

Takayasu Arteritis & Rheumatic Heart Disease: A Rare Combination

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Abstract: Takayasu Arteritis is an autoimmune, idiopathic, large vessel vasculitis that usually affects young adults and rheumatic heart disease (CRHD) is a common valvular heart disease in India, combination of these two conditions is rarely seen in clinical practice. Here we present a 24 year female patient with CRHD who underwent balloon mitral valvotomy (BMV) in 2006 and presented to our outpatient department with non specific constitutional symptoms. On physical examination a difference of more than 50mmHg in blood pressure in both arms, difference in pulse volume, carotid and renal bruit present. Subsequent evaluation and angiogram was done. Based on the above clinical and angiographic findings the diagnosis of Takayasu Arteritis was done.

Keywords: Takayasu Arteritis, autoimmune disease, blood pressure.

INTRODUCTION:

Takayasu Arteritis is an autoimmune, idiopathic, large vessel vasculitis that usually affects young adults. Incidence is 1-2 cases per million populations. Rheumatic heart disease is a common valvular heart disease in India, combination of these two conditions is rarely seen in clinical practice. We report the first case of Takayasu's Arteritis in combination with rheumatic heart disease at Mamata General Hospital.

CASE REPORT:

A 24 year old female with rheumatic heart disease presented to our outpatient department with complaints of low grade fever, arthralgia and easy fatigability for the past five months. The patient underwent PBMV in 2006 for severe mitral stenosis and developed mitral regurgitation as a complication. She was asymptomatic since then.

On physical examination the patient was conscious, oriented not in distress. Blood pressure in the right arm was 180/100mmHg, left arm was 120/80 mmHg, lower limbs right 120/80 mmHg, left 110/80 mmHg. Pulse was 76/min, regular, high volume, hyperkinetic in right radial artery, the left radial, carotid, subclavian pulses were feeble, all lower limb pulses were felt equally. Cardiovascular system examination was normal except for a pansystolic murmur of grade 3/6 at the mitral area, radiating to axilla and back. Auscultation of the carotids revealed a left carotid bruit, there was a mid abdominal aortic bruit, bilateral renal bruit audible. Her investigation reports were as follows: ECG showed normal sinus

rhythm, LVH; FUNDUS EXAMINATION was normal; ANA negative; 2D ECHO showed anterior mitral leaflet thickened, posterior mitral leaflet fixed, moderate MR, dilated left atrium, LVH, normal LV function; CORONARY ANGIOGRAM : Normal coronaries; PERIPHERAL ANGIOGRAM; Left subclavian artery total occlusion, left common carotid artery proximal stenosis (figure 1), stenosis of both the renal arteries (figure 2); other routine investigations of urine, stool, CBC, ESR, creatinine, urea and liver function tests were normal. The combination of differences in blood pressure between the patients arms, angiographic findings, young age female, carotid bruit, renal bruit led to the diagnosis of takayasu arteritis.



Fig-1: Peripheral angiogram showing dilated ascending aorta, innominate & rt.subclavian arteries. Left common carotid artery osteal stenosis, left subclavian artery total occlusion.



Fig-2: Stenosis of abdominal aorta at the level of renal artery, right renal artery diffusely diseased, left renal artery osteal & proximal stenosis.

DISCUSSION:

Takayasu's arteritis is a worldwide disease, more common in Asia and Africa. The age of onset is usually between 10 - 40 years [1, 2]. The majority of cases occur in women. Park et al studied the clinical and angiographic features of 129 patients in Korea and found a female to male distribution of 6.6:1. In India, over a period of 18 years (1972-1990), 83 cases of Takayasu's arteritis were reported with a female to male ratio of 1.6:1 [3]. Sixteen per cent of the patients presented with fever and arthralgia [3].

Takayasu arteritis primarily affects the aorta and its primary branches [4]. The inflammation may be localized to a portion of the thoracic or abdominal aorta and branches, or may involve the entire vessel. Although there is considerable variability in disease expression due perhaps to geographic differences. The initial vascular lesions frequently occur in the left middle or proximal subclavian artery. As the disease progresses, the left common carotid, vertebral, brachiocephalic, right middle or proximal subclavian artery, right carotid, and vertebral arteries, and aorta are also affected. The abdominal aorta and pulmonary arteries are involved in approximately 50 percent of patients. In 2009, Agarwal et al reported a case of rheumatic mitral stenosis with takayasu disease [5]. Nikolic et al reported a case of Takayasu's arteritis associated with aortic regurgitation and mitral stenosis [6].

CONCLUSION

In patients with valvular heart diseases who present with pulse discrepancies should also be evaluated for autoimmune disorders.

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