
CORRESPONDENCE

Pericardial Effusion in Patients with End-Stage Renal Disease

To the Editor:

In patients with end-stage renal disease (ESRD), how often does pericardial effusion occur, what clinical significance does it have, and what is its relation to regular and emergency hemodialysis? To answer these questions, we reviewed the hospital records of 251 patients with ESRD who had been cared for at Lyndon B. Johnson General Hospital in Houston, Texas.

All of these patients were 18 years of age or older, and 89 of them had varying degrees of pericardial effusion. The cause of renal failure in these patients was diabetes mellitus or systemic hypertension in 128, a variety of disorders in 32, and unknown in 91. One hundred thirty-seven patients received regular hemodialysis (RHD) and 114 underwent emergency hemodialysis (EHD).

Pericardial effusion was more prevalent in the EHD group (51 vs 38), and more often severe (7 vs 1). Echocardiographic indications of cardiac tamponade were rare: they appeared in 4 patients in the EHD group and in a single patient in the RHD group.

Length of hospital stay and need for admission to the intensive care unit were comparable in the 2 groups. Twelve patients died during the study period (6 per group). Five of those 12 had pericardial effusion. Yet the effusion was severe in only 1 of those deaths, and in no instance did pericardial effusion cause death.

Of the 4 patients with severe effusion, 1 underwent pericardial window and 3 pericardiocentesis. The fluid was exudative in 3 patients and transudative in 1. Other analyses gave nonspecific findings.

Patients with pericardial effusion, regardless of the dialysis method, were more likely than patients without effusion to have left ventricular systolic dysfunction and cardiomegaly on chest radiographs. Although higher blood urea nitrogen levels were more prevalent in patients who were receiving EHD, this laboratory value did not predict the severity or even the presence of pericardial effusion.

The factors responsible for pericarditis and pericardial effusion in patients with advanced renal disease remain poorly understood. Whereas some studies show that dialysis and renal transplantation reverse the effusion, others show that those complications can develop even when dialysis is performed and regardless of the patient's level of blood urea nitrogen or serum creatinine.¹

Our growing immigrant population, many members of which enter the United States illegally, puts much of the burden of their healthcare on resource-limited community hospitals such as ours. This becomes especially relevant to the treatment of chronic, costly ailments—

ESRD among them. On the other hand, the need for better access to healthcare is apparent when one considers that early detection of renal disease can prevent or delay the progression to ESRD and its sequelae.² Early detection of pericardial effusion is of vital consequence, for this condition typically produces no symptoms or signs before causing tamponade.³

In our investigation, pericardial effusion occurred in about one third of patients with ESRD, especially in those who needed emergency hemodialysis. Echocardiographic evidence of cardiac tamponade, however, was rare; and none of the deaths in our study was related to pericardial effusion.

*Kay-Won Chang, MD,
Gabriel Marcelo Aisenberg, MD, FACP,
Department of Internal Medicine,
The University of Texas Houston
Health Science Center,
Houston, Texas*

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Evaluation of Previously Cannulated Radial Arteries

To the Editor:

I read with interest the article by Watson and colleagues¹ on the evaluation of previously cannulated radial arteries. I have a number of queries.

The paper fails to mention the time lapse between transradial artery coronary angiography and coronary artery bypass grafting (CABG). This is important, because the incidence of early radial artery (RA) occlusion after prior cannulation has been reported to be between 5% and 20%.² Apart from occlusion, there can be damage to the arterial wall, endothelial disruption, damage to the tunica media, perivascular inflammation, and reactive hyperplasia with impaired