Introduction:
One way to expand the potential donor pool is Donation after Circulatory Death (DCD), and a strategy to reduce the complications related to the ischemic time is the use of Normothermic Regional Perfusion (NRP) with extracorporeal membranous oxygenation (ECMO). [1][2]
We compare the use of standard NRP with an effective adsorption system inflammatory mediators (CytoSorb®) in the regional normothermic reperfusion phase via regional ECMO, that involves a reduction in cellular oxidative damage, assessed as a reduction in levels of proinflammatory substances.

Methods:
We report a case series of 9 DCD-Maastricht IIIA category donors, treated in ECMO with NRP, to maintain circulation before organ retrieval, in association with CytoSorb® in 5 patients. During perfusion, from starting NRP (T0), blood samples are collected 3 times, every 60 minutes (T1, T2, T3).

Results:
During treatment with Cytosorb®, lactate levels progressively decrease, AST and ALT increase less than without Cytosorb®, as sign of improvement in organs perfusion (Figure 1).

Conclusion:
NRP with CytoSorb® might help to successfully limit irreversible organ damages and improve transplantation outcome. [2]
Development and implementation of uniform guidelines will be necessary to guarantee the clinical use of these donor pools.

References:

Figure 1