BLOOD PURIFICATION TREATMENT WITH OXIRIS® IN PATIENTS WITH COVID-19 INFECTION

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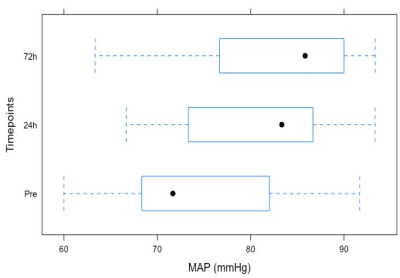
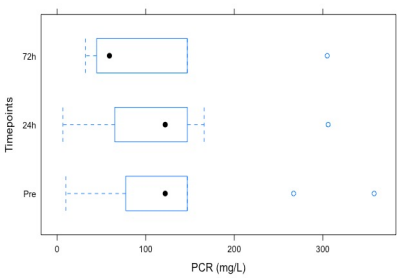
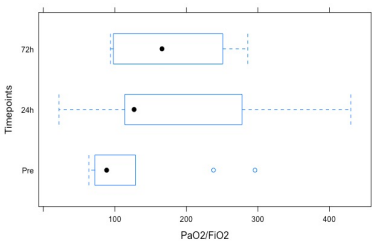
Background: Systemic inflammation in Covid-19 patients may induce multiorgan dysfunction. Blood purification techniques may allow resolution of cytokynes storm and help in reducing systemic inflammation. The aim of the present study was to assess the efficacy of Oxiris ® in the treatment of Covid-19 patients developing AKI during the course of the disease.

Methods: We included 11 patients admitted in the Intensive Care Unit (ICU) for severe ARDS secondary to Covid-19 infection and presenting severe AKI requiring CRRT. Oxiris® set was used in patients with clinical and laboratory signs of sepsis and septic shock. The protocol consisted in the two sets for each patient (first change of dialysis circuit after 24 hours). Clinical and laboratory parameters were monitored during the first 72 hours of treatment. Outcomes at 7 days were reported.

Results. Median age of included patients was 61 (IQR 55-67) years with a predominance of male participants (7/9, 77.8%). After 72h of treatment, an improvement of inflammatory markers was documented, with the reduction of C-reactive protein (CRP, 122 [77.40, 147] vs 59 [48.10, 125.03]mg/L), procalcitonin (PCT, 5.60 [2.57, 43.80] vs 1.94 [1.86, 2.02]ng/ml), although we did not reach a statistical significance due to the limited sample size. Moreover, a significant emodynamic improvement was documented with the increase of mean arterial pressure (MAP 71.67 [68.33, 82] vs 85.83 [78.33, 89.58]mmHg). Finally, PaO2/FiO2 improved in the first 72h after (P/F ratio 88.60 [72, 129] vs 166 [110.25, 234.50]). 3 patients died in the first 7 days after treatment (3/11, 27%), while 3 patients presented renal recovery.







Conclusions Oxiris® set represents a valid therapeutic option in the management of patients with Covid-19 infection and severe sepsis. Further studies with higher sample size are needed to assess the role of this treatment in improving clinical outcomes.

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