INFLUENCE OF ADMINISTRATION OF ANTITHROMBIN CONCENTRATE IN CHILDREN ON HEPARIN INFUSION RATE DURING EXTRACORPOREAL MEMBRANE OXYGENATION

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OBJECTIVES
During extracorporeal membrane oxygenation (ECMO), the risk of thrombosis is important due to the non biological surfaces of the circuit.

STUDY DESIGN
Retrospective study:
- all patients supporting ECMO in 2015
- at least one administration of ATC

Results:
2015: 28 patients received ATC during ECMO

2 patients excluded: lack of biological results

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RESULTS

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Mean ATIII activity
Pre-administration: 45.8%
Post-administration: 85.4%

Mean Anti-Xa level
Pre-administration: 0.36 IU/ml
Post-administration: 0.53 IU/ml

Mean UFH doses
Pre-administration: 25.8 IU/kg/h
Post-administration: 27.1 IU/kg/h

Regarding UFH dose, the ATC administration has no influence on UFH dose requirements.

DISCUSSION
In some studies, administration of ATC decreased UFH dose requirements and in other studies no difference was found in heparin infusion rate.

Influence of ATC

CONCLUSION
ECMO is a common procedure associate with an off-label use of ATC. In this study, ATIII levels and anti-Xa levels increase significantly after ATC administration but the UFH doses were not changed after ATC. This study could enable us to review our anticoagulation protocol during ECMO particular by decreasing UFH requirement. Future prospective studies are warranted to evaluate the benefits of antithrombin replacement.