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Acute Renal Failure: Changing Causes?

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In spite of variable definitions, the rate of acute renal failure seems to have increased due to variable contributions by different clinical settings [1].

Community-acquired renal failure appears to be rare. It is mostly due to one single cause of renal failure of either pre- or postrenal origin. The prognosis is most often favorable [2]. Hospital-acquired acute renal failure in a medical-surgical setting occurs in 2-5% of patients. More than one single insult is responsible for impaired renal function. Factors involved include, in descending frequency, septic shock, volume depletion, congestive heart failure, amino-glycoside treatment, and radio contrast exposure. Renal insufficiency is a poor prognostic indicator for survival [3]. The largest contribution to the incidence of acute renal failure occurs in intensive care units. Multiple renal insults, as well as multiorgan failure, are responsible for survival figures of 10-30%. Acute renal failure after major cardiovascular surgery contributes significantly to the frequency and severity of the problem [4].

Changing predisposing factors for acute renal failure include sepsis in AIDS patients and nephrotoxins applied by oncologists [5, 6]. Of central importance is the increasing age of the general population with a concomitant increase in comorbidity. A higher frequency of acute renal failure and slower recovery in this patient group is the rule [7].

The causes of acute renal failure have changed markedly during the last 20-30 years; an older patient population with comorbidity and side effects due to modern medical therapy and (cardiovascular) surgery are all involved in this development.

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