Massive aortic aneurysm presenting as chest wall swelling

Cardiovascular syphilis is now a very rare diagnosis with only a few dozen cases reported worldwide following the advent of antibiotics. Involvement of the ascending aorta is most frequently followed by aortic annular dilation and coronary ostial stenosis. Very rarely, the gradually dilating proximal aorta becomes very large without causing associated cardiac symptoms. This mechanical effect can erode through the rib cage and manifest as an anterior chest wall “mass”.

An active, otherwise healthy 65 year old labourer presented for evaluation of a swelling in the right upper chest. The chest wall mass was 5 x 5 cm in size, hemispherical, pulsatile, immobile, and had gradually enlarged over the previous six months (below left). It was tender to gentle palpation. The cardiac examination and ECG were normal. Chest x ray revealed mediastinal widening. Tertiary syphilis was suspected, based on a history of sexual promiscuity 25 years earlier, and confirmed with positive VDRL at 1:4, TPA-FTA at 1:400. Tests for HIV and tuberculosis were negative. The patient’s left ventricular function was normal by transthoracic echocardiography. The aortic valve was normally functioning without regurgitation. Cardiac catheterisation with an ascending aortogram revealed a massive aeurysmal dilation of the ascending aorta and proximal arch. The clearance of dye was sluggish and prolonged (below right). The descending aorta and coronary artery anatomy was normal. Benzathine penicillin was given for three weeks. Surgery was strongly recommended but the patient declined. Instead treatment with atenolol was started and the patient tolerated 100 mg daily, with a resting heart rate of 60 beats per minute.