

CYTOKINE ADSORPTION IN PATIENT WITH COVID 19 AND STANFORD A, CASE REPORT

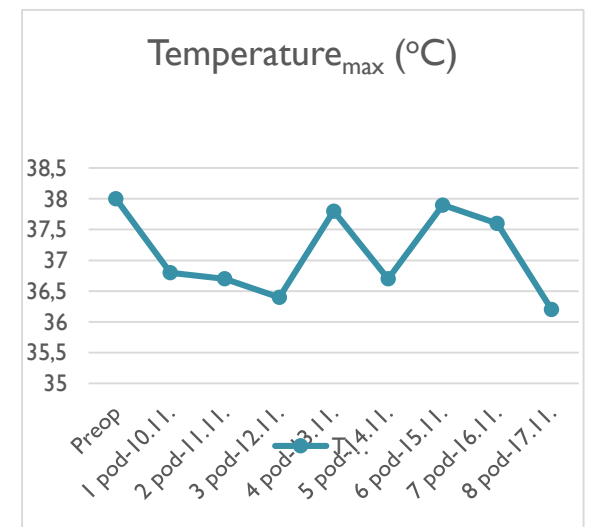
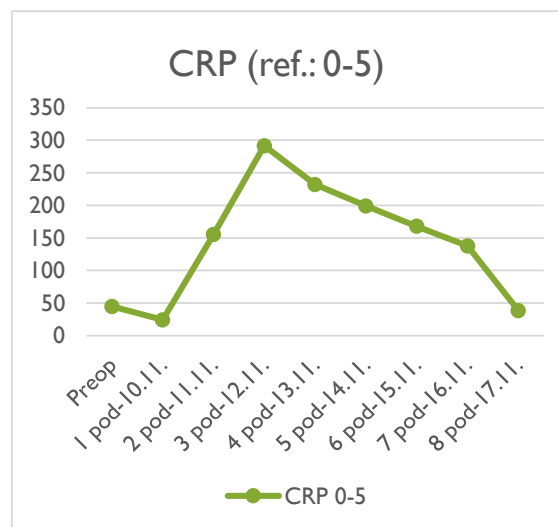
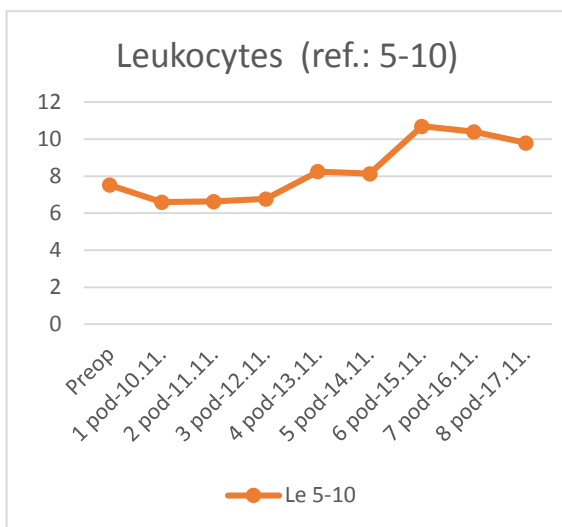
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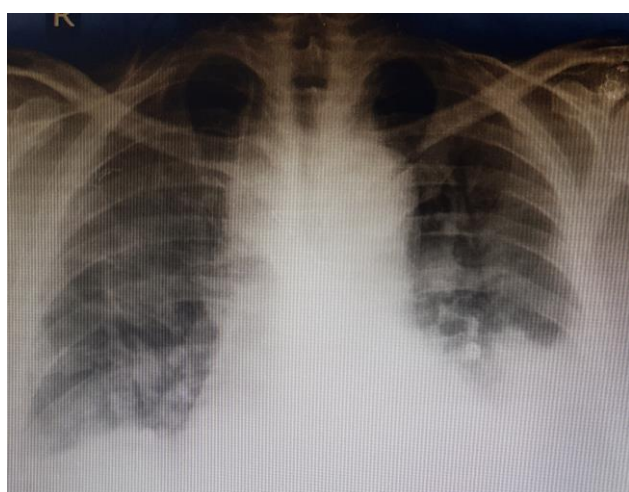
Background: Coronavirus disease (COVID-19) is an infectious disease caused by a newly discovered coronavirus which attacks the immune system causing an exaggerated and uncontrolled release of pro-inflammatory mediators (cytokine storm). On-pump cardiac surgery triggers a significant postoperative systemic inflammatory response and together it possible resulting in multiple-organ dysfunction associated with poor clinical outcome. Using hemoperfuser Jafron (HA330) device can improve cytokine elimination and promises better clinical outcome.

Case presentation: The patient (58 age) received in Cardiovascular department University Clinical Center Sarajevo like urgent case with suspect disectio aortae Stanford A. He said that this afternoon he felt suddenly very strong pain in chest with weakness hands and legs. After examination, CT angiography and TTE (dimension of aorta ascendens 54 mm with visible disction flap, aortic regurgitation AR+4, no pericard effusion) it confirm diagnosis disectio aortae ascendens. Also, during examination it is stated that patient has fever 38,7 C. Preoperative fast checking SARS-CoV-2 Ag-RDT confirm positive COVID infection. Bilateral pneumonia characteristic for COVID disease was found on CT.

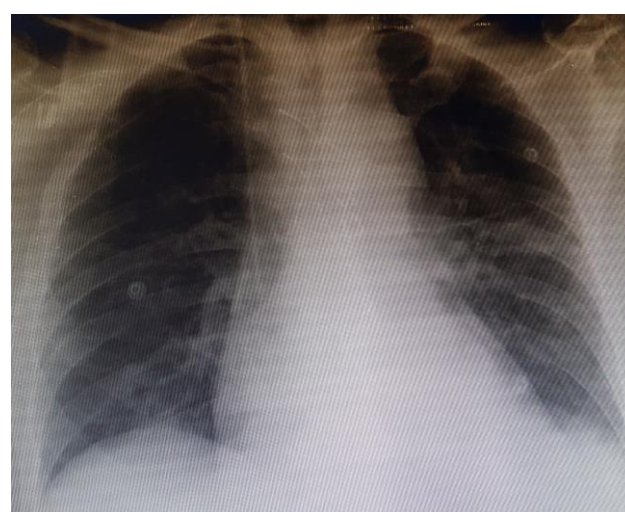
Urgent surgery, replacement of aortic valve (AVR Edwards Magna 23) and double sandwich tube replacement aortae ascendens was performed. Because of active COVID infection during extracorporeal circulation (220 minute) it used hemoperfuser Jafron HA330, cytokine adsorber. Jafron hemoperfuser HA330 was installed into the venous CPB, so that the blood was pumped into the reservoir. Postoperatively, the patient had hemodynamic stability with medium doses of inotropes and he was extubated 3 hours later. In consultation with an infectologist therapy for COVID disease was ordained. Intensive oxygen therapy was necessary for postoperative period (high flow nasal canila and mask) According to standard protocol drains removed. The patient was discharged on the thirteenth postoperative day in good condition.



After using hemoperfuser Jafron HA330 during extracorporeal circulation (220 min) dynamics of leukocytes, CRP and temperature was like for non critical cardiac surgery patient.



First postoperative Rtg



Rtg after 12 days

Conclusion: Reduction cytokine storm by using JAFRON hemoperfuser HA330 during cardiac surgery can be therapeutic options for critically ill patients. The outcomes of critically sick patients who used the JAFRON cartridge were comparable to those of non-critically ill cardiac surgery patients.