Migraine and epilepsy terminology and classification: opening Pandora’s box

To the Editor

Headache as a symptom of epileptic seizure is well documented (Verrotti et al., 2011; Parisi et al., 2013a; Parisi et al., 2013b). Published data suggest that ictal headache manifests with multiple and diverse symptomatology, such as a sensation of bifrontal pressure, vague ache in the head, sharp stabbing retro-orbital pains or a sensation of electricity passing through the head of varying intensity, discomfort, and localisation (Parisi et al., 2013b). As a rule, ictal headache is associated with other seizure symptomatology emanating from the affected epileptogenic zone (e.g. according to the current ICHD-II 7.6.1 criteria for hemicrania episptlica [HE]).

For this reason, ictal epileptic headache, as an isolated ictal manifestation, appears to be a rare and probably under-reported condition (Parisi et al., 2012a; Parisi et al., 2013b). Status epilepticus migrainosus has been described in a few cases of mainly occipital lobe epilepsy and its epileptic nature documented by ictal EEG recordings. Thus, epilepticus migrainosus is also considered as ictal epileptic headache, imitating migraine-like features (Belcastro et al., 2011).

The term “ictal epileptic headache” (IEH) has recently been proposed by our group to describe an EEG-recorded epileptic seizure with migraine/headache-like features (Parisi et al., 2012b). In particular, IEH is recognised as a headache (“as the sole ictal manifestation” without any “specific” clinical picture of migraine, migraine with aura, or tension-type headache) which lasts for seconds to days, with evidence of ictal epileptiform EEG discharges (Parisi et al., 2012b). Notably, different types of EEG anomalies may be observed as generalised spike-and-wave or polyspike-and-wave, focal or generalised, rhythmic activity or focal, subcontinuous spikes or theta activity that may be intermingled with sharp waves, with or without photoparoxysmal response (Belcastro et al., 2011; Parisi et al., 2013b).

In the last issue of the Journal, Cianchetti and associates reported a patient with “epileptic headache” and discussed the terminology and classification of IEH and HE (Cianchetti et al., 2013). In particular, the authors suggested that all cases of “epileptic headache” that are not accompanied or followed by other seizure types should be referred to as “pure epileptic headache” or “isolated epileptic headache”. Moreover, the authors proposed to avoid the term “HE”, since this appears to represent true epileptic headache and the only reported cases were published about 25 years ago by Cianchetti et al. (2013) as well as the term “ictal” because epileptic manifestation (e.g. epileptic headache) is ictal per se.

The term “ictal headache” was used 30 years ago by Laplante et al. (1983) and recently also proposed by Dainese et al. (2011) to define headache occurring as the sole manifestation of an epileptic seizure. In view of the above uncertainties on terminology and classification, we encourage the use of “ictal epileptic headache” instead of “ictal headache” for two reasons: a) when headache is the sole ictal event, it is mandatory to consider the epileptic origin; b) an ictal paroxysmal condition may also be non-epileptic in origin (e.g. vascular) and in such cases, the use only of the term “ictal” may not be straightforward for physicians who are not familiar with epilepsy (Striano et al., 2012). Of note, in epilepsy patients, headache can occur as an interictal, preictal, ictal or postictal symptom, making differentiation between migraine and epilepsy difficult in some patients. Thus, we believe that the word “ictal” reinforces the concept of paroxysmal headache/migraine as genuine seizure (e.g. epileptic headache) and avoids the misleading temporal concept of migraine-triggered seizures or epilepsy-triggered headache (Belcastro et al., 2012; Belcastro et al., 2013). Finally, the term “HE”, according to the current ICHD-II 7.6.1 criteria, should be applied when the headache, whether brief or long-lasting, is part of a more complex seizure, including other sequential or overlapping (sensory-motor, psychiatric or non-autonomic) ictal manifestations (Parisi et al., 2013b; Parisi et al., 2013c).

Clinical depiction and EEG recordings in cases with suspect IEH are imperative in order to achieve clarity and consensus in this area of research. In the meanwhile, we discourage the use of additional terms,
such as “isolated” or “pure” epileptic headache, which could potentially increase confusion in this field.

**Disclosures.**

None of the authors have any conflict of interest to disclose.

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