BioCore Exploring Scientific Community

International Journal of Nephrology and Urological Disorders

ISSN 2577-0152

Editorial Open Access

Septic Shock and Multiple Organ Failure : Treatment with Cytokine removal continous Hemofiltration

Ebru Tarikci Kilic*[1], Mehmet Salim Akdemir[1]

Umraniye Training and Research Hospital Anesthesiology and Reanimation Department, Turkey

Corresponding author: Ebru Tarikci Kilic, Umraniye Training and Research Hospital Anesthesiology and Reanimation Department. Turkey. E-mail: ebru.tarkc@yahoo.com

Citation: Ebru Tarikci Kilic et al. (2017), Septic Shock and Multiple Organ Failure: Treatment with Cytokine removal continous Hemofiltration. Int J Nep & Uro Dis. 1:1, 10. DOI: 10.25141/2577-0152-2017-1.0010

Received: December 08, 2017; **Accepted:** December 19, 2017; **Published:** December 30, 2017

Introduction:

Acute renal failure occurs in 10% to 23% of critically ill patients, and 70% of these patients require renal replacement therapy (RRT). Hemofiltration and hemoperfusion have been used in the treatment of sepsis and septic shock. Sepsis is associated with increased blood concentrations of immunologically acute molecules. These molecules play a role in the pathogenesis of organ injury, severity of illnesses and outcome. As intensive care units have improved presence of multiple organ dysfunctions in majority of patients with acute renal failure (ARF) has become clearer. To facilitate multi organ support continous renal replacement therapy (CRRT) tecniques have been developed. We consider hemofiltration a valuable therapeutic option in the initial management of severe cases of sepsis. Here we aimed to present a 28 year old male patient with severe sepsis who recovered from sepsis with the immediate use of hemofiltration.

A 28 year old male patient admitted to our hospital with generalized weakness. Initial blood tests indicated white blood cell count of 12000. Serum electrolytes were remarkable for a potassium of 7 mEq/l and creatinine of 5.2 mg/dl. Liver function studies were markedly abnormal with a lactate dehydrogenase level of 1342 IU/l, aspartate aminotransferase 1373 IU/l, alkaline phosphatase 99 IU/l, and a serum albumin of 2.3 mg/dl. An electrocardiogram showed sinus rhythm at a rate of 110 beats/min.

On admission to the ICU, he was dispneic with a blood pressure of 64/45 mm Hg, heart rate of 144 beats/min, respiratory rate of 44 breaths/min. The estimated mortality rate for this patient was 92%. In the ICU, the patient was intubated and urgence cytokine removal continous hemofiltration was started. Norepinephrine was used to maintain blood pressure. Intravenous bicarbonate was administered for the unremitting metabolic acidosis. Fresh frozen plasma and packed red cells to treat the anemia. The clinical impression was that of a patient with a very high probability of death suffering from fulminant multiple organ failure and vasodilatory septic shock associated with renal failure. Broad-spectrum antibiotics administered in the ICU included piperacillin/tazobactam, ciprofloxacin, metronidazole, vancomycin, liposomal amphotericin B. On ICU continous hemofiltration lasted for 20 days. On ICU day 20, the patient was weaned from mechanical ventilation. The coagulopathy resolved and her hepatic and renal function returned to normal with resolution of the metabolic acidosis leading to discontinuation of the bicarbonate infusion. He was transferred to the ward on day 34.

This case highlights The ICU clinicians facing with sepsis of unclear etiology.The high mortality rates of patients who develop severe sepsis or septic shock due to kidney failure need supportive care in the ICU demand that new avenues of treatment be considered for this very high-risk patient population. Increasing evidence of **'Hemofiltration'** is a valuable tool in the treatment of acute renal failure in the intensive care unit patient.