AKUTNA LEDVIČNA ODPOVED IN OLIGURIJA

ACUTE RENAL FAILURE AND OLIGURIA

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Definition

Acute renal failure is a clinical syndrome characterized by retention of degradation products of protein metabolism, derangement of salt and water regulation, potassium and hydrogen ion retention. The clinical syndrome is in approximately 70% of cases accompanied with oliguria (<500 ml of urin/24 h) or anuria (<100 ml of urin/24 h). Three main types of the syndrome are distinguished: prerenal type (>70% of azotemia), postrenal type (approximately 5% of azotemia), and intrinsic type (see the algorithm).

Treatment

Adequate replacement of lost volume (vomiting, diarrhea, sweating, fistula, loss on burnt surface, loss in "third spaces"). Administration of crystalloid solutions appropriately replaces the loss of volume. In exceptional situations, due to the loss of blood, blood replacement will be needed in addition to crystalloid solutions.

The intrinsic type of acute renal failure is most often the consequence of epithelial lesion in proximal tubule as a complication of septic and other events. Adequate control of the underlying disease is a necessary prerequisite for renal function recovery.

In the intrinsic acute renal failure in glomerulopathies, systemic diseases, immunosuppression can significantly improve renal function. In some exceptional situations with intrinsic acute renal failure (TTP, Goodpasture's syndrome, Wegener's granulomatosis) plasmapheresis can significantly improve renal function.

Postrenal azotemia is as a rule the consequence of obstruction below the kidneys with resultant azotemia. A proper correction of obstruction (percutaneous pyelostomy or cystostomy if the obstruction is below the bladder) results in excretory function recovery .

The correction of hyperkalemia in the clinical syndrome of acute renal failure is an essential prerequisite for possible surgical intervention, and it is also a necessity in every type of renal failure. Prompt correction of hyperkalemia and deranged electric gradient to myofibril is possible with the bolus of calcium gluconate. Administration of insulin, with simultaneous administration of glucose solution, stimulates sodium potassium ATP-ase and allows more rapid entry of potassium into the cell. The correction of metabolic acidosis with bicarbonate solution also allows the entry of potassium into cells. Different procedures of extracorporeal circulation (hemodialysis, hemofiltration) allow potassium elimination from the body.

Figure 1. *Algorithm for oliguria.*