

6 hours. The most common cause of hypertension in AKI is overexpansion of extracellular fluid and plasma volume together with activation of the renin–angiotensin system. Hypertension is controlled with antihypertensive drugs. Other measures that may be used include limiting fluids and salt.

Anemia is frequently associated with AKI, but transfusion is not recommended unless the hemoglobin drops below 6 g/dl. Transfusions, if used, consist of fresh, packed RBCs given slowly to reduce the likelihood of increasing blood volume, hypertension, and hyperkalemia.

Seizures may occur when renal failure progresses to uremia and are also related to hypertension, hyponatremia, and hypocalcemia. Treatment is directed to the specific cause when known. More obscure causes are managed with antiepileptic drugs.

Cardiac failure with pulmonary edema is almost always associated with hypervolemia. Treatment is directed toward reduction of fluid volume, with water and sodium restriction and administration of diuretics.

Prognosis

The prognosis of AKI depends largely on the nature and severity of the causative factor or precipitating event and the promptness and competence of management. The outcome is least favorable in children with rapidly progressive nephritis and cortical necrosis. Children in whom AKI is a result of HUS or AGN may recover completely, but residual renal impairment or hypertension is more often seen. Complete recovery is usually expected in children whose renal failure is a result of dehydration, nephrotoxins, or ischemia. AKI after cardiac surgery is less favorable. It is often impossible to assess the extent of recovery for several months.

Quality Patient Outcomes: Acute Kidney Injury

- Underlying cause of acute kidney injury (AKI) identified and treated
- Water balance maintained