



MIGRAINE AND OTHER SEIZURE RELATED HEADACHE IN EPILEPSY

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ABSTRACT

Epilepsy and Migraine are the chronic disorders with recurrent neurological dysfunction associated with headache and autonomic, abdominal and psychotic features. This is a prospective cross sectional observational study. 300 epileptic patients who attended the Epilepsy out patient clinic in Madurai medical college between March 2012 and February 2013 were recruited. This study demonstrates that seizure related headache is a common accompanying symptom of seizure, causes major impairment in daily life. Hence, by reducing the incidence of headache, we can improve the quality of life in patients with epilepsy.

KEYWORDS : Epilepsy, Headache, Migraine.

INTRODUCTION

Epilepsy and Migraine are the chronic disorders with recurrent neurological dysfunction associated with headache and autonomic, abdominal and psychotic features. In some patients it may be difficult to differentiate between migraine and the seizure episodes. Both are having comorbid symptoms and occurrence. Migraine patients can develop seizure and epileptics can have migraine attacks (1,3). Epileptologists proposed the hyperexcitability of the altered brain tissue, as the cause of seizure and migraine headache occurrence and vice versa. Enhanced hyperexcitability of cortical neurons and diminished threshold are the pathophysiological mechanisms enumerated in these conditions. Low magnesium in brain and the altered neurotransmitters are responsible for increased cortical excitability. Both the environmental as well as the genetic factors might cause these changes.

AIMS AND OBJECTIVES OF STUDY

1. To study the incidence of various headaches which can occur periodically and interictally in patients with known primary generalized epilepsy.
2. To evaluate the association of headache, with the seizure and its impact on the patient's lifestyle.

MATERIALS AND METHODS

This is a prospective cross sectional observational study. 300 epileptic patients who attended the Epilepsy out patient clinic in Madurai medical college between March 2012 and February 2013 were recruited.

Definitions:

Pre ictal headache: Headache which occurs more than 30 minutes prior to seizure onset and continues till seizure onset (2).

Ictal headache: Headache that occurs simultaneously with the seizure

Post ictal headache (4): Occurs immediately after the seizure.

RESULTS AND ANALYSIS

In the present study which was conducted over 1 year observation period, totally 248 patients (out of 300 recruited) completed the study and they were analysed. Their mean age was 36.30 years and 123 (49.60%) of them were female, and 125 were male (50.40%). Average duration of seizure disorder was 6.52 yrs. The total number of patients who developed headache was 72 (29%) and without headache was 176 (70.97%). Of the 72 patients who developed headache, 27 were male and 45 were female patients.

Among the 72 (29%) patients with headache, 54 (21.7%) patients developed headache in the interictal period and 10 (4.03%) in the

periictal period and 8 (3.22%) patients developed headache both in the periictal as well as in the interictal period. Twenty seven (10.9%) Patients had developed migraine type of headache and 20 (8.06%) patients had tension type headache and 25 (10.08%) patients developed nonspecific headache. In the present study, this reveals that migraine is the most common type of headache in patients suffering from epilepsy. In the interictal period, 21 patients developed tension type of headache and 17 had developed migraine headache & 16 patients developed tension type of headache. This showed that patients with nonspecific predominates in the interictal period.

Among the 10 patients who developed headache in the interictal period 5 had migraine without aura and 2 developed tension type headache & 3 patients presented with nonspecific headache. Eight patients developed headache both in the interictal and periictal period. Of them, 4 had migraine with aura and 1 developed migraine without aura and 2 patients developed tension type headache, 1 patient had nonspecific headache. This also showed, that patients with migraine headache predominated the periictal as well as the periictal+interictal period, in the present study.

TOTAL HEADACHE EPISODES IN THE STUDY PERIOD:

72 patients developed 223 headache episodes during the study period. Among the 223 headache episodes, the migraine with aura was 52, migraine without aura was 39 and tension type of headaches were 63 and nonspecific headache episodes were 69 (p-value 0.117). In the present study, the migraine type of headache occurred in large number followed by tension type headache and nonspecific headache. In the periictal period, the total number of headache episodes, the patients developed was 52. Among the 52 headaches, the migraine headache episodes were 31, tension type of headache was 11 episodes. P-value for this is 0.004 which is statistically significant value. This reveals that migraine is the most frequent type of headache in the periictal period.

HEADACHE OCCURRENCE IN RELATION TO SEIZURE FREQUENCY:

Among the 158 patients, with seizure frequency of > 3 per month, 60 (37.97%) patients developed headache. Total number of patients with seizure frequency of 1-3 per month is 60. Among the 60 patients, 10 (16.66%) patients developed headache. Among the 30 patients with seizure frequency of 0-1 per month, 2 (6.66%) patients developed headache. The present study showed that, the incidence of headache increases whenever the seizure frequency also increases, from 6.66% (0-1 seizure/month) and 16.66% (1-3 seizure/month) to 37.97% (>3 seizure/month) and clearly reveals the relation between the headache occurrence with the number of seizure episodes. The p-

value for this, is 0.005 which is statistically significant.

CONCLUSION

1. The present study showed the incidence of headache among the epileptic patients and its impact on their daily life.
2. In the present study, the headache incidence increases with the seizure frequency, which reiterates the fact that, adequate seizure control is essential to reduce the incidence of headache in patients with epilepsy.
3. Headache incidence in epileptic patients can be considerably ameliorated by choosing appropriate drug that will be useful for both seizure and headache.
4. This study demonstrates that seizure related headache is a common accompanying symptom of seizure, causes major impairment in daily life. Hence, by reducing the incidence of headache, we can improve the quality of life in patients with epilepsy.
5. This study also suggests that migraine is a frequent comorbid disorder in patients with epilepsy and an important factor which affects the occurrence and type of seizure related headache.
6. The links between the epilepsy, seizure related headache and migraine are an important subject for future investigation.

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