity which showed BP 137/57, widely discordant to the upper extremity arterial line reading of 66/39. A CT angiogram of the chest was performed showing high-grade stenosis of the bilateral subclavian arteries and brachiocephalic trunk. Vasopressors were titrated off utilizing lower extremity NIBP readings and the patient was subsequently discharged with instructions to measure blood pressure via the lower extremities only.

## Discussion

Large vessel vasculitis often involves the aortic arch and branch vessels and can accelerate atherosclerotic disease. In a patient who is asymptomatic despite persistent “hypotension” and without any signs of end-organ dysfunction that would indicate a shock state, critical stenosis of major arteries should be considered and NIBP measurements adjusted accordingly to avoid unnecessary pharmacologic therapy.