CERTA "Continuous EEG Randomized Trial in Adults"

Institution : Service de Neurologie, CHUV, Lausanne

Goals: Continuous video-EEG (cEEG) is recommended in patients with altered consciousness. Compared to routine EEG (rEEG, lasting <30 minutes) it improves seizure detection rate, but it is time- and resource consuming. While North American centers are increasingly implementing cEEG, most other (including European) hospitals still have insufficient resources. To date, only one retrospective study based on discharge diagnoses suggested that cEEG may improve outcome, while other recent retrospective assessments challenge this view. It appears thus relevant to close this knowledge gap.

Methods: CERTA (NCT03129438) is a Swiss multicenter randomized clinical trial. Adults with GCS <12 or FOUR score <13 are randomized 1:1 to cEEG for 30-48 hours or two rEEG, assessed through standardized ACNS guidelines. The primary outcome is mortality at 6 months, assessed blindly. Secondary outcomes explore functional status at 4 weeks and 6 months, ICU length of stay, infections, detection of seizures and potentially epileptiform EEG features, detection of physiologic EEG features, costs. Additionally, quantitative EEG analyses will assess correlations with outcome. Using a 2-sided approach (power=0.8, α =0.05), 2x174 patients are needed to detect an absolute survival difference of 14%, suggested by the only available study on the topic.

IRB approval: CERV-VD (2017-00268)

Current status: Recruitment completed, data analyses ongoing.

Timeline: 2017-march 2018: study planning; April 2018-December 2019: Patient's recruitment; July 2019-current: data analyses.

In search for partners: Yes, potentially (already participating: Inselspital BE, Hôpital de Sion, Universitätsspital BS)

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