Inferior perisylvian epilepsy

Although inferior perisylvian epilepsy (IPE) is a subtype of neocortical temporal lobe epilepsy (NTLE), it possesses certain electroclinical features that have been associated with its insula, frontal, or parietal operculum propagation.

Liu et al. from the Beijing Tiantan Hospital, summarized the clinical and electrophysiological observations of epilepsy originating from the inferior perisylvian cortex, and analyzed the potential epileptic networks underlying the semiological manifestations.

They retrospectively analyzed patients with refractory inferior perisylvian epilepsy (IPE) who had undergone resection, and then reviewed the demographic, clinical, neuroelectrophysiological, neuroimaging, surgical, histopathological, and follow-up data of the patients from the respective medical records. The selected patients were then categorized in accordance with the results of semiological analysis. Quantitative 18F-fluorodeoxyglucose-positron emission tomography (FDG-PET) analysis was performed to investigate the underlying neural network.

Of the 18 IPE patients assessed in this study, ipsilateral frontotemporal epileptic discharges or its onsets were the dominant interictal or ictal scalp EEG observations. In addition, oroalimentary or manual automatism was the most frequently documented manifestation, followed by facial tonic or clonic movements. Moreover, the semiological analysis identified and classified the patients into 2 patterns, and the PET statistical analyses conducted on these 2 groups revealed differences in the neural network between them.

Inferior perisylvian epilepsy possesses semiological manifestations similar to those of mesial temporal lobe epilepsy or rolandic opercular epilepsy, hence these conditions should be carefully differentiated. Performing lesionectomy or cortectomy, sparing the mesial temporal structures, was found to be an effective and safe treatment modality for IPE [1].

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Liu HG, Yang BW, Zhao BT, Zheng Z, Gao DM, Shao XQ, Zhang K, Zhang JG, Hu WH. The electroclinical features and surgical outcomes of inferior perisylvian epilepsy. Epilepsy Behav. 2021 May 28;121(Pt A):108028. doi: 10.1016/j.yebeh.2021.108028. Epub ahead of print. PMID: 34058496.