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EPILEPSY

Determinants of quality of life in epilepsy go beyond seizure-related variables

In patients with epilepsy, factors such as psychiatric comorbidities, depressive symptoms and adverse effects of antiepileptic drugs seem to have a more profound negative influence on health-related quality of life than do seizure-related variables, according to two recently published studies. The new findings could have important implications for epilepsy care, especially in cases where seizure freedom is not a realistic possibility.

As part of the NIH-funded Connecticut Study of Epilepsy, led by Anne Berg at Northwestern Children's Hospital, Chicago, USA, Christine Baca and colleagues conducted a 9-year follow-up of adolescents who had been diagnosed with epilepsy during childhood (mean age of epilepsy onset 4.4 years). Using the Child Health Questionnaire, the researchers obtained data on health-related quality of life from 277 child–parent dyads. Multiple linear regression models were used to examine the interrelationships between quality of life, epilepsy severity, and a range of comorbidities, including psychiatric diagnoses, neurodevelopmental disorders and migraine.

"We found that chronic comorbidities, particularly psychiatric disorders, are more strongly associated with worse quality of life than is 5-year remission status," explains Baca. "The independent effects of chronic comorbidities on quality of life nearly a decade after diagnosis of childhood-onset epilepsy has not previously been reported." On the basis of their findings, the researchers recommend that screening for psychiatric comorbidities should be incorporated into a comprehensive care strategy for individuals with childhood-onset epilepsy.

In the second study, Emilio Perucca from the University of Pavia, Italy, and colleagues explored the effects of adverse antiepileptic drug reactions and depressed mood on quality of life in patients with pharmacoresistant epilepsy. "Previous studies had established that people with pharmacoresistant epilepsy have poor health-related quality of life; however, there has not been any large study comprehensively investigating the many potential determinants of quality of life in this population," says Perucca.

The researchers recruited 809 adults with pharmacoresistant epilepsy, each of whom had been enrolled at one of 11 tertiary referral centers in Italy. The patients were asked to complete three questionnaires—the Quality of Life in Epilepsy Inventory-31 (QOLIE-31), the Adverse Event Profile (AEP) and the Beck Depression Inventory-II (BDI-II). The results were analyzed by means of multivariate linear regression models.

Perucca and colleagues discovered that depressed mood (BDI-II scores) and adverse effects of antiepileptic drugs (AEP scores) were the most reliable negative predictors of quality of life in their patient group. By contrast, epilepsy-related variables, such as seizure frequency, occurrence of tonic–clonic seizures, age of epilepsy onset, and disease duration, had no significant predictive value in this context. The researchers suggest that if seizure freedom cannot be accomplished, treatment of depressive symptoms and reduction of the burden of antiepileptic drug toxicity should be prioritized.

The findings from the Italian study represent the baseline data for a longer-term prospective study, in which the patient cohort has been followed up at 6-month intervals for a total of 18 months. "We are interested in finding out how many of these patients achieved seizure control following repeated medication changes, and how this affected their quality of life," explains Perucca. "Equally important, we want to assess whether, among patients who reported significant medication toxicity at baseline, the availability of the AEP questionnaire led to a reduced toxicity burden and improved quality of life."

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The Connecticut Study of Epilepsy is also continuing. "We plan on examining whether chronic comorbidities impact other long-term psychosocial outcomes at 13–14-year follow-up," says Baca. "Resolution of seizures does not necessarily mean that such comorbidities stop posing challenges in patients with epilepsy, thereby highlighting the need for future research directed toward understanding, identifying and treating comorbidities in children with epilepsy."

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Original articles Baca, C. B. *et al.* Psychiatric and medical comorbidity and quality of life outcomes in childhood-onset epilepsy. *Pediatrics* **128**, e1532–e1543 (2011) | Luoni, C. *et al.* Determinants of health-related quality of life in pharmacoresistant epilepsy: results from a large multicenter study of consecutively enrolled patients using validated quantitative assessments. *Epilepsia* **52**, 2181–2191 (2011)

Further reading Taylor, R. S. *et al.* Predictors of health-related quality of life and costs in adults with epilepsy. *Epilepsia* **52**, 2168–2180 (2011) | Baca, C. B. *et al.* Differences in child versus parent reports of the child's health-related quality of life in children with epilepsy and healthy siblings. *Value Health* **13**, 778–786 (2010)