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Psychiatric diagnoses of patients with psychogenic non-epileptic seizures

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Summary

Objective: Our purpose was to present and discuss the psychiatric diagnoses of patients who presented psychogenic non-epileptic seizures (PNES) during video-electroencephalographic monitoring (VEEG).
Methods: Out of 98 patients, a total of 28 patients presented PNES during the diagnostic procedure. In those cases in which the PNES that occurred during VEEG were validated by clinical history (clinical validation), and by showing the recorded event on video to an observer close to the patient (observer validation), was defined psychogenic non-epileptic seizure disorder (PNESD). Psychiatric diagnoses were made according to DSM-IV.
Results: In 27, psychogenic non-epileptic seizures disorder was diagnosed. Fourteen patients presented only with psychogenic non-epileptic seizure disorder, 13 with both psychogenic non-epileptic seizures disorder and epilepsy, and one patient with epilepsy only. Psychiatric diagnoses were: 17 (63%) patients with conversion disorder, five (19%) with somatization disorder, two (7%) with dissociative disorder NOS, two (7%) with post-traumatic stress disorder and one (4%) with undifferentiated somatoform disorder.
Conclusions: Dissociative-conversion non-epileptic seizures are the most frequent finding, representing the pseudoneurological manifestation of mental disorders that have these symptoms as a common feature. Provisionally, they may be defined as dissociative-conversion non-epileptic seizure disorders.

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Introduction

Non-epileptic seizures (NES) are characterized by recurrent seizures, attacks or fits that may be mistaken for epileptic seizures (ES) because of their semiological similarities, but that, nevertheless, are not caused by abnormal cortical discharges. They may be of physiologic or psychogenic (PNES) origin and the former are clearly more frequent. Studies on the prevalence of PNES show variable, but clinically significant results: from 5 to 33% of outpatients receiving treatment for epilepsy[1,2] and from 10 to 58% of inpatients treated for refractory epilepsy present PNES.[3–5] Prevalence in the general population is estimated from 2 to 33/100,000.[5] The only epidemiological studies in this field showed a yearly incidence of 1.4—3.0\100,000 of PNES in the general population.[6,7] According to Gates[8] such a significant difference in results may be explained by differences in diagnostic criteria for PNES.

For several centuries PNES and their manifold presentations have challenged and puzzled both psychiatrists and neurologists. From the 1980s onwards knowledge on PNES has grown significantly due to the widespread use of intensive video-electroencephalographic (VEEG) monitoring. Currently, VEEG is considered the ''gold standard'' for proper diagnosis of PNES. Strangely enough, the diagnosis of PNES does not have a nosological status, because it is considered as a mere provisional diagnostic stage, before the medical condition manifested as PNES is finally determined. A long list of mental disorders may present as PNES.[8] The purpose of this study is to present and discuss the psychiatric diagnoses of a group of patients that presented PNES during intensive VEEG monitoring.

Methods

From 2002 to 2006, 98 patients underwent prolonged intensive VEEG monitoring at the Laboratory of Clinical Neurophisiology of the Institute of Psychiatry of the Hospital das Clínicas of the University of São Paulo, Brazil. Out of these, a total of 28 patients presented PNES during the diagnostic procedure. Patients were submitted to VEEG for one of the following reasons: pre-surgical evaluation as part of an epilepsy surgery program, diagnostic elucidation of clinically refractory seizures and suspected PNES. Patients remained at the VEEG unit for variable periods, during which behavior and EEG activity were simultaneously registered for identification, characterization and quantification of events. Equipment utilized was digital Biologic Systems Corp., with Ceegraph PTI Version 6.72.06 software. We used the International Electrode System Placement with additional zygomatic and EKG electrodes. At first, basal records (sleep and wakefulness) with the usual activation procedures (hyperventilation and photostimulation) were obtained, while maintaining habitual anti-epileptic drug (AED) dosages.

In all patients in whom VEEG was carried out because of suspected PNES, and in all patients investigated for other reasons who presented spontaneous PNES, the following sequential steps were carried out as a research ''suggestion'' protocol for seizure induction: simple suggestion, suggestion interview, hypnotic induction with either intra or post-hypnotic suggestion, and intravenous placebo infusion (saline solution). As soon as a PNES was obtained the sequence was interrupted.

After this sequential procedure, AEDs were gradually discontinued and records were obtained for observation of events and EEG tracing changes, during periods considered long enough for diagnosis. In all patients in which PNES had been previously suspected or in which either spontaneous or provoked PNES were obtained, typical hospital stay in the VEEG unit was of 3 weeks (range from 1 to 6 weeks). Longer than usual monitoring periods were carried out to verify possible occurrence of epileptiform discharges in EEG tracings or of late ES following complete AED discontinuation.

An event occurring at any moment was defined as an ES when accompanied by unequivocal discharges or ictal EEG patterns before, during or soon after its occurrence otherwise it was defined as PNES. All recorded events were analyzed and shown to family members, so that they could confirm whether these events were or not present in the patient's daily life.

Some patients may, in extreme conditions, such as those in prolonged intensive monitoring by VEEG, present isolated PNES, without however constituting a clinical problem.[9] Only in those cases, configuring a *de facto* clinical problem, in which the PNES that occurred during VEEG were validated by clinical history (clinical validation), and by showing the recorded event on video to an observer close to the patient (observer validation), was considered as a present diagnosis, defined as psychogenic non-epileptic seizure disorder (PNESD). On the other hand, some patients with epilepsy may occasionally not present ES during prolonged intensive VEEG monitoring. In those patients from our sample in which ES did not occur, epilepsy was defined as present if and when unequivocal interictal epileptiform discharges (sharp waves, spikes or spike—wave complexes) were found, and when the occurrence of ES was confirmed by clinical and observer valida-