

Frequent seizures and polytherapy impair quality of life in persons with epilepsy

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Background and Objective: Developing countries account for 85% of persons with epilepsy, but receive only 15% of total amount of antiepileptic drugs (AED) distributed in the world. More than 80 per cent of those living in such locations do not receive any AEDs. Careful evaluation of pharmacotherapy, seizure control and quality of life (QOL) is necessary to improve epilepsy care but such data are sparse from developing countries. This study aims to audit the pharmacotherapy, seizure control, QOL and identify factors that influence QOL in a cohort of persons with epilepsy attending a tertiary referral epilepsy center in India.

Methods: Persons satisfying ILAE criteria for epilepsy attending the epilepsy program of this institute and aged more than sixteen years were interviewed with a standard questionnaire and adapted version of Quality of Life in Epilepsy – 31 (QOLIE-31). Clinical data was extracted from medical records. Persons with disability attributable to causes other than epilepsy, and pregnant women were excluded. Chi-square test, analysis of variance (ANOVA) and multiple regression analysis were carried out for statistical significance.

Results: One hundred and twelve patients with epilepsy (59 males, 53 females; age 31 ± 11 years) were studied. There were 47 persons (42%) with generalized epilepsy (GE) and 65 persons (58%) with localization related epilepsy (LRE). At entry 24 persons (21%) were not on treatment and 59 persons (65%) had frequent seizures. The mean delay in starting treatment was 3.3 ± 0.3 years. Reasons for treatment gap at the time of referral to this tertiary center were: Use of traditional medicines, non-disabling nature of seizures, different diagnosis and unaffordability of drugs. This is in contrast to the reasons observed in epidemiological studies: Different perceptions in different countries, lack of prioritization, lack of infrastructure, and cost and supply of AEDs.¹ At entry fewer persons were on monotherapy (46%) when compared to last follow up (74%). Current AEDs included carbamazepine 48 (43%), sodium valproate 40 (36%), phenytoin 20 (18%), clobazam 15 (13%), phenobarbital 13 (12%) and clonazepam 3 (3%). The annual cost of AEDs reduced to INR 1,898 (45 INR = 1USD) at the time of last follow up when compared to time of entry (INR 2,276). Seizure frequency reduced considerably at the time of last follow up with an Engel's score² $< 5 = 57%$ (0% at entry), score 5-6 = 36% (35% at entry), score $> 6 = 7%$ (65% at entry). QOLIE-31 scale ranged from 22.6 to 94.4 (mean 68.0 ± 15.8). All sub scores co varied. Occurrence of one or more seizures per month ($p=0.001$), polytherapy ($p=0.002$) and localization related epilepsy ($p=0.035$) had a statistically significant association with lower total score on QOLIE 31. Multiple regression analysis model (adjusted $r^2 = .147$) confirmed polytherapy (beta -0.196 , $p=0.041$) and frequent seizures (beta -0.281 , $p=0.003$) to be significant predictors of with lower QOL. Gender, type of epilepsy, duration of epilepsy or use of any specific AED did not influence the QOL.

Conclusions: Treatment gap for epilepsy can be considerable even at the time of referral to a tertiary care center, but the reasons for the same may be different. Frequent seizures and polytherapy are two significant factors that predispose a person to poorer QOL. Better control of seizures QOL can be offered at lower cost by judicious use of drugs preferably with monotherapy.

References

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