



Psychosocial factors associated with in postsurgical prognosis of temporal lobe epilepsy related to hippocampal sclerosis



Neide Barreira Alonso^{a,*}, Lenon Mazetto^a, Gerardo Maria de Araújo Filho^b, Marcos Vidal-Dourado^a, Elza Márcia Targas Yacubian^a, Ricardo Silva Centeno^c

^a Department of Neurology, Escola Paulista de Medicina/UNIFESP, São Paulo, Brazil

^b Department of Psychiatry, Escola Paulista de Medicina/UNIFESP, São Paulo, Brazil

^c Department of Neurosurgery, Escola Paulista de Medicina/UNIFESP, São Paulo, Brazil

ARTICLE INFO

Article history:

Received 23 June 2015

Revised 22 September 2015

Accepted 24 September 2015

Available online xxxx

Keywords:

Epilepsy surgery

Psychosocial follow-up

Adjustment

Quality of life

ABSTRACT

We examined the long-term psychosocial trajectory in a consecutive and homogeneous series of 120 patients followed up for five years after corticoamygdalohippocampectomy (CAH). Evaluation of psychosocial variables at baseline and at five-year follow-up were compared. After five years of CAH, a significant improvement in educational level ($p = 0.004$) and employment status ($p < 0.001$) was observed, although retirement ($p < 0.001$) and divorce ($p = 0.021$) rates increased. In a long-term follow-up, a tendency to have similar QOL profile was observed between Engel classes IA and IB ($p > 0.05$). A more favorable surgical outcome (Engel IA) was related to better psychiatric status ($p = 0.012$). Poor psychosocial adjustment before surgery was the most important predictor of QOL outcome ($p < 0.05$). Patients' trajectory after surgical treatment showed positive effects mainly in those with better seizure outcome. Our results emphasized the influence regarding baseline psychosocial functioning on postoperative psychosocial adjustment. Furthermore, many psychosocial gains and difficulties after surgery may be similar in developing and developed countries.

© 2015 Elsevier Inc. All rights reserved.

1. Introduction

Positive effects of surgical treatment of epilepsy on psychosocial status have been well emphasized in the literature mainly in patients who became seizure-free [1,2]. However, outcome results vary depending on several parameters, which usually include duration of follow-up, an objective definition of seizure-free allowing or not including auras, differences in patient populations undergoing surgical treatment from one center to another, influence of psychosocial factors, and long-term effects of natural epilepsy history [3]. Mesial temporal lobe epilepsy (MTLE) related to hippocampal sclerosis (HS) is the most frequent 'surgically remediable' syndrome, and in a recent study, 55.2% of patients became seizure-free after surgery with a follow-up of 5.4 years [4].

In the last two decades, clinical studies have focused on quality-of-life (QOL) improvement after temporal lobe surgery in follow-up intervals of <5 years [1,5,6] or longer [2,7–13].

The psychosocial evaluation after surgery has included employment status, vocational level, driving, independent living, cognitive functioning, emotional role, and psychiatric disorders as secondary parameters of surgery success. Thus, it is important to understand the relative influence of each one of these factors in the patients' perception of their QOL following surgical treatment. The cessation or significant reduction of seizure frequency does not fully explain improvements of emotional well-being, social functioning, and QOL [5,14–16].

Poor psychosocial adjustment is as disabling as seizures themselves [17], and patients, who are considered candidates for epilepsy surgery, with a history of long-standing psychological and social disability may continue to have functional disability regardless of surgical seizure relief [18–20]. Knowledge of the interplay between patients' presurgical psychosocial status and postsurgical psychosocial status has implications for prognosis regarding postoperative QOL gains. Cognitive impairment, psychiatric disorders, and psychosocial adjustment difficulties in addition to seizures can equally have an impact in patients' QOL [13,21,22].

In this prospective study, we examined long-term psychosocial follow-up in a consecutive and homogeneous series of patients with MTLE-HS after corticoamygdalohippocampectomy (CAH). Quality of life prognosis and interrelations with presurgical psychosocial adjustment, Engel's outcome, psychiatric disorders, and demographic and clinical variables were evaluated.

* Corresponding author at: Universidade Federal de São Paulo, Ambulatório de Neurologia, Rua Pedro de Toledo, 650, São Paulo CEP: 04039-032, Brazil. Fax: +55 11 5576 4136.

E-mail address: neide.bal@uol.com.br (N.B. Alonso).

2. Methods

2.1. Patients

This study included 189 consecutive patients who underwent CAH related to MTLE-HS in the Epilepsy Surgery Programme at Universidade Federal de São Paulo between July 2002 and July 2014. Postoperative psychosocial evaluation was performed at one, two, and five years after surgery. During this period, 42 patients discontinued the treatment before five years, seven died (one of SUDEP), and 20 were unable to answer the Epilepsy Surgery Inventory (ESI-55) instrument. The remaining 120 patients were followed up for five years. The subjects signed an informed consent, and the local ethics committee at Universidade Federal de São Paulo approved the study.

2.2. Presurgical assessment

All the 120 patients underwent the same protocol investigation, including detailed clinical history, psychiatric assessment interview (GMAF) using the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) Axis I criteria [23], neuropsychological and QOL evaluations, video-electroencephalographic monitoring, a 1.5-T MRI with unilateral HS, and HS on histopathological examination. Exclusion criteria included the presence of other clinical or neurological diseases besides epilepsy, psychosis diagnosis, cognitive impairments, bilateral HS, additional extrahippocampal abnormalities on MRI, and/or age younger than 18 years.

2.3. Psychosocial evaluation

Quality-of-life assessment before surgery included a semistructured interview, Beck Depression Inventory-BDI [24], and Epilepsy Surgery Inventory – ESI-55 [25]. The instruments were administered in a face-to-face interview to check the comprehensibility of the questionnaires. The semistructured interview comprised demographic, clinical, and psychosocial status in five main areas: *independent living*, *family relationships*, *social relationships*, *emotional well-being*, and *cognitive functioning*, as described in Table 1. We compared answers obtained through the semistructured interview prior to surgery and five years after CAH. The ESI-55 measure was validated for the Brazilian population [26], and for

this study, the following three domains were evaluated as suggested by Mikati et al. [27] and described in Table 1.

Determinants of poor adjustment to seizures were also included in the presurgical evaluation. The following seven determinants prior to surgery, five psychosocial and two clinical, were hypothesized indicators of unfavorable psychosocial outcomes. Psychosocial determinants were as follows: unemployment and no stable partnership in the last five years, lack of family support, lack of friendships in the community, dropout from school, and/or cognitive daily impairment. Psychiatric disorders and BDI scores > 17 points were considered clinical determinants of poor psychosocial adjustment before CAH. The presence of 50% of these determinants might be indicative of poor psychosocial outcomes.

2.4. Seizure outcome and psychosocial evaluation

Engel's classification was used to determine the surgery outcome [3]. For statistical analysis comparison, patients were categorized in four groups: Engel classes IA, IB, IC/ID, and others (Engel classes II–IV). Engel class I included patients free of disabling seizures; IA: completely seizure-free; IB: with nondisabling simple partial seizures only since surgery; IC: with some disabling seizures after surgery but free of disabling seizures for at least 2 years; and ID: with generalized convulsions with AED discontinuation. Engel classes II–IV included patients who remained with seizures. The ESI-55 and the semistructured interview served as parameters to evaluate psychosocial outcome at one, two, and five years after surgery. Semistructured interview assessed the subjective patient's opinion with respect to improve, worse, or no change in psychosocial areas at five years follow up.

2.5. Statistical analysis

Data were analyzed using SPSS 10.0 software for Windows. Results of psychosocial variables at baseline and those at five-year follow-up were compared. The Marginal Homogeneity Test evaluated means and standard deviation (SD) of demographic variables concerning educational level, marital status, and employment status. Engel's outcome, psychiatric disorders, QOL, semistructured interview, predictors of unfavorable psychosocial outcomes, and their interrelations were examined using the most adequate statistical test. Fisher's exact test or Student's *t*-test, one-way analysis of variance (ANOVA) with adjustment for multiple comparisons by least significant difference (LSD), and multiple analysis through logistic regression model were used. A multiple logistic regression model was performed in order to identify possible clinical and psychosocial predictors of QOL outcome after five years of surgery. Variables included in this initial model were poor psychosocial adjustment determinants, psychiatric disorders, BDI > 17 points, epilepsy duration, and HS side. Psychological determinants of poor adjustment before surgery were defined as follows: unemployment and no stable partnership in the last five years, lack of family support, lack of friendships in the community, dropout from school, and/or cognitive daily impairment. Statistically significant results were considered with $p < 0.05$ setting – the type I error (α) in $\leq 5\%$. The data distribution and the parametric tests ensured the control of the type I error in this study. Multiple comparisons adjusted by LSD with no *p*-value correction were performed based on previous studies of QOL in epilepsy surgery [28,29].

3. Results

3.1. Demographic data

The sample was composed of 120 patients, including 74 (61.7%) women, with a mean age of 38.3 ± 9.52 years at the time of surgery and 14.4 ± 7.42 years at seizure onset. Left HS was present in 76 (63.3%) subjects. After five years following CAH, significant improvements in educational level ($p = 0.004$) and employment status ($p <$

Table 1
Semistructured interview and Epilepsy Surgery Inventory (ESI-55) domains.

Semistructured interview	Description
Independent living	Self-sufficiency, ability to care for others, ability to assume responsibilities, ability to solve problems, and ability to make daily outdoor activities
Family relationships	Family support and interpersonal relationships
Social relationships	Ability to make friends, ability to go to churches, and ability to attend to parties or other community activities
Emotional well-being	Perception of negative feelings: pessimism, sense of failure, self-dissatisfaction, guilt, cry, irritability, and social withdrawal
Cognitive functioning	Impairment in remembering names or things, impact in work or daily activities, act of learning new things, and difficulty in remembering faces and places
ESI-55	
Well-being domain	Health perception (10 items), energy/fatigue (four items), emotional well-being (five items), pain (two items), and overall quality of life (two items)
Functioning domain	Physical function (10 items), social functioning (two items), and cognitive functioning (five items)
Role limitation domain	Role limitation due to physical (five items), emotional (five items), and memory (five items) problems

Download English Version:

<https://daneshyari.com/en/article/6010297>

Download Persian Version:

<https://daneshyari.com/article/6010297>

[Daneshyari.com](https://daneshyari.com)