

INTERMITTENT CVVHDF WITH OXIRIS FILTER AND ANTIBIOTIC THERAPY: A WINNING COMBINATION

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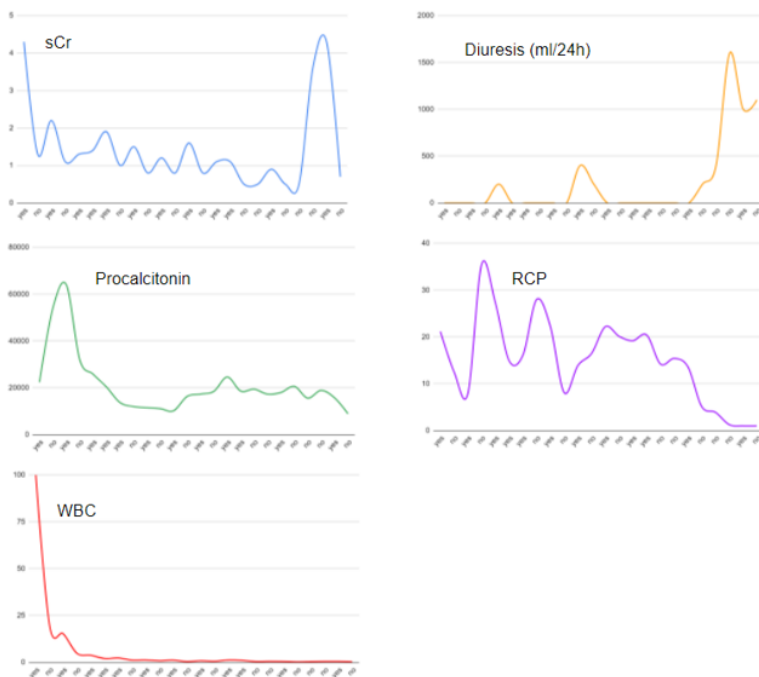
Background

The balance between pro and anti-inflammatory responses is crucial for the resolution of the alterations that occur during infections. In sepsis there is a disturbance of this balance resulting in high mortality for severe multi-organ damage. Renal replacement therapy can help to restore immune balance.

Case report

Woman, 50 yo, with a history of kidney stones from the age of 25 yo, carrier of bilateral ureteral JJ stent. She arrived in the emergency room with renal colic and severe hypotension. Blood test analysis showed serum creatinine 4.4 mg/dl and procalcitonin 100 ng/ml. Due to the suspected microbial colonization of the ureteral stent, she was admitted to Urology Unit for stent replacement. She was then transferred to the post-operative intensive care unit in a state of septic shock, anuria, sensory clouding, and severe hypotension. The aggravation of clinical conditions and respiratory pattern required intubation and mechanical ventilation. Hemocultures showed *K. Pneumoniae*, *B. Fragilis*, and *Acinetobacter B* infections. Based on the antibiogram, antibiotic therapy with Meropenem, Colistin, Linezolid, Ceftazidime, and Avibactam was started. Intensive aminic treatment and CVVHDF with Oxiris filter were started. The clinical picture was improved with progressive reduction of the aminic and ventilatory support up to progressive and total weaning and CVVHDF was discontinued.

Figure 1: Serum creatinine (sCr) level, urine output, procalcitonin level, RCP level and white blood cells (WBC) level during continuous veno-venous hemodiafiltration with the Oxiris hemofilter.



Conclusion

The combination of antibiotic therapy and the use of intermittent CVVHDF with Oxiris filter (replaced every 72h or earlier if necessary) in our patient has determined the resolution of a potentially lethal state. While the various antibiotic treatments have allowed the eradication of infections, on the other hand, the elimination of inflammatory mediators and endotoxins, favored by the filter used, has allowed the restoration of the volumic and hemodynamic state, renal function and immune homeostasis determining the favorable outcome.