

The spectrum of echocardiographic findings in chronic renal failure

Abstract:

In a six month period at the Kenyatta National Hospital, 46 patients (30 males) with chronic renal failure (CRF) and 22 healthy subjects have had a clinical and echocardiographic study of their cardiovascular systems. The patients with CRF were further classified as stable or in end stage renal disease (ESRD), the latter group requiring dialysis. Hypertension and circulatory congestion were the commonest clinical cardiovascular findings in patients with CRF. The patients with ESRD had significantly higher blood urea nitrogen and serum creatinine than the ones with stable CRF. Echocardiographically right ventricular size, left atrial size, aortic root diameter, left ventricular internal diameters, left ventricular end diastolic and systolic volumes, stroke volume, cardiac output, left ventricular posterior wall and interventricular septal thickness, ejection time and mitral and aortic peak flow rates were significantly higher in patients with CRF than in controls. In contrast, the circumferential fibre shortening and the ejection fraction were reduced in patients with CRF. Global left ventricular dysfunction was found in 47.8% of the patients. Using doppler flow studies, valvular incompetence was detected in a number of patients, mitral regurgitation being found in 84%. 76% of the patients with CRF had varying degrees of pericardial effusion. The echocardiographic abnormalities and the pericardial effusions responded six weeks of haemodialysis in a variable manner