Increased Occurrence of Pericardial Effusion in Patients with Autosomal Dominant Polycystic Kidney Disease

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Background and objectives: Autosomal dominant polycystic kidney disease (ADPKD) is a common hereditary disease with prominent connective tissue manifestations. A frequent occurrence of asymptomatic pericardial effusion has been observed in patients with ADPKD.

Design, setting, participants, & measurements: Consecutive computed tomography scans from 60 patients with ADPKD (group 1), 100 patients without ADPKD and with serum creatinine concentration of ≥1.1 mg/dl (group 2), and 100 potential kidney donors (group 3) were retrospectively examined. Pericardial effusion was graded from 0 to 4 on the basis of the distance between the parietal and visceral pericardia at mid, mid-low, and low levels of the heart on transaxial computed tomography scan sections.

Results: Twenty-one (35%) of 60 patients in group 1 were found to have pericardial effusion, compared with 9 (9%) and 4 (4%) patients in groups 2 and 3, respectively. Ten of the 21 patients...
with pericardial effusion in group 1 but none of the patients in groups 2 and 3 had moderate to high effusion scores. The presence and severity of pericardial effusion were not associated with age, renal dysfunction, or hypertension. All pericardial effusions were asymptomatic.

Conclusions: Pericardial effusion occurs with an increased frequency in patients with ADPKD, possibly as a result of increased compliance of the parietal pericardium. Although frequently moderate to large, these effusions are generally well tolerated and clinically inconsequential.