A CASE OF TAKAYASU ARTERITIS IN ELDERLY MALE PATIENT

Dr. Priscilla C. Lalhmachhuani¹, Dr. Stephen Lungkuliangpou Daimei², Dr. Richard Lalrinmawia Ralte³, Dr. Nang Neeta Manpang⁴, Dr. Mohammed Jaleel P⁵

¹²³⁴⁵ PGT Department of Medicine, RIMS Imphal, India.

Abstract

Takayasu arteritis is an inflammatory and stenotic disease of medium and large sized arteries characterized by strong predilection for the aortic arch and its branches. It is an uncommon disease with an estimated annual incidence rate of 1.2-2.6 cases per million. It is most prevalent in adolescent girls and young women. Here we present a case of 57 year old male, diagnosed to have takayasu arteritis involving the right subclavian artery.

Keywords:
takayasu arteritis, inflammatory, stenosis, aortic arch, right subclavian artery.

Introduction

Takayasu arteritis is an inflammatory and stenotic disease of medium and large sized arteries also known as “pulseless disease”, “Occlusive thromboaortopathy”, “Martorell syndrome”, or “Non-specific aortoarteritis”. It is a chronic inflammatory disease of unknown cause, which predominantly affects the aorta and main branches. There is granulomatous vasculitis of medium and large arteries. Stenotic lesions are more common; however, mixed lesions and dilatation leading to aneurysm formation may also be seen. Most of the patients present with decreased/absent pulses and blood pressure differences. Here we report a case where the initial presentation was due to involvement of the right subclavian artery. It is an uncommon disease with an estimated annual incidence rate of 1.2-2.6 cases per million. It is most prevalent in adolescent girls and young women. Hence the presentation of this disease in male at the age of 57 years old is an unusual presentation.

Case report

A 57 years old male was admitted for evaluation due to complain of low-grade intermittent fever, generalized malaise, night sweats, decreased appetite for 1 year. He was a known hypothyroid patient since 5 years back and is currently on tablet thyroxine 75 microgram per day. The patient has no known history of hypertension, diabetes mellitus and no history of smoking and alcohol consumption. The physical examination shows non-palpable right radial, ulnar and brachial artery pulses. All other peripheral pulses were palpable and there was no radio femoral delay. The blood pressure in the right arm was 80/40 mmHg, and on the left arm was 124/80 mmHg. On auscultation bruit was heard over the right subclavian artery, but it was absent in the right carotid artery. Rest of the examination was normal. Complete blood count: Hb-13 g/dl, TLC- 7200/mm³, DLC- N70 L22 M05 E03, Platlets- 3.8 lakhs/mm³, ESR- 78 mm/1hr. Anti TPO antibody was positive, CRP-5.1 mg/dl. Liver function test, kidney function test and random blood sugar were within normal limit. Urine routine examination was normal, urine and blood culture and sensitivity was sterile. Typhidot (IgG and IgM), Malaria OMT, Scrub typhus antibody, Dengue panel, mantoux test, ANA, and Rh factor were all negative. And the patient was subjected to ultrasound Doppler of the right upper limb.
Figure 1: Ultrasound Doppler of the right subclavian artery showing peak systolic (PS)=72.9 cm/s, end diastolic (ED)=6.8 cm/s, SD=10.69, RI=0.91. The features are suggestive of right subclavian artery stenosis, which is suggestive of “takayasu arteritis”.

Figure 2: Ultrasound Doppler of the right axillary artery shows biphasic waves pattern and low peak systole suggestive of post stenosis.

Figure 3: Ultrasound Doppler of the right brachial artery shows low peak systole with biphasic pattern suggestive of post stenosis.
The right subclavian, axillary, cephalic, basilic, radial and ulnar veins were all normal. After clinical, laboratory and sonographic correlation, the diagnosis of takayasu arteritis involving the right subclavian artery was made according to “The American College of Rheumatology criteria for takayasu arteritis” and oral prednisone and antiplatelets was started. On follow-up there was symptomatic improvement and in sonography there was decrease in the wall thickness of the involved vessels.

**Discussion**

Takayasu’s disease is seen in a wide geographic area, mainly in Asia and Africa. It is an inflammatory and stenotic disease of medium and large sized arteries characterized by strong predilection for the aortic arch and its branches disease causing panarteritis. The American Rheumatological Society considers three of the following six criteria necessary for a definite diagnosis of Takayasu’s disease:

1. Onset before 40 years
2. Claudication of the extremities
3. Decrease in the brachial pulse in one or both arms
4. Difference of 10 mm Hg or more in blood pressure measured in both arms
5. Audible bruit on auscultation of the aorta or subclavian artery
6. Narrowing at the aorta or its primary branches on arteriogram

The current patient met three of the six criteria. Our patient was a 57 years old male. Though takayasu arteritis is predominantly a disease of young adults in the second and third decades of life, but it is not uncommon in childhood and in adults older than 40 years. The youngest patient described was 6 months old and the oldest one was 75 years. In adults approximately 80% of patients were women although the female-to-male ratio varied from 9:1 in reports from Japan, 6.9:1 in Mexico and 1.2:1 in Israel. However, in India, a greater percentage of male patients have been observed with F:M ratio varying from 1.58:1 to 3:1 in various studies.
Clinical manifestations of takayasu arteritis are nonspecific, some present systemic symptoms of fever, general malaise, night sweats, loss of appetite, weight loss, headaches, dizziness, arthralgia, skin rashes, etc. Clinical manifestations are varied and related to the location of arterial lesions. Evidence of vessel inflammation such as tenderness along arteries, bruits, and aneurysm may point to the diagnosis. The late chronic phase is the result of arterial stenosis and/or occlusion and ischemia of organs.

Suspected takayasu arteritis mandates vascular imaging. While the intraarterial angiography still remains the standard for diagnosis and evaluation of takayasu arteritis, it has been largely replaced by computed tomography angiography or magnetic resonance angiography (MRA). However ultrasound with CDFI (color doppler flow imaging) and angiography correlated quite well in terms of detecting and determining the severity of disease except for right brachiocephalic artery. Wall thickening can be picked up even in angiographically normal artery, especially in the common carotid arteries and can confirm the diagnosis of takayasu arteritis.

Treatment of takayasu arteritis is based on the use of immunosuppressant such as prednisone and/or methotrexate to decrease or eliminate inflammatory activity. Anti-inflammatory therapy can lead to a dramatic improvement. The 5-year survival rate in adults is as high as 94%. In the presence of symptomatic stenotic or occlusive lesions, endovascular revascularization procedures like bypass grafts, patch angioplasty, endarterectomy, percutaneous transluminal angioplasty, or stent placement should be taken into consideration. The status of such treatment is controversial in the literature. Despite providing short-term benefit, endovascular revascularization procedures are associated with a high failure rate in patients with Takayasu’s arteritis. Published results suggest that these procedures should be undertaken with great care and be reserved for specific indications. Both, surgical and endovascular, treatments become risky and achieve poorer outcomes, if they are undertaken during a period of inflammatory activity.

References
