



ASSOCIATION OF TAKAYASU'S ARTERITIS AND TUBERCULOSIS COINCIDENCE (OR) CO-OCCURANCE.

Rheumatology

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ABSTRACT

Takayasu's arteritis (TA) is an autoimmune disease of medium and large sized arteries. Cases where TA and Tuberculosis co-existed has been reported around the globe. It has been concluded that both diseases are associated with same HLA alleles. A 16yr old female who is a known case of dilated cardiomyopathy presented with fever, dry cough, breathlessness and pain in the both lower limbs since 20 days. On examination her pulse rate was 92 bpm with absent pulses in both lower limbs, Blood pressure was 180/110mmHg with no carotid and renal bruit. Her BP could not be controlled with 3 different classes of anti-hypertensives. We then evaluated her in line of secondary hypertension. Blood investigations showed ESR to be elevated to 110mm/1sthr with lymphocytic predominance on peripheral smear and chest x-ray revealed right upper lobe consolidation. With all the aforementioned findings we strongly suspected that the patient might have Tuberculosis or TA. So we advised CT aortogram and CT chest which confirmed our suspicion. The patient was finally diagnosed with Type 3 TA and Pulmonary Tuberculosis. "TA is a systemic vasculopathy that can progress to cause vital organ ischemia". It is one of the 1st vasculitides to be associated with specific infectious agent. Mycobacterium and human heat shock protein might play a key role. So in any female presenting with PULSELESS arterial disease, one should rule out the possibility of TUBERCULOUS association.

KEYWORDS

BACKGROUND

Takayasu arteritis (TA), also known as "pulseless disease", is a type of primary systemic vasculitis affecting medium and large arteries, including the aorta and its branches, as well as the pulmonary and coronary arteries. It is a chronic inflammatory disease of unknown origin characterized by granulomatous vasculitis, leading to thickening, dilatation, stenosis, and/or aneurysm formation of the involved vessels. Furthermore, the signs and symptoms exist due to systemic inflammation or ischemia of an organ or limb, and encompass angiodynia, claudication, peripheral pulselessness, murmurs, ischemic stroke, myocardial infarction, severe systemic arterial hypertension, etc. TA tends to affect females more than males, with 80% of patients being female. Furthermore, TA is associated with significant morbidity and can be life threatening. Around 20% of patients experience monophasic and self-limited disease, whereas others can have a progressive or relapsing/remitting disease. Moreover, the overall 10-year survival rate for this disease is approximately 90% which can be reduced in the presence of major complications.

CASE REPORT

A female aged 16 yr came with complaints of fever, easy fatigue, pain lower limbs for 20 days, cough for 15 days, breathlessness for 10 days.

Fever was insidious, continuous, high grade associated with chills, pain in lower limbs which was aggravated on walking, short cough is sudden, dry cough associated with SOB of grade 2

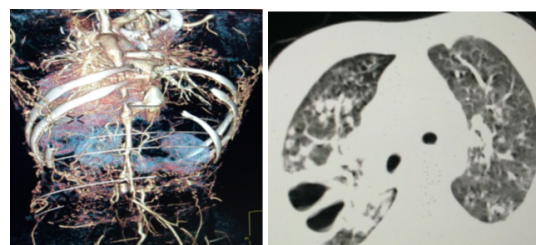
On examination her PR was 92bpm, high volume, with absent pulsations in both lower limbs. BP -180/100mmHg. Crepitations in rt supra clavicular & rt infra clavicular area. We evaluate initially as rt upper zone pneumonia and secondary hypertension with pulseless arterial disease. After routine lab investigations we diagnosed as pulmonary tuberculosis & hypertension secondary to stenosis of aorta. Later we confirmed it by CT AORTOGRAM as TAKAYASU ARTERITIS with critical stenosis at abdominal aorta.

Thyroid profile	T3-1.76ng/ml T4-9.51, TSH-1.74uIU/m
2D ECHO	Global hypokinesia of LV. Severe systolic dysfunction, EF - 32%.
Se. Na ²⁺ -138mmol/l, se. K ⁺ -4mmol/l, se. Ca ²⁺ -8.4mg%	CRP -positive 9m/dl. ESR-64mm/hr.
RFT	Se. creatinine -1.2mg/dl. B. Urea -32mg/dl
TLC. Hb%	N-60%, L-34%, M -03%, E-03% 11gm%

ANCA	Negative
ECG	Sinus tachycardia, LBBB, LV strain pattern.
Sputum for AFB	Acid fast bacilli present with 1+

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INVESTIGATIONS



DISCUSSION

TAKAYASU ARTERITIS is rare, systemic, granulomatous inflammation of large sized arteries leads to massive intimal fibrosis & narrowing of arteries with MC in young females of 14-30yr (8:1).

Though the exact pathogens of the arteries is still unknown, tuberculosis, streptococcal infections, RA, other collagen vascular diseases have been debated as its etiology in past.

TA & TB both diseases present similar chronic inflammatory lesions. The genetic relationship between these two diseases has not been explored before, however both have been associated with HLA alleles.

TA was characterized by HLA-B39, B-44, pulmonary tuberculosis by HLA 35 & 39. This preliminary study suggests comparison distribution of HLA-B alleles in patients with TA & TB.

TA as cause of CHF in 76%, Renovascular hypertension in 28-75%, aortic regurgitation in 20-24%, dilated cardiomyopathy in 5-6% cases.

CONCLUSION

High index suspicion and vigilance should be kept in mind when a

young female presented with secondary hypertension.

Larger studies are required to confirm the etiology & clinical spectrum of disease.

Checking PULSE RATE & BLOOD PRESSURE very keenly gives a lot of information regarding disease status.vital data is mandatory even when you are practicing 1000 patients per day.

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