ACUTE KIDNEY INJURY DA RHABDOMYOLYSIS IN COVID-19 PATIENT: A CASE REPORT

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Background: Rhabdomyolysis can occur as a rare complication of SARS-CoV-2 infection; acute kidney injury (AKI) with oliguria, resulting from rhabdomyolysis, is a serious syndrome and an accurate and timely diagnosis can be essential for patient survival.

Methods: A 62-year-old man with Diabetes Mellitus and Hypertension, was hospitalized six days after the onset of fever and cough, tachycardia, tachypnea, hypotension, oliguria, despite maximal diuretic therapy, SpO2 91%. A picture of bilateral ground glass pulmonary opacities was evident on chest CT scan. He tested positive to the molecular swab SARS-CoV-2. for On admission. showed laboratory exams plasma concentration of: creatinine 4,5 mg/dL (eGFR 13 ml / min / 1.73m²), BUN 190 mg/dL, phosphate 9 mg/dl, GOT 3000 mg/dl, GPT 1000 mg/dl, LDH 1940 U/L, Myoglobin> 4000 U/L, CK 8000 U/L. After right jugular catheter placement, a CVVHD session was started with high cut-off polysulfone 40000 dalton, Qb 150 ml / min, Qreinf. 2500 ml / hour (Fig.1). After seven days of CVVHD session, resumption of diuresis occurred. One month after, serum creatinine levels decreased to 1.2 mg/dl.

Fig. 1. Data CRRT.

CRRT (Continuous renal replacement therapies)

Dialysis method: CVVHD (Continuous Hemodialysis)

Vascular access: temporary bilumed central venous catheter in the right internal jugular vein

Filter: high cut-off polysulfone 40000 Da

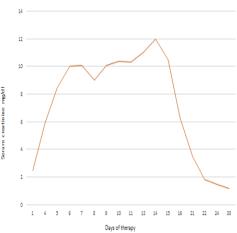
Qb: 150 ml/min

Qreinf:: 2500 ml/h

Results: The differential of rhabdomyolysis diagnosis autoimmune includes myopathies, electrolyte imbalances, medications, drugs, alcohol abuse, and infections. In this specific case, the pathogenetic mechanism of rhabdomyolysis is triggered by the cytokine storm typical of Sars CoV-2 infection and by hypoxic damage.

Conclusion: Acute kidney injury associated with rhabdomyolysis and sepsis has a high mortality rate. The treatment with a membrane with a high cut-off permeability allowed the removal of myoglobin and inflammatory cytokines with a improvement marked in hemodynamic stability and a recovery of complete function with suspension of the purification treatment.

Fig.2. Trend of Creatininemia



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AKI & CRRT

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