

USE OF HEMOADSORPTION IN CARDIAC SURGERY. CASE PRESENTATION.

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Background

- The contact of blood with the foreign surface of CPB → SIRS → MODS
- Cytokine adsorbers → ↓ SIRS → ↓ MODS
- Case presentation: redo cardiac surgery - hemoadsorption intra- and postop.

Methods:

- 64-year-old female - dysfunction of mitral and aortic prosthesis + aortic aneurysm pulmonary hypertension
- Intraoperative hemoperfusion with HA330 (Jafron Biomedical LTD) cytokine filter during the CPB + Postoperative hemoadsorption - because of SIRS.

Results:

- Aortic and mitral prosthesis replacement + ascending aortic recalibration
- CPB time: 277 minutes.

	Preop.	Postop. day 1	Postop. day 2	Postop. day 3	Postop. day 5	Postop. day 7
Temperature (°C)	36.2	36.5	38.7	36.3	37.9	36.7
Leucocyte nr. (/μl)	8070	7200	17700	9730	13130	8500
PCT (ng/L)		0.8	9.8	2.3	6.7	2.1
CRP (mg/dl)		2.8	30.8	10.6	24.7	12.3
MAP (mmHg)	80	70	55	85	75	90
Vasoactive-inotropic score	0	46	57	33.5	43	20.5
Lactate (mmol/L)	1.9	6.4	16.5	5.6	8.9	2.2
APACHE II	8	20	19	9	18	7
SOFA	1	13	14	11	13	6
SAPS	20	40	38	27	32	21

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HA during CPB HA 12 h HA 2 x 12 h extubation

- Respiratory dysfunction (paO₂/FiO₂: 140), coagulation disorders (thrombocytopenia)
- Day 9 – transferred to surgical ward
- Day 16 – discharged from hospital

Discussions

- Removal of cytokines → ↓ SIRS → ↓ MODS
- Low CO → SIRS → MODS

Conclusions

- cytokine adsorber ↓ severity of SIRS + improve hemodynamic condition

Bibliography

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