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IMAGE

Marked Biatrial Calcification in Long-Term Haemodialysis

Vinesh Appadurai, MBBS [a*], Michael T. Burke, BSc, MBBS [b], Alex Frampton, BAppSc [c], Mugur Nicolae, MD [d]

[a]Department of Cardiology, Princess Alexandra Hospital and the University of Queensland, Brisbane, Qld, Australia
[b]Department of Nephrology, Mater Public Hospital and the University of Queensland, Brisbane, Qld, Australia
[c]Department of Cardiology, Mater Public Hospital and the University of Queensland, Australia, Brisbane, Qld, Australia
[d]Department of Cardiology, Mater Public Hospital; Department of Cardiology, the Prince Charles Hospital & the University of Queensland, Brisbane, Qld, Australia

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A 34-year-old female presented with increasing dyspnoea. She was a chronic in-centre haemodialysis patient having had two previous renal transplants at the ages of 2 and 18, returning to dialysis aged 23. Her history included end stage kidney disease secondary to congenital dysplasia, calciphylaxis and a subtotal parathyroidectomy. She had 16 years of cumulative dialysis and had received regular oral calcium supplementation. There was no previous rheumatic valve disease or atrial fibrillation. A transthoracic echocardiogram revealed heavily calcified atria with relative sparing of the ventricular myocardium and valves in the apical four-chamber (Figure 1A) and parasternal long axis views (Panel B) (Figure 1B). A non-contrast computed tomography (CT) chest demonstrated calcification of the crista terminalis in the right atrium on transverse view (Figure 1C) and calcification of the left atrium on sagittal and coronal views (Figure 1D and 1E). There was evidence of significant pulmonary hypertension with a right ventricular systolic pressure of 111 mmHg and elevated filling pressures (Figure 1F and 1G respectively), likely due to gross left atrial calcification with poor compliance. Interestingly, there was no significant aortic

*Corresponding author at: Department of Cardiology, Princess Alexandra Hospital, Cnr of Ipswich Road & Cornwall Street, Woolloongabba, Queensland, 4102, Australia., Email: vinesh.appadurai@health.qld.gov.au

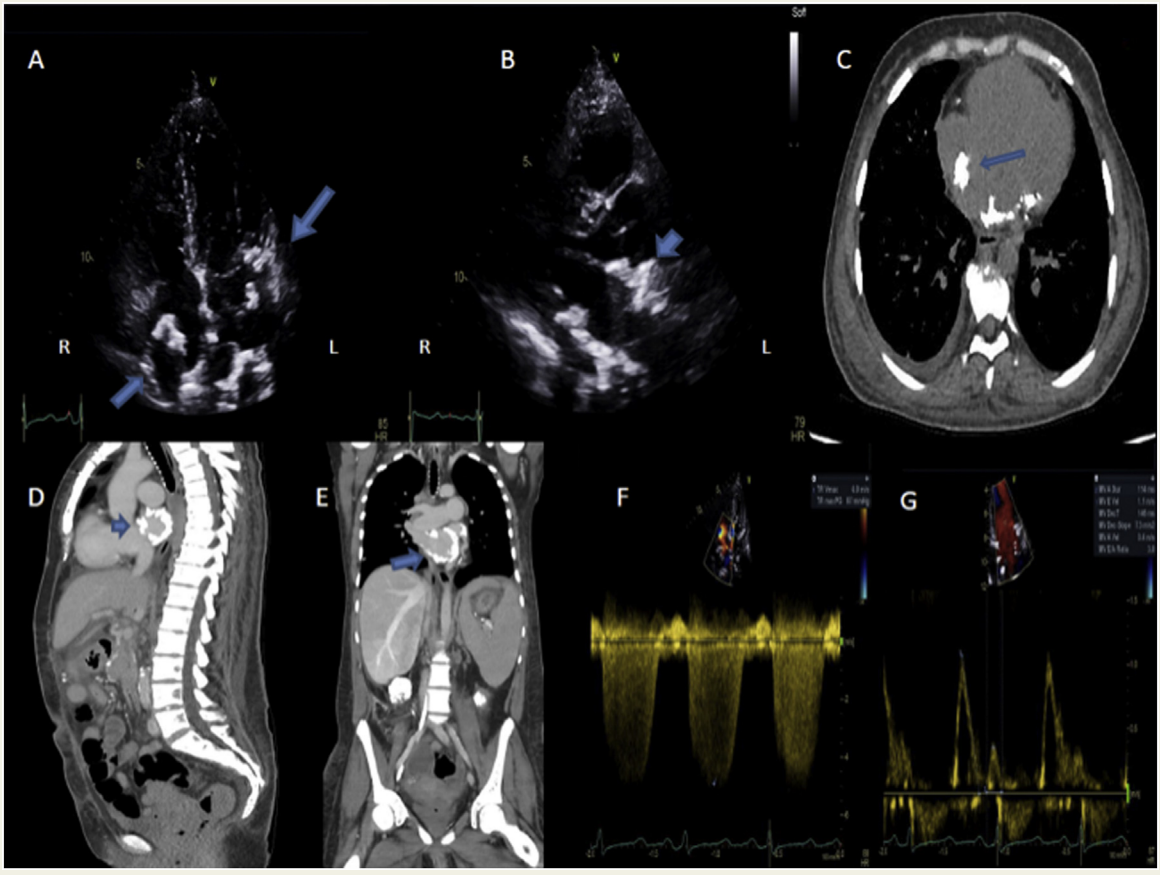

Figure 1 Apical four chamber (A) and parasternal long-axis (B) echocardiography views of biatrial and left atrial calcification respectively. Axial (C), sagittal (D) and coronal (E) computed tomography views of biatrial calcification. Tricuspid regurgitant jet velocity (F) and left ventricular in-flow velocity (G) demonstrating elevated pulmonary systolic pressures and filling pressures, respectively.

calcification. Left atrial calcification is rare and primarily occurs in long standing rheumatic mitral valve disease. Extensive bi-atrial calcification to our knowledge has never been described. The significant calcification demonstrated in this patient is unique as abnormalities of calcium metabolism associated with the chronic kidney disease-mineral bone disorder characteristically involve arteries unlike this case of bi-atrial cardiac involvement with relative sparing of the vasculature.

Relationships with Industry/ Conflict of Interests

None of the authors have any relationship with industry or financial associations within the past 2 years that might pose a conflict of interest in connection with the submitted article.