



Original Research Article

COMPARATIVE STUDY OF QUALITY OF LIFE AMONG EPILEPTIC AND HYPERTENSIVE PATIENTS

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Abstract

A prospective cross-sectional study was conducted through patient reported outcomes of the therapy in epileptic and hypertensive patients for the period of two months at B.P.Koirala Institute of Health Sciences, Hospital, Dharan. 52 epileptic and 60 hypertensive patients were analyzed with mean±SD ages 23.69±7.61 and 60.68±14.34 years old respectively. Out of which 53.85% and 46.66% were male in epilepsy and hypertension respectively. The Mean±SD (HRQOL) 60±17 was found in epilepsy and 59±6 in hypertension. Social function, scored 61 out of 100, was highly reduced in epilepsy than in hypertension whereas role limitation due to physical function is comparatively reduced in hypertension than epilepsy, although there were no significant difference between mean HRQOL of epilepsy and hypertension (P>0.05) with correlation -0.084 in paired samples T-test. There were no variations in HRQOL by gender in both groups after having drug therapy in both categories. Independent sample T test (P>0.025) showed that there were no significant differences in mean HRQOL and every domains of HRQOL of epilepsy with cut point 20 years. But physical functioning, energy level and general health were significantly (P<0.035) different in between age group ≥ 50 and < 50 years with hypertension. The study concluded that the Health Related Quality Of Life is low in both epilepsy and hypertension than general population regardless gender and age. In hypertension a decrease in QOL was observed with age, only in relation to physical and psychological health rather than other health domains but in epilepsy there were no significant variation in health domains of HRQOL by gender and age.

Keywords: Epilepsy, Quality of life, Domains

INTRODUCTION

About 45 to 50 million patient all over the world are suffering from epilepsy.¹⁻³ The International League Against Epilepsy (ILAE) and World Health Organization (WHO) emphasize on the removal of barriers to a better life for those with this disease.⁴⁻⁷ In 2000, it was estimated that 972 million adults; nearly 26.4% of the adult population had HTN worldwide.⁸ The number of adults with HTN in 2025 is predicted to increase by 60% to 1.56 billion.⁹ These chronic diseases are social burden that affect the health related quality of life. Epilepsy is a neurological disease

while hypertension is a non-neurological disease, the comparison between these two with different etiological origin will help to develop decision tree for treatment. There are different definitions for quality of life (QOL) and health which relate these two together. Happiness and satisfaction with life are usually considered as the definition of QOL. It is obvious that QOL bears different meanings to different people. Nowadays, patients self assessment of their health status is considered as the basis for evaluation of QOL using standard questionnaires.⁷ QOL

could be used as a surrogate endpoint for survival in clinical trials.⁸ Quality of life (QoL) is a ubiquitous concept that has different philosophical, political and health-related definitions. Health-related QoL (HRQoL) includes the physical, functional, social and emotional well-being of an individual. HRQoL is a patient-reported outcome usually measured with carefully designed and validated instruments such as questionnaires or semi-structured interview schedules.⁸

Many studies have shown that people with well controlled or newly diagnosed epilepsy have a lower QOL than do well people, but function quite normally. Quality of life in epilepsy has become a critical measure in health care⁹ due to the increased use in clinical research and practice.^{10, 11} Quality of life had given rise to numerous discussions and debates in health care since late 1980 throughout the world. QOL had under gone a marked change from well-being of patients with chronic health care problems to an important outcome measure.^{12, 13} The study aims to assess and compare health related quality of life among epileptic and hypertensive patients

METHODOLOGY

B.P. Koirala Institute of Health Science is a teaching hospital located in the eastern region of Nepal. It is a tertiary referral center for the eastern area and serves the population with low socio-economic status. A prospective and cross sectional study was conducted on the patients who were clinically diagnosed as epilepsy with ECG and hypertension with measured sitting Systolic BP/Diastolic BP more than 140/100 mm Hg, who were dispensed antiepileptic and antihypertensive drugs respectively for two months and assigned to follow up after two months from initiation on medications. Then Patients were interviewed in face to face interaction to record patient reported outcomes after written consent form was obtained. The patient reported outcomes of the therapy in epileptic and hypertensive patients were analyzed by using semi-structured questionnaire QOLIE-31 and SF-36 respectively to assess the QOL. The translation of QOLIE-31 and SF-36 in Nepali version were done by two individuals who are fluent in both English and Nepali language. The Nepali version of QOLIE-31 and SF-36 were back Translated into English to ensure that the meaning and comprehension of the original version were retained. Pretests were conducted on 10 patients with either epilepsy or hypertension.

This multi-purpose, short-form health surveys Were comprised of 31-36 questions which provide an eight-scale profile (domains) of functional health and well-being scores (physical function, role function, bodily pain, general health, vitality, social functioning, emotional well-being and mental health) as well as composite physical and mental health summary measures, and a preference-based health utility indicators. The total score of every domains

(T score) were converted into percentage out of maximum possible total score of each domain (100). The epileptic patients who were visited at department of psychiatry, BPKIHS, Dharan from July 2011 to December 2011 and hypertension patients who were visited department of medicine, BPKIHS, Dharan from January 2012 to June 2012 were enrolled for the study.

Inclusion criteria: A patients taking antiepileptic or antihypertensive agents for at least 2 months with age above 10 years of age.

Exclusion criteria: Patients with other neurological illness, mental retardation and other chronic illness.

RESULTS:

Out of a total of 113 participants, 112 who fulfill all inclusive and exclusive criteria were analyzed. 52 were grouped as Epileptic Patients and 60 respondents were Hypertensive Patients. The age of respondents ranged from 11 to 55 years old with 23.69 ± 7.61 (mean \pm SD) years and 33 to 90 years old with 60.68 ± 14.34 (mean \pm SD) years in epilepsy and hypertension respectively. In epilepsy 28(53.85%) were male and 24(46.15%) were female while in hypertension 28(46.66%) were male and 32(53.33%) were female.

T-score for social function (61) was highly reduced in epilepsy than in hypertension. But T-score for role limitation due to physical function is comparatively reduced in hypertension than epilepsy although there were no significant difference between mean HRQOL of epilepsy and hypertension ($P > 0.025$) with correlation - 0.084 in paired samples T-test. But role limitation due to physical function, role limitation due to emotional well being, energy level, emotional wellbeing and social function are significantly different in between epilepsy and hypertension. Table no. 1 shows the difference in individual T scale of domains between epilepsy and hypertension.

Among all parameters, T-score for emotional wellbeing was highest in both male (n=42) and female (n=34) and lowest in role limitation due to emotional health (25) in male but in case of female lowest in role limitation due to physical health (22) among hypertensive patients. Similarly Role limitation due to physical health was highest score in male as well as female in epilepsy. There was no difference in HRQOL significantly ($P > 0.025$) between male and female with epilepsy. Role limitation due to emotional wellbeing was significantly different in male and female with hypertension ($P < 0.035$), other differences in remaining domains were not significant in hypertension. Table no. 2 shows the differences in HRQOL among male and female. Most of the patients were between the age group of 50-59(n=19) years old with average HRQOL 60 and lowest number of patients were between the age group

of 90-100 (n=1) years in hypertension. In epilepsy, most of the patient were belong to age group of 20-29(n=27) years with average HRQOL 59. Independent sample T test (P>0.025) showed that there were no significant differences in every domains of HRQOL of epilepsy when 20 years

were used as cut point. But physical functioning, energy level and general health were significantly (0.035) different in between age group 50 and < 50 years with hypertension

Table no. 1 Comparison of different scales between epilepsy and hypertension

Domains	Epilepsy(n=52)				Hypertension(n=60)			
	Min.	Max.	Mean	SD	Min.	Max.	Mean	SD
Total HRQOL	13	86	60	17	40	81	59	6
Energy level	20	100	53	18	10	100	65	23
Emotional well being	33	100	75	13	12	100	64	25
Physical function	20	100	51	15	0	100	60	34
Role limitation due to Emotional wellbeing	32	100	49	17	0	100	58	22
Role limitation due to Physical function	20	100	71	17	0	100	50	22
Social function	33	100	61	15	12	100	75	22
Pain Perception	20	100	57	19	0	100	51	32
General health	20	100	61	19	5	95	51	26

Figure no. 1 Comparison of Quality of life

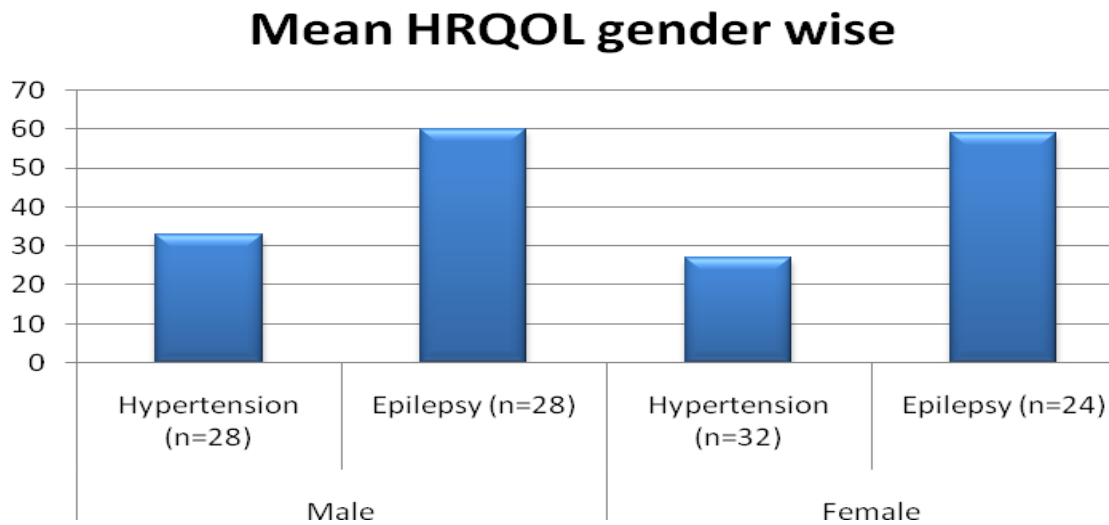


Figure no.2 Mean HRQOL scores in male and female

Table no. 2 Comparisons of HRQOL between male and female (n=112)

Sex	Male		Female	
	Hypertension (n=28)	Epilepsy (n=28)	Hypertension (n=32)	Epilepsy (n=24)
Role limitation due to physical Health	28	73	22	67
Energy level	36	54	29	52
Emotional well being	42	64	34	66
Physical health	33	50	27	52
Role limitation due to emotional health	25	59	23	57
Social functioning	41	64	33	57
Pain perception	27	54	24	61
General Health	28	60	23	62

Table no.3 Variation of health domains of QOL by age

Age	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	
	Epilepsy (n=15)	Epilepsy (n=27)	Hyper- tension (n=5)	Epilepsy (n=10)	Hyper- tension (n=8)	Hyper- tension (n=19)	Hyper- tension (n=10)	Hype- tension (n=12)	Hyper- tension (n=5)	Hyper- tension (n=1)
Role limitation due to physical function	72	70	55	69	62	50	57	39	50	50
Energy level	49	53	79	58	80	63	59	60	70	35
Emotional wellbeing	67	63	91	67	79	78	63	75	76	60
Physical health	49	49	71	59	87	67	54	42	52	0
Role limitation due to emotional health	63	55	60	58	45	45	33	61	60	66
Social functioning	66	61	82	53	88	80	75	62	77	25
Pain perception	56	60	60	50	68	49	69	35	44	0
General Health	59	62	60	60	68	48	52	41	57	25

DISCUSSION

The assessment and comparative study of health related quality of life in between epilepsy and hypertension is underdeveloped and continuous investigation is necessary for its understanding. As previous researches showed, the HRQOL among hypertensive and epileptic patients were comparatively and significantly lower than general population.¹⁴⁻¹⁷

Mean age of epileptic respondents was 23.69±7.61 which is slightly lower than the population studied in Tehran where

the mean age was 32.6±11 years old.¹⁸ 53.89% of epileptic patients were male which is similar result (54.50%) obtained by the study carried out in Iran.¹⁸ In case of hypertension the mean age was 60.68±14.34 years old that represent similar result in other studies carried out in Vietnam(65.8 ±9.9 years).¹⁹⁻²⁰ In hypertension 46.66% were male but an investigation done by Ha et al showed 40.70%.¹⁹

Our investigation revealed that the mean ±SD total QOL score was found as 60±17 in epileptic similar as result obtained 61 ±12 in India²⁵ and 59±6 in hypertension comparatively low score than result obtained 74±25 and

72±15 in other research in America.^{26, 28} These findings indicated that mean QOL are very low in epilepsy and hypertension.²⁷

In our study analysis of how the domains scores varied according to sex and age yielded some conclusive results. In our study the average quality of life were not affected significantly by gender in epilepsy as well as in hypertension. But the role limitation due to emotional well being in hypertension was significantly difference in between male and female which showed contrast with the results obtained by the study in Vietnam^{20, 21, 22} and other countries.^{23, 24}, showed variation in QOL by genders in hypertension. Mean QOL scores were not varied significantly in epilepsy that is agreed with the result obtained by Rakesh PS et al.²⁵

Increasing age did not show low QOL except role limitation due to physical function and emotional function, social function in epileptic patents which is slightly differ from QOL in India.²⁵ In hypertension a decrease in QOL was observed with age, only in relation to physical and psychological health rather than other health domains, that is concordance with other previous results.^{20, 24}

CONCLUSION

The Health Related Quality Of Life is low in both epilepsy and hypertension than general population regardless gender and age. In hypertension a decrease in QOL was observed with age, only in relation to physical and psychological health rather than other health domains but in epilepsy there were no significant variation in health domains of HRQOL by gender and age.

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