The disease is named after the Japanese ophthalmologist Mikito Takayasu, who described the first case in 1908. The highest incidence is found in Japan of 30 cases per million per year. It is mainly a disease of young females; however, male to female ratio varies around the world. The disease has a predilection for the aorta, aortic branches, pulmonary and coronary arteries. Patients from Japan and South America are more likely to have thoracic aorta involvement while involvement of the abdominal aorta is more common in other Asian and Middle Eastern patients.

The etiology of the disease is still not well established; however, it is thought to be a T-cell mediated autoimmune process. Inflammation starts from the tunica adventitia proceeding to the tunica intima. The process eventually leads to narrowing of the lumen and impairment of blood flow.

Symptoms vary upon the location of the stenosed arteries. Symptoms include, but are not limited to, neck pain, arm numbness, chest pain, dizziness, vision impairment and abdominal pain. Systemic symptoms include low-grade fever and easy fatigability.

Diagnosis is usually based on radiological findings of CT angiography or MR angiography (MRA). Other valuable imaging modalities include angiography, fluorodeoxyglucose (FDG) scan and carotid sonography.

The aim of this study is to present an overview of the role of different imaging modalities in the diagnosis and follow-up of Takayasu arteritis.

THE CASE

A previously healthy 31-year-old Indian housemaid presented with episodes of atypical chest pain and headache. The BP was constantly elevated measuring ≥180/110 mmHg despite compliance with multiple antihypertensive medications. The patient had a weak left radial and bilateral femoral pulse with radio-femoral delay. Electrocardiogram revealed normal sinus rhythm with changes indicating left ventricular hypertrophy. Laboratory results were unremarkable, apart from elevated erythrocyte sedimentation rate (ESR) of 40 mm/h and C-reactive protein (CRP) of 8 mg/l. A chest X-ray revealed a saccular non-calcified aneurysm of the thoracic descending aorta, see figure 1.

CT Aortogram was obtained using 64 slice CT scanner (GE optima CT660). A 70 ml of intravenous nonionic contrast (Optiray 350, ioversol 74 %) was injected automatically at a rate of 5 ml/sec. Multi-planner reconstruction was generated along with 3D reconstruction using volume rendering and maximum intensity projection techniques. Images demonstrated stenosis at the origin of the left subclavian artery followed by multiple areas of saccular dilatation (maximum caliber of 18 mm) and stenosis ending by a thread-like stenosis up to the proximal axillary artery. A tortuous fusiform aneurysmal dilatation of the descending aorta (maximum caliber of 5.8 cm) was seen extending downwards into the abdominal aorta, proximal to...