

Myocarditis and painless thyroiditis: case report

A 55-year-old woman developed myocarditis and painless thyroiditis following administration of AZD-1222 COVID-19 vaccine. The woman presented with palpitation 14 days after administration of the second dose of AZD-1222 COVID-19 vaccine [AstraZeneca COVID-19 vaccination; *route and dosage not stated*]. No history of dyspnoea, chest pain, fever, weight loss or neck pain was reported. She had a history of hypercholesterolaemia and essential hypertension. No history of thyroid disease was reported. On admission, she had tachycardia. Twelve-lead electrocardiography (ECG) showed sinus tachycardia with no evidence of ST-T segment change. Plain chest radiography revealed a normal cardiothoracic ratio and pulmonary vasculature. Her high-sensitivity cardiac troponin I was 2007.5 ng/L. Thyroid function tests revealed increased serum free triiodothyronine and normal serum free thyroxine with suppressed serum thyroid stimulating hormone (TSH). Her thyroglobulin, thyroid peroxidase and TSH receptor antibodies were negative. High-sensitivity C-reactive protein and erythrocyte sedimentation rate were normal. She tested negative for COVID-19. Her thyroid ultrasound showed normal thyroid gland size and homogeneous parenchyma without elevated Doppler flow. Iodine-131 uptake study revealed very low thyroid uptake, which was consistent with thyroiditis. Transthoracic echocardiography (TTE) revealed normal biventricular size and function. Cardiac MRI showed basal inferoseptal segment hypokinesia on steady state free precession (SSFP) cine images with signs of myocardial oedema on T2 mapping, myocardial hyperaemia on early gadolinium enhancement images, myocardial necrosis on delayed gadolinium enhancement images, native T1 mapping and postcontrast T1. Based on findings, a diagnosis of myocarditis and painless thyroiditis due to of AZD-1222 COVID-19 vaccine was made.

Hence, the woman was treated with propranolol. After 3 weeks of treatment and exercise restriction, her blood tests and symptoms became normal.