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CASE REPORT

A CASE REPORT OF TAKAYASU'S ARTERITIS WITH STROKE AS INITIAL PRESENTATION

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Abstract:

Takayasu's arteritis a rare, idiopathic, chronic granulomatous vasculitis that affects aorta and its major branches. Stroke is a common complication; however, this is hardly the initial presentation.Here we reported one such case of a 39-year-old man presented with sudden onset right sided hemiparesis, facial deviation towards the left and motor aphasia for last 21 days. He was diagnosed as ischemic stroke with right sided hemiparesis with motor aphasia due to Takayasu's arteritis.

Key words: *Takayasu's arteritis, Cerebral Infarction, Ischemic stroke, pulseless disease.*

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Introduction:

Takayasu's arteritis (TA) is a systemic granulomatous inflammation affecting aorta, its main branches, pulmonary, renal and coronary arteries, whereinflammatory mononuclear cell and giant cellsinfiltrates leads to intimal proliferation and fibrosis, vascularization of the media, degeneration of the elastic lamina, narrowing of the lumen occurs with or without thrombosis. It is also known as "pulseless disease" ornonspecific aortoarteritis.[1,2,3] The disease is primarilyconfined to the young female, but now males are also affected with variable diseasemanifestations[4].It is most prevalent in Japan, South East Asia, India and Mexico.[1]

It is considered as an early or pre-pulseless phase presenting as non-specific constitutional symptomsfollowed by a late, pulseless phage. The most common clinical presentation is diminished or absent pulses, associated with limb claudication and blood pressure discrepancies[4]. Other manifestations include vascular bruits in the carotids and subclavian arteries, hypertension, aortic regurgitation, neurological features secondary to hypertension and/or ischemia, including seizures, stroke, visual impairment, retinopathy and pulmonary hypertension[4]. Nevertheless, stroke as the initial manifestation is infrequent and only a few cases are reported[5]. We report such a case, where stroke in young menheralded the onset of the disease.

Case Report:

A39-year-old man, non-diabetic, normotensive and smoker, presented with sudden right sided

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hemiparesis, facial deviation towards left, and motor aphasia for last 21 days. He had occasional muscle cramps, mild to moderate pain in small and large joints of upper limbs, without joints welling and morning stiffness. There was no history of unconsciousness, convulsion, headache, blurred vision, nausea, vomiting, abdominal pain, claudication in the lower limbs and Raynaud's phenomenon. There was history of similar attack two years back.

On examination, the patient was ill looking, mildly anemic, pulseless undetectable blood pressure, while pulse and blood pressure on the lower limbs were detectable and normal, motoraphasia with intact comprehension,right facial nerve palsy, increasedmuscletone, exaggeratedall tendon jerks with planter extensoron rightand flexor on left with normal fundoscopy. His ESR was 77mm/hour, CRP was15.4 mg/L. In Figure: A CT Scan of brain A which demonstrated cerebral infraction in evidenced by a Large hypodense area in the left frontotemporal parietal region, mass effect and perifocal edema. Duplex study revealed vasculitis with thromboembolic disease involving both carotid and vertebral arteries (Figure-B).

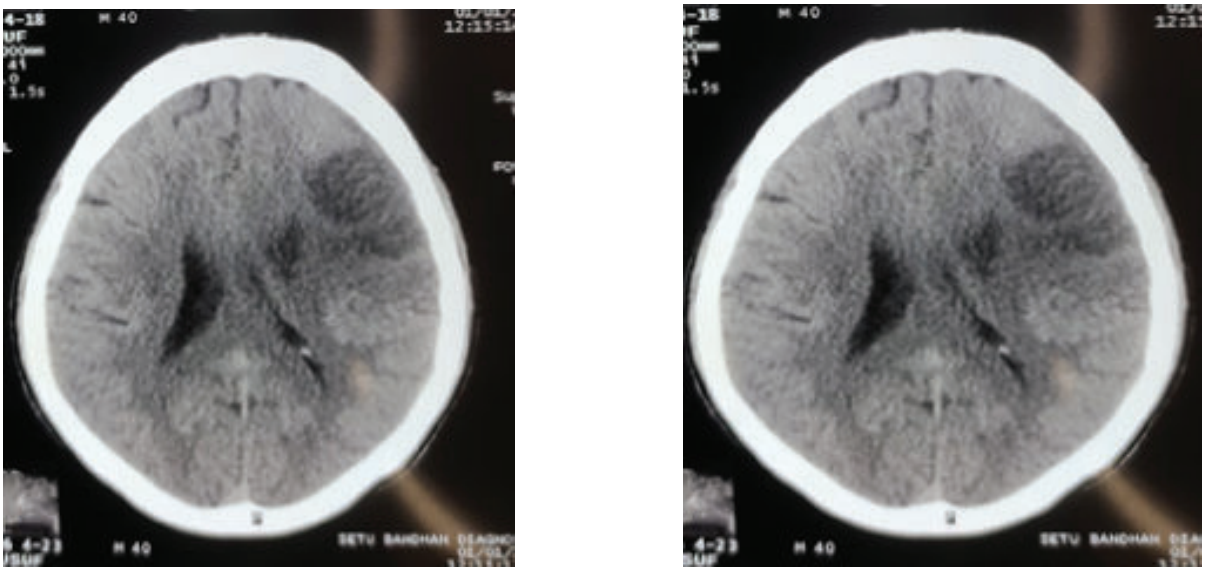

Figure-A Cerebral infract: A large hypodense area in the left frontotemporal parietal region, mass effect and perifocal edema

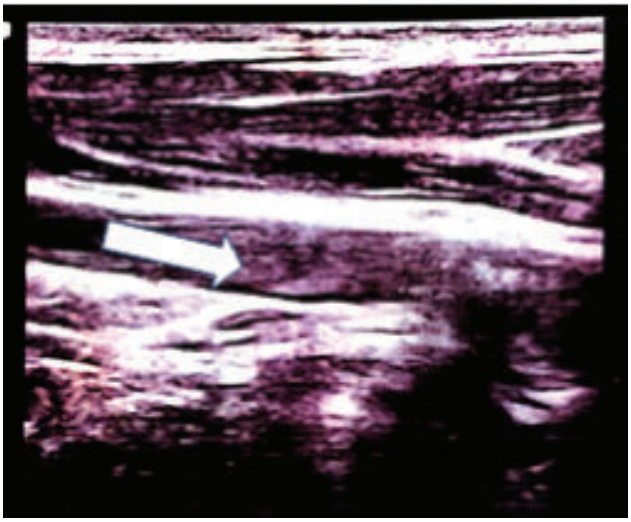

Figure B: Duplex study of neck vessels and vertebral arteries showing heterogeneous thrombus in right common carotid art

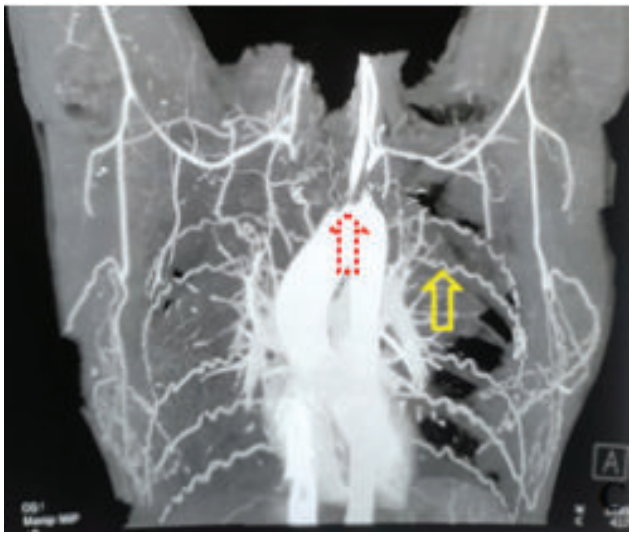

Figure C: CT-angiogram showing narrowing of three great vessels near origin and multiple collaterals.

CT angiogram showed short and long segment narrowing in left and right subclavian artery, brachiocephalic trunk and left common carotid artery and established flow by multiple collaterals (Figure-C). He was diagnosed as ischemic stroke with right sided hemiparesis with motor aphasia due to TA and treated with oralprednisone 40 mg daily, aspirin 75mg, methotrexate 10mg, calcium and vitamin D supplementation after which he displayed marked clinicalimprovement and normalization of inflammatory markers by the time of discharge.

Discussion:

Evaluation of the inflammatory status andpattern of arterial damage in TAis still a major challenge.[6]Clinical presentation was ranging from asymptomatic, constitutional features to symptoms of end-organ damage. Stroke as the initial presentation in 5%-8% of the patients[5]occurs due to acute ischemia by thrombosis or embolism of vessels.[7]Our patient was presented with sudden ischemic stroke, along with takayasu arteritis with thromboembolic disease involving both carotid and vertebral arteries. Kameyama et al.[8]reported that the source of thrombus is stenosed common carotid or internal carotid artery, dislodged by the turbulent blood flow.

Patients characteristically present with diminished or absent pulses, blood pressure discrepancies and vascular bruits over carotid and subclavian vessels.[9] Chen et al.[10]informed that most of the patients had abnormal characteristics of four limbs blood pressure that helped them to diagnose the disease by primary screening and complete assessment. Similarly, in our patient, pulse and blood pressure were undetectablein upperlimbs and detectable in lower limbs, which raised the suspicion of TA.

The commonly adopted approach for judging TA activity includes acute-phase reactants, new bruits and angiographic features. Wang et al.[11]stated that high resolution sonography was able to provide precise images for evaluation ofTA. The first line of management is systemic steroids.Methotrexate and cyclophosphamide is required for long-term disease control.[12]We also used methotrexate along with steroid, aspirin and atorvastatin. Therefore, our patient's clinical and laboratory parameters were improving rapidly.[13]

Takayasu's arteritis can be debilitating to patients physical and mental health, becoming dependent during their most productive years, which can have a greater impact on their socioeconomic status. So early diagnosis, treatment and monitoring are extremely important to control the disease activity and prevent life-threatening complications.

Conclusion:

Young patients, who present with stroke, should be evaluated meticulously for Takayasu's arteritis. Initial identification is important for management. It will halt the inflammation and its progression thereby, leading to better clinical outcomes.

Conflict of Interest:

The authors stated that there is no conflict of interest in this study

Funding:

This research received no external funding.

Consent:

For the purpose of publishing this case report and any related photos, the parents are written informed consent was acquired.

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