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CARDIOVASCULAR FLASHLIGHT

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Non-infectious large vessel vasculitis of the aorta: diagnosis by echocardiography and cardiac positron emission tomography–computed tomography

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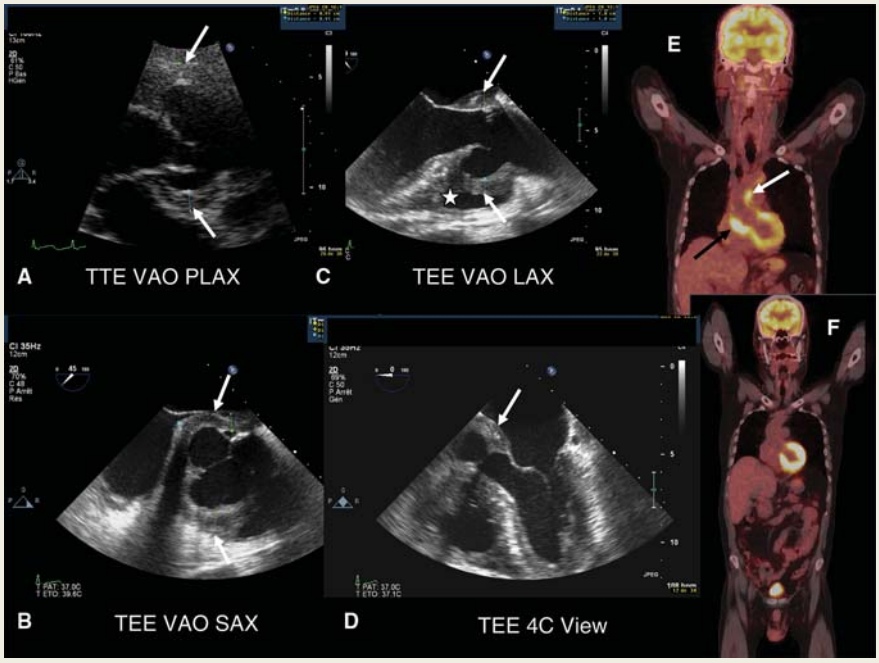
A 59-year-old male was referred to the General Internal Medicine Clinic for investigation of slowly deteriorating general condition of unknown origin. He had a 4-month history of general fatigue, weight loss, chills, and night sweats. Large screening for a tumour aetiology was negative and laboratory investigations revealed an inflammatory syndrome with an erythrocyte sedimentation rate of 86 mm/h and C-reactive protein of 143 mg/L. Blood cultures and extensive viral and bacterial serology investigations, including Syphilis, were negative. Transthoracic and transoesophageal echocardiography showed a dilated aortic root with marked thickening of aortic wall appearing as a cuff-like circumferential mass (10 mm, white arrows, *Panels A–D*).



There was no significant valvular dysfunction and no image suspicious for valvular vegetation. The mass was infiltrating the interventricular and interatrial septum (white asterisk, *Panel C*). Differential diagnosis included cardiac tumour, abscess or phlegmon, and inflammatory disease. A cardiac positron emission tomography–computed tomography (PET–CT) was performed and disclosed enhanced fluor-18 fluorodeoxyglucose (FDG) uptake in the wall of the aortic root, ascending aorta (*Panel E*, black and white arrows, respectively), and, less pronounced, in the descending and abdominal aorta. Non-infectious large vessel vasculitis (probable giant-cell arteritis) was suspected and immunosuppressive treatment with high doses of steroids was initiated. At early follow-up, there was marked improvement of symptoms with normalization of inflammatory parameters. A control cardiac PET-CT 4 months later showed nearly complete regression of the FDG uptake in the aortic wall (*Panel F*). This case emphasizes the complementary role of echocardiography and PET-CT in the diagnosis of large vessel vasculitis.