

Pseudo hypertension: Clue from Osler sign

Dear Editor,

Pseudo hypertension (HTN) is a condition in which indirect blood pressure (BP) measured by the cuff method overestimates the true intra-arterial BP.^[1] It should be suspected if a patient develops dizziness after the start of antihypertensive or following dose escalation. The direct measurement of intra-arterial BP is the gold standard for its diagnosis. However, it is an invasive method and needs expertise. Eliciting Osler sign is noninvasive and easy to perform. A palpable although pulseless, radial artery while the BP cuff is inflated above systolic pressure, is a positive Osler sign. It can be used as a cost-effective screening tool in resource-limited settings, but it has low sensitivity and specificity.^[1] However, it can obviate the need for invasive BP monitoring if used along with X-rays of arteries of the upper limb.

Osler sign occurs due to Monckeberg's sclerosis of arteries. This is a degenerative disorder, which is characterized by the calcification of media of small and medium-sized arteries.^[2] It is different from atherosclerosis where the intimal layer is involved resulting in narrowing of the lumen. Monckeberg's sclerosis usually affects the arteries of upper and lower extremity but can affect renal and coronary arteries. On X-ray imaging, it has a characteristic "rail-tracking" appearance [Figure 1]. Upper limb involvement presents as pseudo-HTN and in extreme form as noncompressible brachial artery syndrome. It is an independent risk factor for the cardiovascular event. It is commonly associated with elderly, male gender, diabetes, chronic renal failure, and decreased bone mineral density. At present, there is no treatment modality to reverse vascular calcification *in vivo*. Bisphosphonates have shown promising results in reversing vascular calcification in the *in vitro* study.^[3]

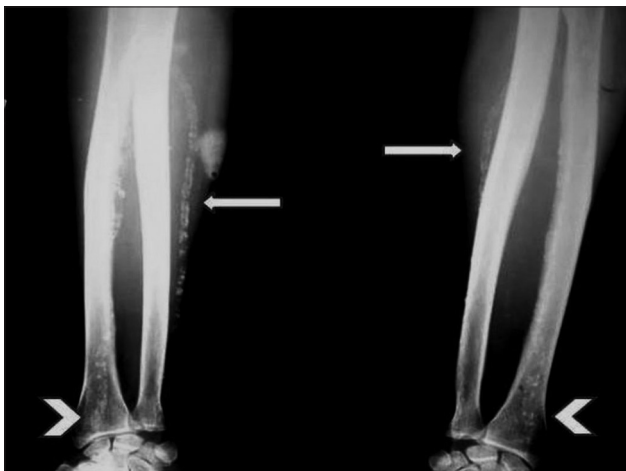


Figure 1: X-ray of both forearms showing calcified ulnar arteries (arrows) and radial arteries (arrowheads)

To conclude, pseudo HTN should be ruled out in any subject with positive Osler sign. This will avoid unnecessary lifelong anti-HTN therapy, which is not without side effects.

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Conflicts of interest

There are no conflicts of interest.

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