**Method**: We recorded ECG using a dedicated wearable device (ePatch®) during long-term video-EEG monitoring. In this phase-2 clinical study, 100 patients were prospectively recruited; 43 of the patients had a total of 126 seizures (111 focal, 15 GTC) of > 20 seconds duration during recording (941 h of training data, 2,238 h of test data). We analyzed 10 HRV-parameters using both 50 and 100 R-R intervals sliding window with maximum overlapping. Each HRV-parameters cut-off value for seizure-alarm was set to 105% of the highest non-seizure period during training data of the same patient. The four best parameters in terms of seizure detection were identified and combined in pairs (all combinations) creating an additional six parameters for seizure detection analysis. Positive responders of seizure detection were defined, for each HRV-parameter, as patients with > 66% of seizures detected.

**Results**: In total, 53.5% of the patients were responders for the best performing algorithm. In these patients, the method achieved a sensitivity of 93.1% and false detection rate of 1.1/day. An average of > 50 beats/minute HR increase or decrease during seizure(s) is a positive predictor of being a responder of seizure detection (sensitivity: 90.9%, specificity: 87.0%), making it easy to define for which patients a reliable seizure alarm is feasible.

**Conclusion**: Automated seizure detection based on HRV was feasible in more than half of the patients. High sensitivity and low false positive alarm rates can be achieved with an algorithm analyzing ECG signals using the wearable device in persons with HR changes > 50 beats/minute during seizures.

## P294 | Our Experience In Stereoelectroencephalography And Electrical Stimulation In A Public Hospital

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**Purpose**: Stereo-electroencephalography (SEEG) is a procedure performed for patients with intractable epilepsy in order to anatomically define the epileptogenic zone (EZ) and the possible related functional cortical areas. Electrical stimulation (ES) was developed to identify with precision cortical structures essential to language and motor function, and to trigger seizures. The aim of this study is to analyze electrical stimulation (ES) findings in our patient population.

**Method**: We analyzed 30 patients with drug resistant epilepsy from our Video-EEG Unit, who underwent a SEEG as part of a surgical plan. Cognitive tasks performed during ES were: hand tapping, naming, automatic speech (counting), reading and verbal fluency.

**Results**: From the 30 patients, we trigger theirs usual seizures in 25 (83.33%), 159 seizures: 25 (15.5%) were trigger with hippocampus stimulation, 15 (9.4%) amygdala, 30 (18.8%) other temporal areas, 50 (31.4%) frontal areas, 15 (9.4%) parieto-occipital areas, and 24 seizures (15%) were obtained with the stimulation of two continues areas. In 14 (46.6%) patients we stimulate eloquent brain regions: 8 (57%) language, 7 (50%) patients were evaluated the motor area, 2 (14.2%)sensitive areas, 4 (28.4%) visual and 5 (28.4%)auditory sensations. We define EZ in all of the patients, 8 (26.6%) mesial temporal lobe epilepsy, 2 (6.6%) other temporal areas, 13 (43.3%) frontal lobe epilepsy, 5 (21.7%) parieto-occipital epilepsy, 2 (6.6%) insular epilepsy.

**Conclusion**: ES is a procedure that allowed us the accurate location of the EZ, the temporal space dynamics of the epiletogenic network and the functional mapping, to plan cortical resection without overlap and to improve post-surgical prognosis.

## P295 | Importance Of Resting-State Functional Connectivity In Propagation Of Focal Seizures

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**Purpose**: Recent studies have suggested that individual brain connectivity can predict seizure propagation. However, quantifying brain connectivity at the individual level is not easy in clinical setting. Interestingly, spatial patterns of resting-state functional connectivity (RSFC) are generally consistent across healthy individuals in functional MRI (fMRI). Therefore, our purpose was to investigate whether common RSFC patterns are useful in predicting seizure propagation of individual patients with epilepsy.

**Methods**: We analyzed ECoG data from eight patients with intractable focal epilepsy. The main inclusion criterion was that patients showed fast activity (FA) both in seizure-onset and seizure-propagation zones within one second from the onset of seizures. Magnitude of FA during the first four seconds of seizures was measured by line-length. The