Clinical determinants of psychopathological outcomes after epilepsy surgery

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Introduction

About one-third of people with epilepsy do not respond to adequate antiepileptic drug treatment[1], therefore, they are considered to have refractory epilepsy, a chronic and debilitating condition with a great impact on patients’ quality of life[2,3]. These people may be eligible for resective surgery, a procedure that is effective in the remission of seizures of about 70% of the cases[4] . After surgery, although most patients seem to achieve a general improvement, others develop de novo psychopathology or may worsen their previous psychiatric condition[5] .

The aim of this study is to determine the predictors of longitudinal changes in psychopathological symptomatology, one year after epilepsy surgery, considering clinical and demographic characteristics.

Methods

People with refractory epilepsy referred to epilepsy surgery were included in this ambispective study. Psychiatric evaluations were made before surgery and one year after the procedure. Demographic, psychiatric and neurological data were recorded. Linear regression was used to analyze longitudinal data regarding the Global Severity Index and 9 symptom dimensions of Symptom Checklist-90 (SCL-90).

Results

Seventy-six people were included. Bilateral epileptogenic zone, lack of remission of disabling seizures and Deep Brain Stimulation, targeting the anterior nucleus of the thalamus (ANT-DBS), were the most important predictors of an increase in SCL-90 scores, after surgery.

	Engel Class II (vs Engel I)	Bilateral epileptogenesis	Multilobar epileptogenesis	ANT-DBS
Somatization	1.32 (0.73,1.90)			
Obsessive-Compulsive	1.62 (0.61,2.62)			
Interpersonal sensitivity	0.88 (0.11,1.65)			
Depression	1.60 (0.69,2.51)			
Hostility	0.77 (0.13,1.41)		0.82 (0.05,1.59)	0.59 (0.14,1.05)
Phobic anxiety	0.94 (0.18,1.71)	Left: 0.71 (0.03,1.38) Right: 0.73 (0.08,1.38)		0.62 (0.06,1.19)
Paranoid Ideation	1.44 (0.66,2.23)	Left: 1.24 (0.55,1.94) Right: 1.06 (0.36,1.76)		1.17 (0.62,1.73)
Psychoticism	0.97 (0.22,1.73)			
Global Severity Index	1.19 (0.54,1.85)	Left: 0.65 (0.02,1.29) Right: 0.65 (0.02,1.28)		0.57 (0.02,1.11)

Table 1: Predictors of higher SCL-90 scores one year after surgery

Conclusion

Some individual factors may have an impact on the development or worsening of the previous psychopathology. This study identifies clinical aspects associated with greater psychological distress, after surgery. These patients may benefit from more frequent psychiatric routine assessments for early detection.

Bibliography

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