PLENARY LECTURE 2 - Sepsis associated acute kidney injury

SEPSIS ASSOCIATED AKI

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Sepsis associated acute kidney injury
The kidney is a target organ for the dysregulated host response to infection that defines sepsis, and acute kidney injury (AKI) is often an early manifestation of this response affecting about 70% of patients with sepsis. In fact, severe infection and sepsis are the most frequent etiologies of AKI worldwide. Patients with sepsis associated AKI have a high risk of worse outcomes, including need for dialysis, prolonged hospitalization and risk of death.
The pathophysiology of sepsis associated AKI is multifactorial, including systemic and renal inflammation, altered microcirculatory and endothelial function, intra-renal shunting, complement activation, renin-angiotensin-aldosterone system dysregulation, mitochondrial dysfunction and metabolic reprogramming. Management consists of rapid control of the underlying infection, individualised haemodynamic and fluid resuscitation and avoidance of further nephrotoxic insults but there are no specific therapies. Tools to differentiate sepsis associated AKI from other causes of AKI are urgently needed to allow personalised management and to get closer to precision medicine.
This talk will explore the epidemiology, pathophysiology and management of sepsis associated AKI and summarise potential future strategies.