



CHILDHOOD FRONTAL LOBE EPILEPSIES: ETIOLOGY, CLASSIFICATION, AND EEG FINDINGS

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OBJECTIVE:

Extratemporal lobe epilepsies are more common in childhood than adults and the most common cause is; frontal lobe epilepsy. However, they have not been as extensively studied and characterized as temporal lobe epilepsies. Therefore, surgical success is not as high as in temporal lobe epilepsy. Today, there are opinions that idiopathic generalized epilepsies may actually be due to focal, structural and functional frontal lobe abnormalities. Because of the direct intra-hemispheric relationship of the frontal lobe with the temporal and parietal lobes, a wide functional heterogeneity is seen in frontal lobe seizures. In our study; We studied detailed etiology, clinic, and EEG findings of childhood frontal lobe epilepsies (FLE).

Material and Methods:

Among 746/1233 children admitted to Gazi University Pediatric Epilepsy Monitoring Unit between 2000 and 2021 were studied. Pseudoseizures and no seizures were excluded (n:487). Therefore, 151/746 of them were eligible to analyze for FLE. Demographics, etiology, seizure classification (Both semiological seizure classification-SSC and ILAE), and EEG findings were evaluated comprehensively.

RESULTS

Of 151 FLE patients, 62 were females (41,1%) and 89 were males (58,9%) with a mean age of 11 years (4 months-18 years).50(33,1%) patients had structural-metabolic reasons while 87(57,6%) patients had unknown etiology. Mostly had motor seizures (80%) according to ILAE seizure classification and 5(3,3%) patients had auras, 37(24,5%) patients had dialeptic, 78(51,6%) patients had simple motor, 25(16,5%) patients had complex motor, 2(1,3%) patients had special seizures in details depends on SSC. 38 (25,1%) patients had lateralization signs, in which the most common one was forced version to the contralateral side. Of 60% patients had focal ictal or interictal EEG findings while the rest of 40% of them had either non localizable or jeneralized EEG with significantly higher under the 6 years old (p<0.05).

CONCLUSION

FLE is one of the common reasons of drug resistant epilepsies and mostly nonlesional or subtle MRI findings in childhood. The possibility of age dependent clinic and EEG changes should be taken consider during evaluation. For this reason, multidisciplinary approach can be combined to seizure semiology to help define epileptogenic zone.

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