



Are experiential epileptic prodromes non-convulsive status epilepticus?

Jørgen Alving¹, MD and Jesper Erdal², MD

¹Danish Epilepsy Center, Kolonivej 1, 4293 Dianalund, Denmark

²Department of Neurology, Rigshospitalet, Blegdamsvej 9, 2100 København Ø, Denmark

Aim of study:

1. To assess the percentage of patients with chronic epilepsy reporting prodromes (experiential symptoms lasting for at least 30 min. before seizures)
2. By acute video-EEG during prodromes to clarify whether prodromes were in fact non-convulsive status epilepticus

Results:

1. Occurrence of prodromes
23 patients (2.3 %) reported prodromes. 16 had focal epilepsy syndromes, and five had idiopathic generalized epilepsy (mainly juvenile myoclonic). Two cases could not be classified.
2. Ictal video-EEG was obtained in 5 patients
 - two showed clear EEG evidence of non-convulsive status epilepticus (NCSE) (see Figure 1)
 - in one, EEG findings were ambiguous.
 - two showed no alteration compared to baseline
 In the remainder, ictal EEG could not be performed due to practical problems.

Methods:

Definition

reproducible sensory and/or experiential symptoms, reported by the patient, occurring at least 30 min. before the seizure and not forming part of the seizure itself

Setting

two closely collaborating tertiary referral epilepsy centers

Inclusion

in- and out-patients aged 18 years and above

Exclusion

- significant occurrence of PNES (psychogenic non-epileptic seizures)
- mental deficiency precluding patient from explaining their symptoms
- seizure-freedom for an extended period before interview.

Number of cases

985 evaluable adult out- and in-patients, consecutively interviewed during a one-year period

The study comprised two parts:

1. interview by the treating physician, and subsequently by the authors
2. if possible, acute video-EEG in case of prodromes

Figure of EEG (A) during and (B) between prodromes



Conclusion

The 30-min. time window was set in order to define a condition of status epilepticus. It was the same as used by Hughes et al (1), but they found 30% patients reporting prodromes. In a German study (2), using a larger time window (hours to days), 8.6% had prodromes, and the Hungarian Multicenter Study on warning signs (3), using a much lower time limit, found 50% of patients with prodromes or aura (not subdivided). It is as if the shorter the time window, the higher the frequency of premonitory phenomena.

The findings in the present study, indicating a much lower prevalence of prodromes (2.3%) compared to the previous studies are difficult to explain,, but are in accordance with the clinical experience of the authors. Furthermore, quite a number of patients with generalized epilepsies reported prodromes. This was not described in the previous studies. The EEG from one of these patients (awakening GTCS) is displayed above.

To our knowledge, this study is the first attempt to clarify the possible rôle of NCSE in prodromes. This was confirmed in two out of five cases studied with acute video-EEG. For treatment reasons, this mechanism should be borne in mind in patients with experiential epileptic prodromes.

- 1) Hughes et al, *Seizure* 1993;2:201-203
- 2) Giuccioli et al 1989, *Epilepsie* 89, 29. Annual Meeting of the German Chapter of the ILAE, pp. 312-321.,
- 3) Rajna et al, *Seizure* 1997;6:361-368).