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Case Report
Takayasu arteritis

Takayasu Disease – Dominant Ectatic Epicardial Coronary Arterial Involvement

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Takayasu arteritis (TA), also known as pulseless disease, occlusive thromboaortopathy, and Martorell syndrome is a well known yet rare form of large vessel vasculitis, where an autoimmune inflammation targets the aorta and its branches,1 typically in young women of reproductive age.2 Coronary arterial involvement in TA is rare (to the extent of 11 %) manifesting as coronary ostial stenosis or occlusion and even more uncommonly as coronary arterial aneurysms.3

Keywords: Takayasu arteritis, Coronary artery ectasia, Cardiogenic shock

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Case description

Herein we describe, at autopsy, an extremely unusual manifestation of TA in a 25-year-old male who presented with cardiogenic shock to the emergency medical services of King Edward Memorial Hospital in November 2016. The ECG revealed an acute inferior wall and remote anterior wall myocardial infarction. Despite attempts at resuscitation, the patient soon succumbed to refractory ventricular fibrillation. All the three coronary arteries showed ectasia, maximally seen in the right coronary artery due to active arteritis with luminal thrombi. There was also involvement of the proximal thoracic and infrarenal abdominal aortic segments. Coronary artery ectasia is defined as diffuse dilatation of more than a third of the length of the coronary artery with a diameter 1.5 times greater than the adjacent normal artery. Atherosclerosis is the principal etiologic cause for more than 50% cases in adults. Such ectasia of all three major epicardial coronary arteries has not yet been reported with TA.

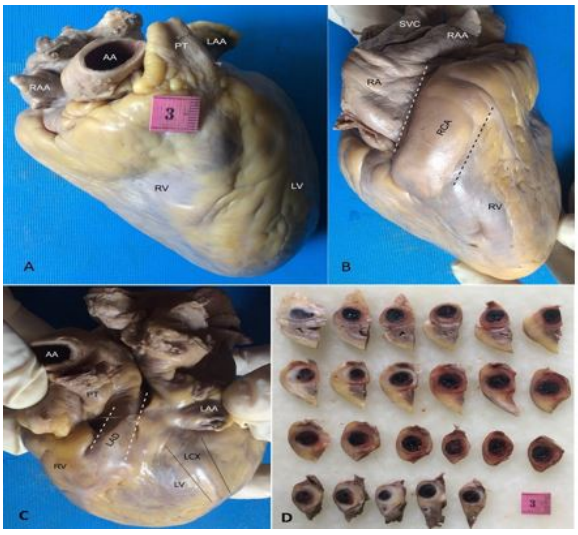

Fig-1: **A.** Mild cardiomegaly (heart weight 290 gm); **B.** Heart as seen from the right border shows marked dilatation of the right coronary artery RCA; **C.** Heart as seen from the basal aspect shows dilated left anterior descending LAD and left circumflex LCA arteries; **D.** Serial transverse sections of the RCA showing ectasia and presence of thrombus admixed with blood clot (AA – Ascending aorta; LAA – Left atrial appendage; LV – Left ventricle; PT – Pulmonary trunk; RA – Right atrium; RAA – Right atrial appendage; RV – Right ventricle; SVC – Superior vena cava).

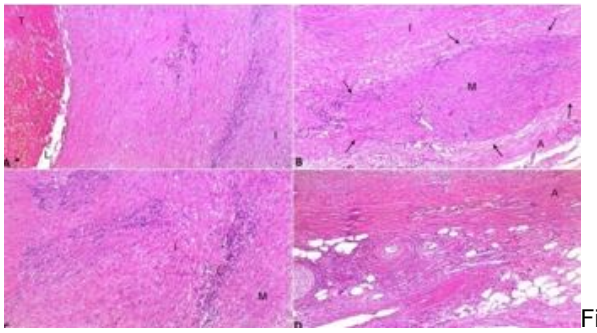

Fig-2: Sections from the right coronary artery - **A.** Lumen L filled with fresh thrombus T. Note extreme intimal I thickening (H&E x 250); **B.** There is marked attenuation (arrows) of the media due to destruction, inflammation and focal fibrosis (H&E x 250); **C.** Presence of inflammation in the intima I and media M – active arteritis (H&E x 400); **D.** Prominent adventitial A fibrosis with endarteritis (H&E x 250)

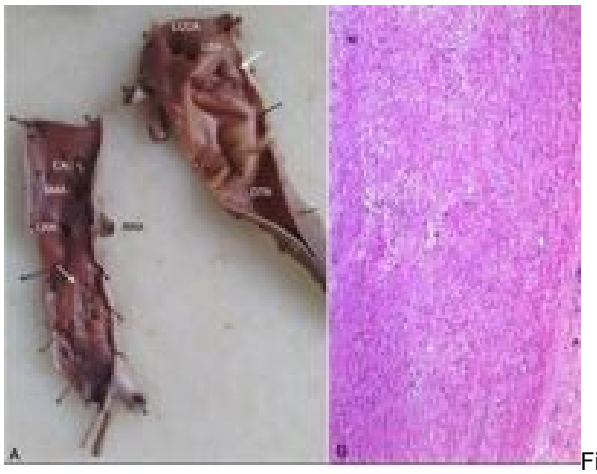

Fig-3: **A.** Thickening of the wall and corrugated intima (arrows) is seen in the proximal thoracic and infrarenal abdominal segments; **B.** The media shows presence of vascularization and sprinkling of inflammation – healing arotitis (H&E x 250)

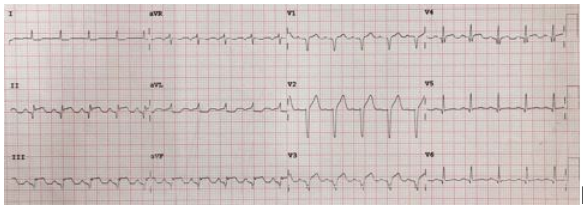

Fig-4: Electrocardiogram of patient performed in the Emergency department suggesting acute inferior wall and remote anterior wall myocardial infarction.

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