

### P353 | Non-Lesional Focal Epilepsies: Epileptogenic Zone Diagnosis Using Deep Electrodes In A High Complex Public Hospital

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**Purpose:** Epilepsy surgery is the most effective method in the treatment of focal epilepsies when the epileptogenic zone (EZ) coincides with lesion in the MRI and does not involve eloquent areas. In those cases where EZ is not identified by neuroimaging methods, the implantation of deep electrodes is required for the adequate diagnosis of EZ. The aim of this study is to perform a descriptive analysis of the EZ diagnoses and the post-surgical evolution compared with the group of patients (p) with lesion in the MRI.

**Method:** We analyzed the totality of patients implanted with deep electrodes (SEEG), from the Video-EEG Unit of El Cruce Hospital “Nestor Carlos Kirchner”, from January 2014 to December 2018, and selected those p without MRI lesion. We compared post surgical evolution of this selected group with the those p with MRI lesion.

**Results:** From 30 p with deep electrodes (SEEG), 7 p (23%) had no lesion in the MRI. Four p. were implanted with deep electrodes in both mesial temporal regions. Two p, was bilateral temporal and prefrontal deep electrodes. The remaining p was explored in the posterior temporal region and right parietal. In 5 p surgery was indicated and 1 p remained seizure free. In 4 p we observed improve on seizures frequency. Compared with the population with a lesion in the MRI that was operated (12p), 4 p remain seizure free, 6 continued with lower seizure frequency and 2 p with sporadic seizures ( $p < .05$ ).

**Conclusion:** Post surgical evolution compared with the group of patients with lesion in the MRI, did not present significant differences. In the group of patients with focal drug resistant epilepsy without lesion in MRI, it is essential to perform SEEG with a multidisciplinary approach for a correct diagnosis of EZ and adequate response to surgical treatment.

### P354 | Stereoelectroencephalography (SEEG) In Children With Refractory Focal Epilepsy In Developing Countries

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**Background:** SEEG procedure is a well-accepted treatment for medically intractable epilepsy patients, but this technique is expensive and requires high technology support. Therefore, SEEG is not usually available in developing countries.

**Objective:** To report our early SEEG program in Thailand in children with medically refractory epilepsy.

**Method:** We retrospectively reviewed all pediatric patients with the diagnosis of medically refractory epilepsy and underwent SEEG implantation at Phramongkutkiao Hospital. Demographic data, pre-surgical investigations, surgical techniques, pathology, and seizure outcome were analyzed.

**Results:** Eight consecutive patients with refractory epilepsy underwent SEEG implantation were enrolled. The mean age was 9 years (range, 2 to 16 years). Four patients (57%) underwent previous subdural grid implantation with resection. None of the patients had a single focal epileptogenic lesion and MRI findings were nonlesional in 4 patients (50%). For presurgical evaluation, magnetic resonance imaging (MRI) and video-EEG monitoring were done in all patients, others tests such as PET scan and ictal SPECT were done if indicated.

In total, 77 SEEG electrodes were implanted. On average, 9 electrodes were implanted per patient. The time of implantation planning was 45 minutes on average (range, 30–60 minutes). All electrodes were implanted under a stereotactic frame guided. The average operation time was 240 minutes (range, 180–300 minutes). Eight of the patients underwent SEEG-guided resection without complications. Surgical pathology showed focal cortical dysplasia in 6 patients (75%) and gliosis in 2 patient (25%). After surgery, two patients became seizure-free (Engel class I), and 6 patients (75%) experienced seizure improvement (Engel class II or III) at the end of the follow-up period (mean, 14 months; range, 6 to 25 months).

**Conclusion:** Our early SEEG program in Thailand were demonstrated to be safe and efficient in defining the epileptogenic zone. In addition, SEEG-guided resection offering the opportunity of seizure improvement without complication in children.