Effect of Xenon and Therapeutic Hypothermia, on the Brain and on Neurological Outcome Following Brain Ischemia in Cardiac Arrest Patients (Xe-hypotheca, ClinicalTrialsID: NCT00879892)

Project description
The main purpose of this study is to explore whether xenon in combination with mild hypothermia treatment (MHT) has neuroprotective effect and whether the combination is better than the MHT alone in out-of-hospital cardiac arrest (OHCA) patients by showing a significant reduction in the degree of severity of the ischemic brain injury in the MHT+Xe group compared with the MHT group and defining an association of these findings with neurological outcome and mortality. In addition, aim is to explore the underlying mechanisms for the possible synergistic neuroprotective interaction of xenon and hypothermia in patients suffering cerebral ischemia post cardiac arrest. In addition, the investigators aim to correlate these findings with neurological outcome to determine surrogate markers of favourable clinical outcome.

Current topics
Neurological and cardiac efficacy and safety of the therapeutic hypothermia with and without xenon will be studied with the following assessments:
Depth and extent of the cerebral pathology, Cardiac autonomic regulatory system, Cardiac function, Neurological and overall outcome

Methods used
Brain imaging, Biosignal analysis, Transthoracic echocardiography, Biochemical assessments, Neurological evaluation, Overall clinical evaluation

Selected publications


Research group

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