Original Research Paper

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Medicine

A CASE OF TAKAYASU ARTERITIS PRESENTING WITH CAROTID BRUIT

Dr. Nilima K. Shah Professor and Head Of Unit, General Medicine, BJMC, Ahmedabad.

Dr. Nirali Vishwakarma Resident Doctor.

Dr. Vatsal Mehta Resident Doctor.

Dr. Yash Chaudhary Resident Doctor.

ABSTRACT Takayasu Arteritis is a rare, large vessel vasculitis as it primarily affects the aorta and its primary branches. It also shares some histological and clinical features with giant cell arteritis, the other major large vessel vasculitis. Patients may present initially with constitutional symptoms but later develop symptoms associated with stenosis, occlusion or aneurysmal degeneration of large arteries. Angiography is the gold standard for diagnosing and for topographical classification which correlates with symptoms and prognosis. Early diagnosis and prompt treatment is crucial for patient outcome.

KEYWORDS : Takayasu Arteritis, Carotid Bruit

INTRODUCTION:

Takayasu arteritis is a granulomatous large vessel vasculities with a preponderance for young women. The inflammation results in disruption of the arterial endothelium causing stenosis, endoluminal thrombosis and aneurysmal dilatation.

CASE REPORT:

A 18 years old female residing at Ahmedabad presented to Emergency Medical Department with complaints of headache, giddiness, malaise, weight loss, low grade fever, decreased appetite, chest discomfort, left upper limb claudication and graying of vision.

Patient had no complaints of arthralgia, skin lesions, oral or genital ulcerations, respiratory symptoms, photosensitivity or photophobia, constipation, menorrhagia, polyuria.

She did not have any significant past or family history or menstrual history.

EXAMINATION:

General Examination:

Patients height was 140cm, weight 45 kg with BMI of 23 kg/m^2. She was afebrile, pulse rate was 130 per minute recorded at right dorsalis pedis artery in supine position. Left and right radial,ulnar and brachial pulses were hard to palpate. Blood pressure was not recordable in upper limb bilaterally, lower limb blood pressure measured at Anterior Tibial artery was 100/62 mm Hg by auscultatory method. Mild conjunctional pallor was also noted. Bruit over right and left carotid arteries was present.

Systemic Examination:

Respiratory system – Bilateral air entry present with clear lung fields on auscultation.
Cardiovascular system – S1 and S2 audible with no murmur.
CNS examination and abdominal examination was unremarkable.

INVESTIGATIONS:

Hemoglobin	– 13 gm/dl
WBC	– 9580 / cmm
Platelets	- 258000/cmm
ESR	- 120mm after 1 hour, (RP = 9 mg/dl)

Renal, Liver, Thyroid function test were normal.

Anti Nuclear Antibody, cytoplasmic and perinuclear antineutrophil / Cytoplasmic autoantibody.

ECG - Sinus Tachycardia

Radiological Investments:

Doppler study : Long, smooth,homogenous and moderately echogenic circumferential thickening of arterial wall involving bilateral common carotid artery, external carotid artery, internal carotid artery is noted causing low velocity waveform in right CCA, ICA, ECA whereas complete occlusion of human of left CCA. Intermedial thickening noted in bilateral subclavian and right vertebral artery with luminal narrowing. Bilateral Axillary, brachial, Radial and ulnar artery appeared normal.

CT Angiography of Aorta And Neck:

Suggestive of Type-II b Takayasu's arteritis.

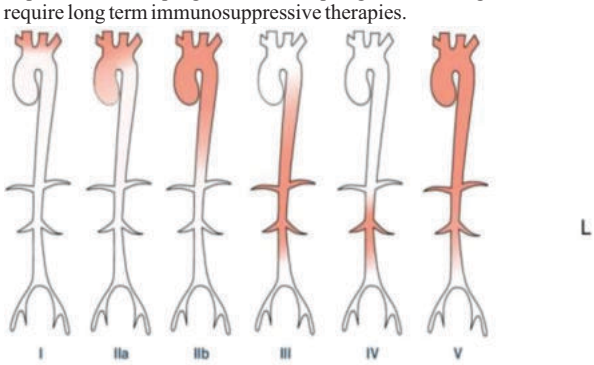
Bilateral CCA, ICA, ECA showed marked wall thickening with >95% stenosis. Similar findings noted in right lower vertebral artery and left subclavian artery for 40mm since origin. Right subclavian artery not visualised – likely occluded. Marked diffused circumferential descending thoracic aorta with 30-40% stenosis. Rest of the thoracic and abdominal aorta appear normal.Transthoracic echocardiography shows global left ventricular hypokinesia with severe LV dysfunction. Ejection fraction of 27%. These findings could be attributed to involvement of coronary arteries and its branches.

TREATMENT:

- Patient was started on T. prednisolone 1mg/kg and methotrexate 15mg PO once weekly.
- Patient was advised for regular follow up at cardiology and Rheumatology OPD.

DISCUSSION:

Takayasu's arteritis(TAK) is a chronic disease characterized by a fluctuating course, with apparent exacerbations and reductions in intensity of the inflammatory processes. Only approximately one-fifth of patients have monophasic and self-limiting course, while majority of patients show a progressive or relapsing and remitting arteritis and require long term immunosuppressive therapies.



The most widely used classification of TAK is based on conventional angiographic findings, as reported at the internal Conference on TAK in 1994. According to this classification there are six different types of

vessel involvement in TAK.

- Type I involves the branches of the aortic arch;
- Type IIa involves the ascending aorta, aortic arch, and branches of the aortic arch;
- Type IIb involves the thoracic descending aorta with the involvement of Type IIa;
- Type III involves the thoracic descending aorta, abdominal aorta, and/or renal arteries;
- Type IV involves the abdominal aorta and/or renal arteries;
- Type V is the combination of Type IIb and Type IV.

Red flags to investigate for Takayasu arteritis in a young patient with otherwise unexplained systemic inflammation.

Carotidynia Hypertension Angina pectoris Vertigo and syncope Extremity claudication Absent/weak peripheral pulses Discrepant blood pressure in the upper limbs (10 mmHg) Arterial bruits. Aortic regurgitation.

TREATMENT:

Patients are started on systemic glucocorticoids but around 60-80% of TAK patients treated with GC monotherapy relapse. Therefore, EULAR experts recommend an early initiation of GC-sparing therapy. As a combination therapy, patients are treated with steroids plus any one non-biological DMARDs. In patients not responding adequately to therapy with csDMARDS + GC (refractory or relapse), EULAR recommends the use of TNF-α inhibitors (TNF) or TCZ.

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