A Cross-Sectional Study of Quality of Life among Subjects with Epilepsy Attending a Tertiary Care Hospital

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ABSTRACT

Introduction: Epilepsy is a chronic disorder associated with profound physical and psychological consequences leading to impaired quality of life (QoL). Evaluation of the QoL among epileptics would throw light on various factors that impair or affect the QoL in such a population.

Aim: To study the QoL among epileptic patients attending outpatient departments of a tertiary care hospital and to identify various factors that affect the QoL in such a population.

Materials and Methods: A cross-sectional observational questionnaire based study, including patients with epilepsy, who were on antiepileptic drugs, on follow-up for minimum one year, aged more than 18years, both sexes and who were seizure free in the previous 24hours. The World Health Organisation Quality of Life (WHOQOL-BREF) questionnaire was administered to those included in the study. The data was analysed using Statistical Package for Social Sciences (SPSS) version 20 and statistical tests like t-test for independent variables and Analysis of Variance (ANOVA) were used to compare the QoL scores.

Results: Of the 98 subjects 61.2% were males, majority were educated upto high school level and most of them were employed in unskilled labour. The mean total QOL score was 53.9 (15.8). There was a significant lower mean total QOL score among people with low educational status and poor seizure control.

Conclusion: Epilepsy is a syndrome associated with chronic drug use and regular long term follow-ups to hospitals. These treatment and disease associated problems affects the QOL of the subjects significantly in various squares of life. We found that a lower education and having seizure in the recent past affected the QOL scores.

INTRODUCTION

Epilepsy is a common neurological condition and is a public healthcare concern in terms of the burden of the disease, nature of illness accounting for a sizeable morbidity and economic loss [1-3]. Epilepsy can affect the Quality Of Life (QOL) due to the need for regular medications, their side effects and also due to prejudices and social conventions that still surround it [4].

Epilepsy can be associated with profound physical, psychological and social consequences and overall the QoL was worse in patients with epilepsy than in the general population [1,5]. The World Health Organization (WHO) defined QOL as an 'individual's perceptions of his position in life, in the context of the culture and value system in which he lives and in relation to his goals, standards and concerns [6].

Growing recognition of the importance of the psychosocial effects of epilepsy it has led to the need to quantify QOL in affected individuals. Hence, appropriate use of Antiepileptic Drug (AED), combined with assessment of QOL and monitoring of adverse effects are important in the management of epilepsy to achieve optimal seizure control [1].

Since QOL has on impact on the outcome, our study focuses on the QOL of epileptic subjects attending outpatient departments of a tertiary care hospital.

MATERIALS AND METHODS

After obtaining the institutional ethical committee clearance we conducted a cross-sectional questionnaire based study in the outpatient departments of Neurology, Medicine and Psychiatry departments of KR Hospital attached to Mysore Medical College and Research Institute. The study was conducted over a period of one year three months from June 2014 to September 2015.

The sample size was calculated using 5% prevalence and 5% margin and found to be 73. As per the inclusion criteria patients with epilepsy, who were on antiepileptic drugs, on follow-up for minimum one year, subjects aged more than 18years, both sexes and subjects who were seizure free in the previous 24hours were included in the study. The questionnaire was administered to only adults aged more than 18years and literates. Subjects with comorbid conditions like psychotic disorder, mental retardation, dementia in elderly, depression, those with acute symptomatic seizure secondary to strokes, head injuries, neuro infection, brain tumors, metabolic causes such as hepatic failure, renal failure, cardiac failure and subjects who have had recent brain surgery were all excluded from the study.

After obtaining written informed consent the required demographic data like the age, gender, educational status, marital status, occupation and monthly family income were collected in a preformed proforma. The clinical data like the diagnosis, seizure frequency, drugs used in therapy were also collected in the proforma. The seizure control was considered to be good in case of zero seizures and poor in case of one or more seizures in the six months prior to the interview.

We used the World Health Organisation Quality of Life (WHOQOL-BREF) questionnaire [7] Kannada version, obtained from National Institute of Mental Health and Neurosciences (NIMHANS) to assess the QOL of the subjects. The questionnaire has 26 questions and four domains which are physical, psychological, environmental and social [7]. The questionnaire was self-administered to the subjects.

As per the WHO user manual, raw scores for the domains of the WHOQOL-BREF questionnaire were calculated by adding values of each item and were transformed on the scale ranging from 0 to 100, where 100 is the highest and 0 is the lowest QOL. The

mean score of each domain and the total score were calculated [7]. Higher scores denoted higher QoL.

STATISTICAL ANALYSIS

The data was analysed using the Statistical Package for Social Sciences (SPSS) 20 version. Descriptive statistics were used for demographic details and inferential statistical tests like the t-test for independent variables were used to compare between the QOL scores among various socio-demographic factors. Analysis of Variance (ANOVA) was used for comparison of the QOL scores among various diagnostic groups.

RESULTS

A total of 136 patients who fulfilled the inclusion criteria were recruited in to the study. Out of the 136, only 98 were taken for analysis and 48 were excluded due to > 20% data missing.

[Table/Fig-1] shows the demographic details of the respondents. The age of the respondents ranged between 18–68years with majority seen in the 21–30years (30.6%). Most of the respondents were males (61.2%) and 53.1% were married and living with spouse. Nearly 2/5th of the study population had an educational qualification up to high school. The occupation of majority of the respondents was unskilled labour (31.6%).

Age in years	Percent (%)
<20	18.4
21-30	30.6
31-40	26.5
41-50	13.3
51-60	9.2
61-70	2.0
Gender	**Percent (%)**
Male	61.2
Female	38.8
Marital status	**Percent (%)**
Married	53.1
Unmarried	42.9
Separated	3.1
Widow/widower	1.0
Education	**Percent (%)**
Primary	12.2
Middle	18.4
High school	38.8
Higher secondary	13.3
Graduation/Post Graduation	17.3
Occupation	**Percent (%)**
Student	16.3
Home maker	13.3
Skilled labour	23.5
Unskilled labour	31.6
Unemployed	15.3

[Table/Fig-1]: Demographic details.

Domains	Range	Mean	Std. Deviation
Physical Domain	94 (6-100)	57.7	19.1
Psychological Domain	100 (0-100)	54.6	21.8
Social Domain	100 (0-100)	53.2	22.7
Environmental Domain	81 (0-81)	50.2	16.4
Total QOL	79.75 (6.25-86)	53.9	15.8

[Table/Fig-2]: The mean quality of life score.

Factor		Mean QOL scores	p-value
Age (years)	≤40	55.3±15.5	0.134
	>40	49.7±16.3	
Gender	Male	51.5±16.8	0.057
	Female	57.7±13.4	
Marital status	Married	52.9±16.5	0.479
	Single/ separated	55.1±15.2	
Education	Up to high school	51.4±16.6	0.016
	Above high school	59.7±12.3	
Per capita income	< 1000	56.2±15.5	0.356
	>1000	52.9±16.0	
Seizures in 6 months	No	58.1±15.3	0.005
	Yes	49.2±15.2	
Duration of treatment (years)	< 10y	53.8±16.7	0.939
	> 10y	54.1±14.1	
Diagnosis	Unknown	52.2±15.8	0.787
	Generalised seizures	55.1±14.7	
	Focal seizures	53.2±15.8	
Number of drugs	1	56.2±13.8	0.071
	>1	50.3±18.2	

[Table/Fig-3]: The quality of life score with respect to various factors.

[Table/Fig-2] shows the mean and Standard Deviation (SD) scores of WHOQOL – BREF domains. The highest mean score was seen in the physical domain followed by the psychological domain. The mean total QOL score was 53.9 (15.8).

[Table/Fig-3] shows the total QOL scores with respect to different socio-demographic and clinical characteristics. There was a significant lower mean total QOL score among people with low educational status and poor seizure control.

DISCUSSION

Effect of epilepsy on the QoL of the patients is enormous. Epilepsy interferes with the education, occupation, socio-economic status of the subjects leading to lower QoL.

The mean total QOL scores in our study was 53.9±15.8 which was higher than other similar study conducted in Tamil Nadu (51.49) [2]. The score was lower than Rakesh et al., (63.05) [3] conducted in Tamil Nadu and Minale Tareke Tegegne et al., (56.36) conducted in Ethiopia [8].

The pattern of domain scores in our study showed a higher mean score in the physical domain followed by the psychological domain. The least score was seen in the environmental domain. Similar studies conducted on epileptic subjects using WHO-QOL BREF questionnaire differed from our findings by showing higher scores in social domain in Ashwin M, higher scores in psychological domain in Rakesh et al., and higher scores in social domain in Minale Tareke Tegegne et al., (56.36) [2,3,8].

In our study various socio-demarphic and clinical characteristics were compared for the QOL scores. We found significantly high scores among people who had good seizure control and those with higher educational qualifications. QOL scores were low among the older subjects. Similar results were found by Shetty et al., who found a negative correlation with increasing age [9].

Effect of education on epilepsy is interlinked. Epilepsy affects education negatively by causing drop outs from school and affects the financial status and social status of the subjects. But higher levels of education have a positive effect on the treatment and overall perspective of the disease by allaying the stigma associated with the disease and allowing better compliance. Similarly our study has shown a significantly higher score among those with higher levels of education.

Seizure control again is an important factor because poor seizure control would lead to a constant strain due to seizure worry which can affect the QOL of the subjects. Seizure episodes can be unpredictable and the falls associated could have an effect on the mobility and regular life of the subjects. Our study found a significantly lower mean total QOL scores among those with poor seizure control when compared to the good seizure control group. This finding was similar to other studies like the G. A. Baker et al., and Norsa'adah et al., and Thomas S.V et al., [10-12].

LIMITATION

The data from 48 subjects could not be included for analysis due to >20% data was missing.

CONCLUSION

Epilepsy being a chronic syndrome affects QoL of the subjects and also the various socio-demographic and clinical characteristics affect the QOL. Thus efforts should be undertaken to control seizures and improve the overall QoL of the subjects in order to achieve a higher compliance and treatment success rates.

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