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Takayasu Arteritis Presenting with Optic Arteritis: An Uncommon Occurrence

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Abstract: ***Takayasu Arteritis is a chronic granulomatous, autoimmune large vessel vasculitis typically involving elastic arteries, aorta and its branches [1]. Loss of vision as a first manifestation of Takayasu Arteritis is unusual. We here present a 15 year girl who presented with acute loss of vision and optic neuritis on fundus examination. On examination, peripheral pulses were not palpable, carotid bruit was present with optic atrophy in left eye and Roth spots in right eye. She was diagnosed to have Takayasu Arteritis and started on prednisolone and antitubercular therapy (ATT).***

Keywords: Optic atrophy, Roth spots, Tuberculosis, Carotid bruit, Pulselessness

1. Introduction

Inflammation of vessels occurs in Takayasu Arteritis that leads to thickening of vessel wall further leading to fibrosis, stenosis and thrombus formation. Manifestations range usually from asymptomatic disease that can be found as impalpable pulses to neurological impairment [2]. Disease occurs in two stages: first is pre - pulseless phase characterised by non – specific inflammatory changes, followed by chronic phase that can lead to vascular insufficiency [2]. We here present a case of a female adolescent with history of acute onset of vision loss in left eye, finally diagnosed to have Takayasu Arteritis.

2. Case Report

A 15 year, female adolescent presented to ophthalmology department with acute loss of vision in left eye over 20 days, 3 months back. Loss of vision was acute in onset, painless and complete loss of vision occurred in a span of 20 days. Fundus examination revealed optic atrophy in left eye and evidence of vasculitis and Roth spots in right eye. Patient was referred to Paediatric department for evaluation for any systemic illness. There was no history of headache, watering from eye, photophobia or diplopia. There was no history of fever, night sweats, malaise, weight loss, arthralgia or myalgia. On examination peripheral pulses including radial, brachial, dorsalis pedis and popliteal were absent and femoral pulse was feeble. Carotid bruit was present on right side and blood pressure was not recordable. Investigations revealed normal hemogram, normal complement C3, C4 and positive antinuclear antibody (immunofluorescence with 1: 320 titre with homogenous pattern). Mantoux test was reactive (15 mm at 72 hrs). Erythrocyte sedimentation rate was 20. Viral markers were negative (Human immunodeficiency virus, hepatitis B surface antigen, hepatitis C virus). Computed tomography (CT) angiography showed narrowing of bilateral common carotid artery (Fig.1).

The diagnosis of Takayasu Arteritis was concluded on the basis of European League Against Rheumatism (EULAR) / Paediatric Rheumatology European Society (PRES) classification criteria 2006 [3]. There was no evidence of disease activity and patient was started on oral prednisolone. Anti - tubercular treatment was initiated in view of immunocompromised state. isoniazid, rifampicin and pyrazinamide were started and since there was optic atrophy, levofloxacin was added instead of ethambutol. Presently child is on regular follow - up in Paediatric Rheumatology clinic at our hospital.

3. Discussion

Data on Incidence and Prevalence of Takayasu Arteritis in Indian population is insufficient. With differing regions, sex ratio differs. Female to male ratio in India is 1.7: 1 [4]. The clinical spectrum of disease vary in paediatric and adult population. Although the involvement of small artery has been often described [5], documentation of acute loss of vision as first symptom is not common [6].

Association of *Mycobacterium tuberculosis* with Takayasu Arteritis is debatable. Cases are reported having active tuberculosis with Takayasu arteritis [7]. Immune response to mycobacterium tuberculosis antigens has been implicated to have a role in immunopathogenesis of the disease.

4. Conclusion

Diagnosis is not difficult if approached with clinical suspicion. Conventional Angiography continues to be the gold standard investigation. The main objective of treatment is to preserve vital organs by preventing irreversible damage

to vessels and relieving ischemia. Corticosteroids are the main stay of treatment. Most patients need additional immune - suppressants like methotrexate, azathioprine, and mycophenolate mofetil. Monitoring should be done for assessing the disease activity and adverse effects of drugs.

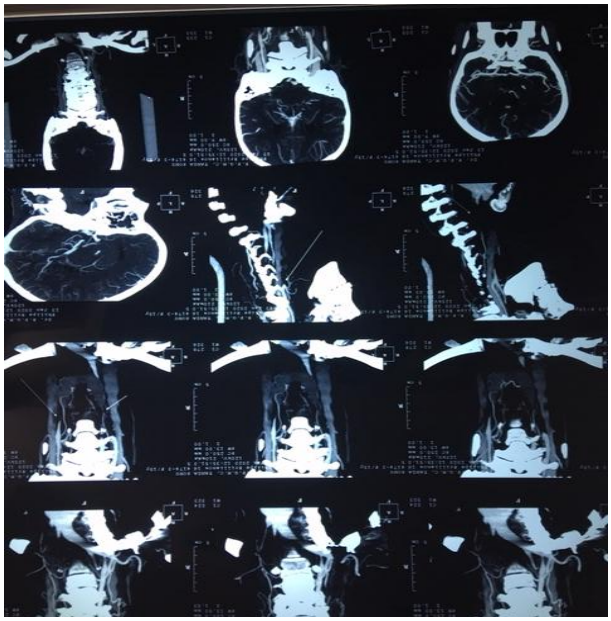

Figure 1: CT ANGIOGRAPHY - diffuse circumferential wall thickening with marked luminal narrowing in bilateral common carotid artery and left subclavian artery.

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