**Prevalence of Photoparoxysmal Response in Patients with Epilepsy: Effect of the Underlying Syndrome and Treatment Status**

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### Objective

To prospectively study the prevalence of photoparoxysmal response (PPR) and its determinants in epilepsy patients.

### Methods

Consecutive patients, older than 2 years, undergoing EEG from January 2016 to December 2019 were prospectively studied for the presence of PPR. Patients with emergent EEG and those with only sleep record were excluded. Intermittent photic stimulation was performed as per standard techniques with frequencies from 1-30 Hz.

### Results

Of the 1893 subjects included, 1492 (78%) patients had epilepsy while 401 (22%) had other diagnoses. In epilepsy group, 1028 (68.7%) had focal epilepsy, 343 (21.6%) had generalized epilepsy, while (9.7%) patients had unclassified epilepsy. Overall, 36 (2.2%) patients with epilepsy had PPR. The mean age of these patients was 19.5 ± 9.4 years and 75% were females. PPR was noted in 5 (0.5%) patients with focal epilepsy and 31 (9%) patients with generalized epilepsies [p < 0.0001; Odds ratio: 20.3 (95% CI, 7.8 – 52.7)]. PPR was noted in 1.5% of treated and 18% of untreated patients with genetic generalized epilepsy (n = 145) and 22% of untreated patients with juvenile myoclonic epilepsy (n = 86). Patients with untreated epilepsy had 17 times higher odds of having PPR [p < 0.0001; Odds ratio: 17.6 (95% CI, 4.1 – 75.6)].

### Conclusion

Underlying epilepsy syndrome and treatment status are the two most important determinants of PPR. Variability in these two factors is largely responsible for the variable reported prevalence of PPR.

## Keywords

Photoparoxysmal Response,Epilepsy Syndrome,