

PSYCHIATRIC MANIFESTATION OF PATIENTS WITH EPILEPSY IN MOSUL, IRAQ

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SUMMARY

Background: It has been proven that physical morbidity is related to psychiatric illness. Some physical illnesses are more related to psychiatric morbidity compared to others. Epilepsy is considered one of them, as patients who suffer from epilepsy has disturbances of consciousness and this leads to a variety of psychological disturbance in addition to the psychological and social impact of the illness.

Aims: To identify risk factors and psychiatric morbidity in epilepsy, in order to try to manage it and improve outcome of this illness and enhance quality of life.

Methods: Patients who were referred to the department of Neurology at Mosul Teaching hospital from primary care centres between October 2012 and February 2013 and consented to participate in the study, were checked and if they fulfilled the criteria for the diagnosis of epilepsy, they were interviewed and their sociodemographic data were recorded, the hospital anxiety and depression questionnaire (HAD) was administered. Results were input in a computer programme and software statistical programme Minitab version 14.1 was utilised to analyse these data.

Results: The whole sample was 100 patients. 55 females and 45 males were included. Mean age was 30 years. Mean duration of illness was 5.5 years. Mean HAD score was 17. Male patients were a little bit older but there was no statistically significant difference compared to females and they both scored similar HAD score. There was no difference between urban and rural population with regards to HAD score. The results showed statistically significant correlation between age and duration of the illness and HAD score.

Discussion: The present study showed that there is a correlation between epilepsy and psychiatric morbidity. It has confirmed that females are more affected compared to males, which is expected as compared to the general population.

It has also confirmed that psychiatric morbidity is positively related to epilepsy as it showed that the duration of illness has increased the psychiatric morbidity.

Conclusion: Psychiatric morbidity is a neglected area in the management and care of physical illnesses, especially, epilepsy, where patients may get stigmatised and traumatised in the society. They may live in constant fear of having a fit. Assessing and managing the psychiatric morbidity of such patients will be reflected on the outcome of the illness and improve the quality of life of patients.

Key words: epilepsy - psychiatric co-morbidity

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INTRODUCTION

The relationship between epilepsy and psychiatric morbidity has been noticed since the Greek era. Cerletti's erroneous observation that fits and psychosis are mutually exclusive led to the historical and beneficial advent of the Electroconvulsive Therapy (ECT) (www.news-medical.net).

Epilepsy, with its long term periodic abnormal electrical discharge of the brain, has its physical, psychological and social consequences on the individual which makes it more difficult for them to cope with day-to-day life and hence suffer from more psychological problems compared to the general population. There has been extensive literature about the relationship between epilepsy and mental disorders worldwide, which demonstrated that psychiatric morbidities are greater in patients who suffer from epilepsy (Gaitatzis 2004, Devinsky 2003).

OBJECTIVE

This is a modest effort to shed light on this problem in patients in Mosul, Iraq and to try to identify psychiatric morbidity and associated ameliorating and exacerbating factors which may help in improving the outcome of this problem.

To our knowledge, there was no such study completed in Iraq before.

PATIENTS AND METHODS:

Mosul is the second largest city in Iraq after the capital Baghdad, with a population of 1.5 million. It has two medical colleges and used to produce around 500 fresh graduates a year before the American invasion of 2003. Since the occupation of the so-called the Islamic State (ISIS) of the city in June 2014, the two universities have been closed and some of the students and the

academic staff have relocated to the neighbouring provinces of Erbil and Duhok.

The Neurology department in Ibnseena University Hospital was jointly run by the university department and the ministry of Health.

100 Patients who attended from the 1st of October 2012 till the 15th of February 2013 were studied. They were referred from other primary and secondary care centres.

Epilepsy was defined as an eye witness of recurrent seizures resulting in a temporary disturbance of motor, sensory, or mental function. The age, sex, and duration of the epilepsy and the type of treatment the patients on were recorded, in addition to the calculation of the Arabic version of the Hospital Anxiety and Depression (HAD) score.

Patients were asked whether they wanted to participate in the study and patients who agreed were asked to sign a consent form. All patients completed the Arabic Version of the HAD scale. The HAD scale consists of fourteen questions, each with four options, and the patient was asked to select the most applicable one to his/her condition. Explanation of the HAD scale was carried out by the author before the patients were asked to complete it.

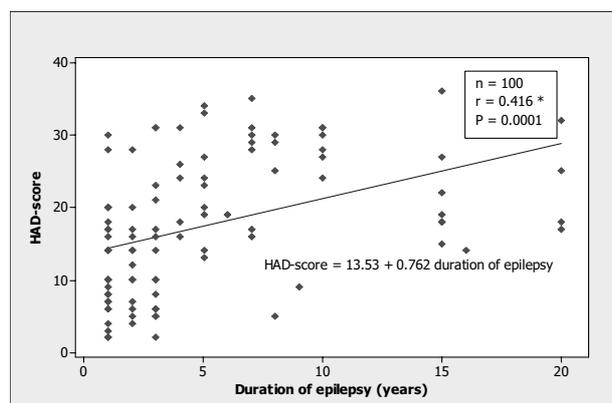
The age, sex, and duration of epilepsy with the HAD score was recorded for each patient.

Statistical analysis was done using the software statistical program Minitab version 14.1.

RESULTS

Patients consisted of 45 men and 55 women, 18-70 years (mean 30.95±13.14), but there were no statistically significant differences in HAD scores between males and females.

The mean of the age of the patients, duration of epilepsy and the HAD score is shown as descriptive data in table 1.



Correlations: Age; Duration; HAD

	Age	Duration
HAD	r=0.540	0.4160
	P=0.0001	0.0001

* Pearson correlation coefficient "r" was used

Figure 1. The correlation between duration of epilepsy and HAD-score

The patients were on regular treatment: 76 on carbamazepine, polypharmacy in 18 patients, valproate in 1 patients, gabapentin in 1 patient and phenytoin in 1.

The correlation between duration of epilepsy, the age of the patients and HAD score were analysed by using the Pearson correlation coefficient as shown in figure 1 and indicates that there was statistically significant correlation between the duration of the disease and the HAD score with a P-value of (0.0001). Furthermore there was statistically significant correlation between the age of the patients and the HAD score with P-value of (0.0001). All these findings are clearly defined in figure 1.

The effects of sociodemographic characteristics of all patients and their effects on HAD scale value were investigated, and there were no statistically significant differences between urban and rural areas. However there were statistically significant differences between patients who were educated at university level, and illiterate or primary school graduates. Furthermore, patients on polypharmacy were more vulnerable and had a higher HAD scale than patients on single drug. Details are shown in Table 2.

DISCUSSION

It has been proven by different studies worldwide that there is a high psychiatric morbidity in patients who suffer from epilepsy compared to general population, and for that reason, the present study did not recruit a control sample.

It is interesting to find that there were more females in this sample although it was taken from the Neurology outpatient attendees.

There is broad agreement between studies that females have a marginally lower incidence of epilepsy and unprovoked seizures than males. This difference is usually attributed to a greater exposure to risk factors for lesional epilepsy and acute symptomatic seizures amongst men. On the other hand, idiopathic generalized epilepsies (IGEs), which may represent some 15-20% of all epilepsies, are more common amongst females. Also, the behaviour of some common epilepsy syndromes such as mesial temporal sclerosis may differ between genders with isolated auras more common among females and secondary seizure spread more likely in males (McHugh 2008).

It is difficult to interpret our findings as the cause of epilepsy was not recorded or investigated. However, it may indicate that the population are more concerned about females suffering from this disorder and they want to treat it or may indicate that this illness is more common in females in Iraq. It can also be interpreted by the fact that females are more interested or obedient to participate if asked by their doctor, although this cannot be ascertained because there was no record about patients who refused to participate.

Table 1. Descriptive data regarding epileptic patients (n=100)

Parameters	Mean ± SD	Range	
		minimum	Maximum
Age (years)	30.95±13.14	18.0	70.0
Duration of epilepsy (years)	5.22±5.07	1.0	20.0
HAD-Score	17.51±9.28	2.0	36.0

Table 2. Relationship between sociodemographic characteristics and HAD-score of the study sample (n=100)

Variables	No.	%	HAD-score Mean ± SD	P-value*
Gender				
Male	45	45.00	17.7±10.1	0.829
Female	55	55.00	17.33±8.68	
Residence				
Urban	75	75.00	17.52±9.39	0.985
Rural	25	25.00	17.48±9.13	
Education				
Illiterate	21	21.00	24.14±7.84	0.0001**
Primary school	54	54.00	17.00±9.06	
Secondary school	19	19.00	15.32±7.74	
University	6	6.00	5.83±2.04	
Therapy				
Carbamazepine	76	76.00	16.55±9.26	0.009
Polypharmacy	18	18.00	22.83±7.96	
Valproate	4	4.00	9.75±7.58	
Gabapentine	1	1.00	---	
Phenyton	1	1.00	---	

* Independent t-test for two means was used; ** One way ANOVA-test for more than two means was used

It is very interesting to note that duration of illness and progression in age are both associated with a higher HAD score which indicates that epilepsy has its cumulative long term effect on the life of patients. This may result from its physical effects, in the form of a degenerative process, psychological effects, in the form of continued stress and suffering with the threatening loss of consciousness and facing hazards, and social effects, in the form of stigma, unemployment, social exclusion and marital problems which may lead to divorce in extreme circumstances.

Our findings demonstrated that polypharmacy is associated with a greater psychiatric morbidity compared to monotherapy, which again indicates the severity of the condition and shows that physical state is related to psychological wellbeing. Having said that, some may argue that the side-effects of polypharmacy have its toll on the patients. This is consistent with similar Western studies (Richardson 2004).

It is again interesting to find that three-quarters of our sample came from urban background which indicates that rural areas may be disadvantaged because of lack of transport facilities or because of lack of education, or may be because of the popular belief that epilepsy is a faith healer specialty rather than a medical one.

The present study indicated that high HAD score is inversely proportional to the level of education. The less educated the patient, the more likely he/she is to suffer from the psychological sequelae, as he is less able to

compensate and perhaps finds it difficult to keep a job or a relationship. He/she may also be less capable of managing his illness i.e. taking his medication or avoiding exacerbating factors, compared to the more educated. This is consistent with Iranian epidemiological studies of epilepsy (Mohammadi 2009).

CONCLUSION

The present study has shown some interesting findings which need to be looked at more carefully and in depth, in order to be able to draw more objective and comprehensive conclusions about the manifestations and complications of this very interesting and debilitating illness.

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Contribution of individual authors:

Khalid Omar Sultan: Data collection and collating the results.

Bashar Shaker Mahmood: Data collection.

Zainab Najim: Writng and editing.

Dhiher Jameel Al-Habboo: Data collection.

Hellme Najim: Design the study, choosing the questionnaire and writing and editing.

References

1. Devinsky O. Psychiatric comorbidity in patients with epilepsy: implications for diagnosis and treatment. *Epilepsy Behav* 2003; 4(suppl 4):S2–10.
2. Gaitatzis A, Trimble MR, Sander JW. The psychiatric comorbidity of epilepsy. *Acta Neurol Scand* 2004; 110:207–220.
3. <http://www.news-medical.net/health/Electroconvulsive-Therapy-History.aspx>
4. McHugh JC, Delanty N. Epidemiology and classification of epilepsy: gender comparisons. *Int Rev Neurobiol* 2008; 83:11-26
5. Mohammadi MZ, Davidian H, Noorbala AA. (2009) An epidemiological survey of psychiatric disorders in Iran. *Clinical Practice and Epidemiology in Mental Health* ceased in cooperation with Bio Med Central. To access the new site, please visit <http://benthamscience.com/open/cpemh/openaccess2.htm>.
6. Richardson SP, Tomaszewski SF, Lima RIII & T Alsaadi TM. Improvement in seizure control and quality of life in medically refractory epilepsy patients converted from polypharmacy to monotherapy. *Epilepsy and Behavior* 2004; 5;3:343–347.

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