

Treatment for psychogenic non-epileptic seizures

The main differential diagnosis of epilepsy among young adults is psychogenic non-epileptic seizures. Such seizures may manifest themselves in very different ways and usually have complex root causes. Optimal treatment of persons experiencing seizures of this type requires close cooperation between the neurologist and the psychiatrist.

Psychogenic, non-epileptic seizures (PNES) are epileptic-like seizures that are not attributable to epilepsy. This is the main differential diagnosis of epilepsy in adolescents and adults (1, 2).

Aetiology

The aetiology is complex. It is thought that psychogenic factors (anxiety, dissociation, non-dissociative post-traumatic stress, sexual abuse, personality disorder, interpersonal difficulties, social and family problems) as well as somatic factors, such as chronic disease or intellectual disability may play a role.

The pattern taken by the seizures varies. PNES may resemble all types of epileptic seizures, from brief episodes of absence to major convulsive seizures. However, these seizures frequently last longer than epileptic seizures, which are usually over after 1–2 minutes. The condition is categorised under conversion disorders or dissociative disorders, possibly as «other unspecified seizures» within the ICD and DSM classification systems.

The condition may be regarded as «a behavioral response to mental, physical or social stress characterized by a temporary loss of control» (2). Many of those affected have lived for many years with a diagnosis of epilepsy and have taken anti-epileptic drugs. It is estimated that around 20% of patients referred to epilepsy centres for refractory epilepsy have PNES (3). It comes as a surprise to many that the seizures prove *not* to be a component of epilepsy.

The patient group is very heterogeneous. The condition is most frequently seen in young girls, but occurs in both sexes and at all ages. Many drop out of school and working life. Psychiatric comorbidity is common, and it is estimated that only 5% of those with PNES do *not* have a comorbid psychiatric condition (1).

Diagnosis

Diagnosis of conditions involving seizures can be challenging, and requires both knowledge and experience. A study showed an

average of seven years between seizure debut and diagnosis (4). The real gold standard of diagnostics is recording of seizures using video telemetry in conjunction with the medical history. Atypical seizure pattern combined with a lack of epileptiform activity on EEG during seizures reinforces the suspicion. Nevertheless, some epileptic seizures, particularly focal seizures with preserved consciousness and some seizures that originate in the frontal lobe, also occur without an EEG correlate.

A detailed case history including information from next of kin, with particular emphasis on the seizures (pattern, circumstances, frequency, duration) and psychosocial conditions, can further strengthen the suspicion (Table 1) (5–7). However, it is not always easy to reveal seizures during EEG recording, for example in patients for whom seizures occur only rarely. In some cases a definite diagnosis may thus only be made following observation over a long period (up to several months or years). The fact that 10–30% of epilepsy patients also have PNES further complicates the diagnosis (8).

How to communicate the diagnosis?

The diagnosis must be communicated in a respectful and empathic manner, and how it is communicated has been shown to have a bearing on the prognosis and coping with the condition (9, 10). Studies giving recommendations as to how this should be expressed are summarised in the guidelines for treatment of PNES (9). One of the recommendations is to explain the mechanisms involved in dissociation. This may help patients feel that they are being taken seriously and that the seizures are not a pretence (9, 11).

Detailed information about how such seizures can occur may sometimes help them to disappear (12). The objective is to create a shared understanding of the role played by both biological and psychosocial (predisposing, triggering and maintaining) factors. Patients who see a possible association between previous life events (as well as their current life situation) and the seizures, find

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MAIN MESSAGE

Psychogenic non-epileptic seizures are often a component of dissociative or somatoform disorders

Diagnosis may be difficult and recording of seizures using video EEG is often necessary

Communication of the diagnosis and a close collaboration between the neurologist and the psychiatrist is important for the prognosis

In our experience, psychotherapeutic follow-up for persons with seizures of this type is the optimal approach

Table 1 Some differences between epileptic tonic-clonic seizures and psychogenic non-epileptic seizures [5–7]

	Epileptic tonic-clonic seizures	Psychogenic non-epileptic seizures
Age	All ages	Primarily 15–35 years old
Sex	Both sexes	Primarily women (70–80%)
Occurrence while awake/asleep	Both while awake and asleep	In a wakeful state
Onset of seizures	Abrupt	Often gradual
Duration of seizures	Most often < 2 minutes	Often > 5 minutes
Eyes	Open	Usually closed
Motor activity	Symmetrical twitching	Usually asymmetrical movements
Tongue biting	Often	Seldom, may occur
Verbal response	Never	Sometimes
Postictal state	Confusion, drowsiness	Usually clear, awake
Amnesia	Always	Varying

it easier to accept the diagnosis and are more receptive to further treatment services (11).

Since the diagnosis is made in the neurology department, the task of communicating the nature of the seizures usually falls to the neurologist. Many neurologists may find it difficult to explain the causality of PNES to the patient, and it may likewise be difficult to tell them that the treatment will take place within the psychiatric health service (9, 13).

In contrast to the patients, many neurologists perceive the condition to be «purely a psychological problem» (14). Patients with PNES have generally experienced more negative life events than patients with epilepsy, but frequently find it difficult to see an association between such events and the seizures. If the neurologist insists that the symptoms have «mental» causes, the patient may react by rejecting the diagnosis (13). Based on our clinical experience, the more secure the doctor feels in a situation of explaining somatoform symptoms, the easier it is for the patient to understand PNES.

Treatment

Psychoeducation

Although the need for treatment varies, all patients should be offered psychoeducation, i.e. a therapy founded on pedagogical principles (15). At the Department of Refractory Epilepsy at Oslo University Hospital, recently diagnosed patients are offered follow-up which includes psychoeducative elements, individually or in groups. They acquire knowledge about their diagnosis and are given practical counselling in how to deal with seizures.

Patients may be referred from throughout the country, and waiting time is currently a few months. The Norwegian Epilepsy Association includes persons with PNES in its organisation, where they can meet others with the same diagnosis and thereby obtain greater insight into the condition.

Further treatment

Most patients with PNES will need treatment within the psychiatric health service (9). Rapid contact should therefore be made with the local services. Follow-up treatment should be given at local child and adolescent psychiatric centres, district psychiatric centres or with psychiatrists and psychologists in private practice. Some patients, particularly those with both epileptic and psychogenic non-epileptic seizures should also receive further follow-up from a neurologist.

It is essential to prevent patients being tossed around between the neurologist and the psychiatrist. Repeated rounds of non-indicated examinations or attempts at treatment are particularly to be avoided. When initiating treatment, the following should be ensured:

- Psychiatric assessment. A detailed psychiatric assessment will be able to reveal any underlying psychiatric diagnosis. Such an assessment will also enable exclusion of psychiatric differential diagnoses, such as panic attacks, and possibly reveal any psychiatric comorbidity as well as indication for treatment.
- Assessment of predisposing, triggering and maintaining mechanisms

In common with genuine epileptic seizures, PNES are perceived as a symptom, not as a disease. Assessment of predisposing, triggering and maintaining factors can contribute to a better understanding of pathophysiological mechanisms and is essential in order to initiate personalised treatment.

A female patient can serve as an example: She has a history of childhood abuse and in addition a serious somatic illness (predisposing factors). She has her first seizure immediately after an operation (triggering factor). The absence of a diagnosis and an increasingly difficult life situation which cause her to withdraw more and more due to fear of seizures reinforces the tendency to seizures (maintaining factors).

In our experience a seizure diary can be a useful tool in verbalising what happens to the body and the emotional state before, during and after a seizure. Patients who have these seizures are therefore encouraged to keep a diary of their seizures and use it together with the therapist to reflect on their situation.

Psychotherapy

There are no studies which show that one therapeutic method is better than another for this patient group. Cognitive behavioural therapy is the method most commonly in use, but psychodynamic models are also used (9).

If dysfunctional family relationships are a triggering and/or maintaining factor, the entire family should be involved in the therapy (9). With some knowledge of PNES and dissociative and somatoform disorders, most psychologists and psychiatrists will have a good basis for treating persons with these types of seizures.

Pharmacological treatment

In patients taking antiepileptic drugs, these should be slowly reduced until they are completely discontinued with the understanding of the patient. In patients with both PNES and epilepsy, dose reduction and preferably use of monotherapy should be considered, where possible. There is no pharmacological treatment that is specifically aimed at PNES.

Prognosis

There are few studies which have examined prognosis in relation to a given treatment, but several studies show that approximately two-thirds of patients still have some seizures 3–6 months after diagnosis (9). The prognosis is better in children than in adults (16).

As with epilepsy, freedom from seizures is the main objective of the treatment. Symptom relief in the form of enhanced quality of life and fewer mental difficulties are nevertheless important treatment goals

(10). Safe handling of seizures as well as avoiding acute administration of drugs and acute hospital admissions may reduce the risk of iatrogenic harm.

Driving vehicles

Doctors treating persons with seizure conditions should be acquainted with the legislation concerning driving of vehicles. A person with PNES with affected consciousness does not fulfil the health requirements to possess a driving licence. In order to regain or qualify for a driving licence, a person must have been seizure-free for one year.

For those who have seizures where consciousness is unaffected, the treating doctor must consider whether it is appropriate for the person concerned to drive a vehicle.

Conclusion

Providing patients with PNES with good treatment requires time, competence and close collaboration between the neurologist and the psychiatrist. As in all areas of medicine, successful treatment depends on correct diagnosis. Communicating the diagnosis in a respectful and empathic manner has a bearing on the prognosis.

Because the patient group is very heterogeneous, the treatment must be personalised. Psychotherapy is currently seen as the best-validated treatment.

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