Determints of Health-Related Quality of Life of Patients With Focal Epilepsy: A Systematic Literature Review

Michael H. Potashnik, MD1; Pamela Engenhart-Cabral1; Caleb March2; Jason Lerner, MD1; David Dill, PharmD3; Gil L’Italien, PhD1; Jordy Malamut, MD1

INTRODUCTION

This systematic literature review (SLR) identified multiple factors associated with (lower health-related quality of life (HRQoL)) in patients with focal epilepsy.

Depression and anxiety were among the most significant and frequent determinants of HRQoL change.

Other relevant and frequent determinants of HRQoL change included cognition, anti-seizure medication (ASM) adverse events (AE), seizure freedom, and employment.

A comprehensive understanding of the modifiable determinants of HRQoL is relevant to patient health and well-being and can inform clinical practice and observational/interventional studies.

OBJECTIVE and METHODS

FIGURE 1: PRISMA Diagram for Study Selection

The SLR was conducted in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines as summarized in Table 1.

Methods

Screening

Published reports

Quality of Life in Epilepsy Inventory 36

• N=19 HRQoL with epilepsy (10/19 [53%]), anxiety (9/19 [47%]), duration of disease (8/19, 68%), duration between seizures (6/19, 38%), and employment (5/7 studies)

• The commonly examined variables (in adjusted models) included depression (n=6/19 studies [31%]), number of AEs (n=6/19 [31%]), seizure frequency (continuous number; n=10/19 [53%]), and time between seizures, number of seizures (as a continuous number; n=13/19 studies [68%]), number of ASMs (n=11/19 [58%]), seizure frequency (as dichotomized by Engel class I [absence] vs II, II, I and IV [presence]; 3/4 studies), and employment (5/7 studies)

• Among the studies examined a wide range of demographic and clinical variables (n=28): demographic factors (sex, age, driving, education, and employment), clinical characteristics (history of temporal lobe epilepsy, surgery [yes/no], presence of general tonic-clonic seizures, presence of aura, and having HS), epilepsy-related factors (age of onset, disease duration, preoperative cognitive status, seizure frequency and freedom, time between seizures, number of AEs, number of ASMs, epilepsy severity/AE burden), comorbidities (presence of comorbidities, depression, anxiety, and psychiatric disorders), cognition (cognitive function/measurements, memory, and intelligence level), and executive function.

• Unique variables (n=5) were also explored in studies such as sleep, temperament, psychosocial function, religiosity/spirituality, and patient-perceived change.

CONCLUSIONS

• The most commonly examined variables (in adjusted models) included depression (n=6/19 studies [31%]), number of AEs (n=6/19 [31%]), seizure frequency (continuous number; n=10/19 [53%]), anxiety (n=6/19 [47%]), duration of disease (n=6/19 [47%]), and cognition (n=6/19 [47%]) (Figure 3).

• Depression, anxiety, and cognition were significant contributors to HRQoL in patients with epilepsy, while those were studied (13/19 [68%]), 6/19 (38%), and 5/7 (75%), respectively.

• In addition, several less frequent but impactful determinants of HRQoL were identified in adjusted models including ASM severity/AE burden (5/7 studies), attainment of seizure freedom (six studies), social support (six studies), and ASM severity/AE burden (six studies).

INTRODUCTION

• Identification of studies via other methods

• Literature Review

• All studies were conducted in subjects with focal epilepsy

• No restrictions

• The results presented herein reflect a status and a range of demographic, psychosocial, and epilepsy-related factors and medical comorbidities in patients with focal epilepsy.

• Studies were included based upon predetermined criteria (Table 1), and a consensus screening by two independent reviewers.

• Literature Review

• The determinants examined (as reported in the included studies) were selected (n=28) based on a priori criteria and a list of common factors identified in the literature.

• The studies examined a range of demographic and clinical variables (n=28): demographic factors (sex, age, driving, education, and employment), clinical characteristics (history of temporal lobe epilepsy, surgery [yes/no], presence of general tonic-clonic seizures, presence of aura, and having HS), epilepsy-related factors (age of onset, disease duration, preoperative cognitive status, seizure frequency and freedom, time between seizures, number of AEs, number of ASMs, epilepsy severity/AE burden), comorbidities (presence of comorbidities, depression, anxiety, and psychiatric disorders), cognition (cognitive function/measurements, memory, and intelligence level), and executive function.

• Unique variables (n=5) were also explored in studies such as sleep, temperament, psychosocial function, religiosity/spirituality, and patient-perceived change.

• All studies were conducted in subjects with focal epilepsy.