PICTORIAL CME

Pseudohypotension

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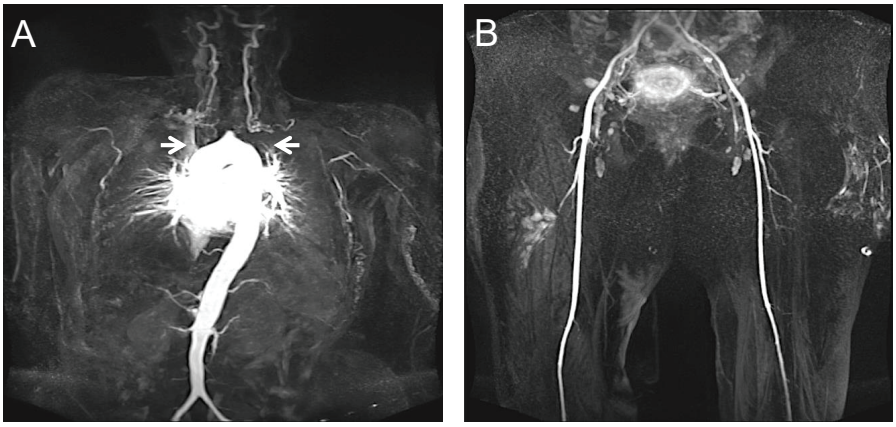

Fig. 1: (A) Magnetic resonance angiogram (MRA) with complete obliteration of the aortic arch vessels (arrows) - innominate, left common carotid and left subclavian arteries. (B) MRA with a normal caliber of left and right femoral arteries

A 52-year-old female presented with a five-day history of menorrhagia. There was a preceding history of a cerebro-vascular accident 13 years ago for which no aetiology had been identified. Initial assessment in the emergency department revealed pallor, hypotension (blood pressure of 80/60 mm Hg) and a 'feeble pulse'. Her Hb was 8.9 g/dL with normal renal parameters and cortisol. She was treated with intravenous fluids, hydrocortisone injections and ionotropes but the hypotension did not improve. An echocardiogram showed a normal left ventricular ejection fraction. In view of the persistent hypotension a review of the clinical status was undertaken. The patient was noted to have absent radial pulses but preserved popliteal and femoral pulses with a normal blood pressure in the lower limb. The fluid resuscitation was stopped and a magnetic resonance angiogram (MRA) was ordered which revealed a complete obliteration of the innominate and the left common carotid and subclavian arteries from the aortic arch vessels (Figure 1A) with normal lower limb arteries (Figure 1B) and a diagnosis of Takayasu's arteritis was made. She was commenced on prednisolone with a partial improvement of the upper limb pulses in a few months.

Takayasu's arteritis is a form of systemic, chronic large vessel vasculitis occurring worldwide but predominantly in Asian women <50 years of age, primarily affecting the aorta and its branches.[1] The other large arteries that are involved include pulmonary, renal, vertebral, subclavian and the carotids. Vascular manifestations occur in the later stages and are dependent on the sites of involvement. Subclavian arterial occlusive disease in Takayasu's arteritis could result in absent upper limb pulses with pseudohypotension.[2] Conventional angiography, the gold standard for imaging is now being replaced by MRA and ^{18}F-Fluorodeoxyglucose-Positron Emission Tomography (FDG-PET).[3] Our case with the illustrative images highlights the importance of palpation of pulses in all four limbs whilst assessing the hemodynamic status of a patient with hypotension along with the utility of an MRA to help diagnosis.

References

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