Correlation of Diagnostic Insight with Short-Term Outcome of Psychogenic Non-Epileptic Events

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Background

• Psychogenic non-epileptic events (PNEE) are episodes of altered motor, sensory, and mental function not associated with abnormal brain electrical discharges.

• Shen et al. (1990) emphasized the importance of communicating the diagnosis of PNEE with the patients, arguing for a tactful, empathetic, but unequivocal explanation.

• Subsequent studies have reported that about 20-45% of patients experienced remission of PNEE after learning of diagnosis and up to 50% of patients reported reduction in frequency of their episodes.

• There are limited data examining the prognosis of PNEE with the extent of diagnostic insight for this condition.

Methods

• We enrolled veterans admitted to the epilepsy monitoring unit at the Michael E. DeBakey VA Medical Center, Houston, TX, from December 2008 until June 2010 with a final diagnosis of PNEE.

• Detailed verbal discussion was done by the same examiner (DKC), disclosing a uniform set of diagnostic information for all patients prior to discharge.

• Each enrolled subject had a phone interview 1 and 3 months after discharge. They were asked to rate changes in their event characteristics and various aspects of their functioning as outlined below.

• For rating purposes, the patients were asked to use the following 5 score system:

  o 1: Much worse
  o 2: Worse
  o 3: No change
  o 4: Better
  o 5: Much better

• Patients were asked to rate the change in:

  o Frequency of their events
  o **Perception of severity** for their events
  o Their quality of life (QOL)

  o Their functioning in the following areas:

  ▪ Family affairs
  ▪ Health
  ▪ Occupational
  ▪ Social

• Furthermore, they answered 5 multiple choice questions (MCQ) pertaining to information that were discussed during the diagnosis disclosure. These MCQ assessed the patients' retention of the diagnosis explanation, as was verbally discussed at the time of discharge.

Results

• 34 patients were included in the study.

• Demographics of the patients is shown in the table below:

Demographics of the study patients		
Age		43 +/- 14.7 years
Gender	Male	27 (62.8%)
	Female	16 (37.2%)
Marital status	Married	30 (88.2%)
	Single	1 (3%)
	Divorced	3 (8.8%)
History of drug abuse		10 (29.4%)
History of abuse	Sexual	10 (29.4%)
	Physical	11 (32.3%)
	Both	6 (17.65)
History of psychiatric disorder	Axis I	30 (88.2%)
	Axis II	1 (3%)
Duration of events before diagnosis		4.7 +/- 8.8 years

• Mean score in multiple choice questions at month 1 and month 3 were 3.68 (+/- 1.46) and 3.58 (+/- 1.46), respectively (p=0.79).

• Outcome at month 1 interview:

Areas of change	Worse	Same	Better	Average score of change*
Frequency of events	5 (14.7%)	15 (44.1%)	14 (41.2%)	3.4
Perception of severity of event	6 (17.6%)	18 (53%)	10 (29.4%)	3.3
Family functioning	3 (8.8%)	26 (76.5%)	5 (14.7%)	3.0
Health functioning	5 (14.7%)	18 (53%)	11 (32.3%)	3.2
Occupational functioning	2 (5.9%)	30 (88.2%)	2 (5.9%)	3.0
Social functioning	2 (5.9%)	29 (85.3%)	3 (8.8%)	3.0
Quality of life	2 (5.9%)	26 (76.5%)	6 (17.6%)	3.1

* In scale of 1 to 5

• Outcome at month 3 interview:

Areas of change	Worse	Same	Better	Average score of change*
Frequency of events	2 (5.9%)	17 (50%)	15 (44.1%)	3.6
Perception of severity of event	2 (5.9%)	21 (61.8%)	11 (32.3%)	3.4
Family functioning	3 (8.8%)	24 (70.6%)	7 (20.6%)	3.1
Health functioning	3 (8.8%)	20 (58.9%)	11 (32.3%)	3.2
Occupational functioning	1 (2.9%)	31 (91.2%)	2 (5.9%)	3.0
Social functioning	4 (11.8%)	25 (73.5%)	5 (14.7%)	3.0
Quality of life	3 (8.8%)	23 (67.7%)	8 (23.5%)	3.1

* In scale of 1 to 5

• Correlation of multiple choice question scores with areas of change at month 1 and month 3 interview were as followed:

Areas of change	Pearson's r (Month 1)	p-value (Month 1)	Pearson's r (Month 3)	p-value (Month 3)
Frequency of events	**0.355**	**0.039**	**0.4277**	**0.012**
Perception of severity of events	0.3090	0.075	0.3266	0.1
Family functioning	**0.3282**	**0.042**	0.3569	0.12
Health functioning	**0.3817**	**0.026**	0.1702	0.336
Occupational functioning	0.1487	0.4	-0.04	0.817
Social functioning	**0.4289**	**0.011**	0.1890	0.284
Quality of life	**0.3815**	**0.02**	0.1632	0.356

Discussion

• The patient's score in answering the multiple choice questions were used as an indicator of patient's retention of insight about their diagnosis. There were no statistically significant difference between the scores achieved in multiple choice questions in month 1 and month 3 (p=0.79).

• We observed a statistically significant correlation between achieving higher score in multiple choice questions and the patient's improvement in frequency of events, both in month 1 and month 3 interviews.

• There were statistically significant correlation between achieving higher score in multiple choice questions and improvement in some areas of function at month 1. These correlations did not reach to statistically significant levels at month 3 interview. This suggests that even though the diagnostic insight is associated with initial improvement of patient's functioning in some areas, other factors are involved in maintaining the improvement. Over time, greater diagnostic insight, while correlating with decreased PNEE frequency, does not appear to correlate with more constructive levels of overall social functioning.

Selected References

• Shen W, et al. Presenting the diagnosis of pseudoseizure. Neurology. 1990; 40(5): 756-9.

• Kanner AM, et al. Psychiatric and neurologic predictors of psychogenic pseudoseizure outcome. Neurology. 1999; 53(5): 933-8.