

Hemoperfusion in Triple Valve Endocarditis Surgery

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Background

Inflammatory response due to the cascades of blood expose to CPB circuit has been extensively discussed [1]. The better outcomes of inflammatory modulation by cytokine scavenger in septic patients has been led to the rationale of using hemoperfusion for same purpose during and after cardiopulmonary bypass procedures [2].

Methods:

- 27 - years old male with sepsis, pancarditis, AR 4+, MR 4+, TR 4+, severe PHT, significant pericardial and pleural effusions, cardiac cirrhosis, MOF, NYHA IV
- CPB time 224 min, Haemoperfusion (HA330) time 220 min.

Results:

- Patient was weaned from CPB successfully
- Patient was extubated 1 POD, mobilisation 1 POD
- Chest tubes removal on the 1st and 2nd POD
- Lab findings (CRP, total bilirubin, AST and ALT) show improvement
- X-Ray and physical findings on lungs satisfactory, saturation SpO₂ 99%
- Haemodynamic: systemic tension was 105/76 mmHg (inotrops – low dose) with sinus rhythm and HR 100/min
- Control TEE showed improvement in LVEF without any other pathological findings
- Discharge to Clinic for Infective Diseases on 8th postop day.
- Lab findings before discharge hospital were within the range



Fig1 HA330 on CPB circuit

Discussions

- Oxygenation improvement and rapid extubating when using HP + CPB
- Hemodynamic stability, better lab findings and low inotrope use when adding HP

Conclusions

- HP + CPB could mediate the inflammation and improve the hemodynamic status

Bibliography

1. Aljure OD, Fabbro M 2nd. Cardiopulmonary Bypass and Inflammation: The Hidden Enemy. *J Cardiothorac Vasc Anesth.* 2019 Feb;33(2):346-347.
2. Huang, Zhao, et al, *Therapeutic Apheresis and Dialysis*, 17(4), 454-461.

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