

Seizure or migraine? The eternal dilemma

Comment on: “recurrent occipital seizures misdiagnosed as status migrainosus” by Italiano *et al.* (*Epileptic Disord* 2011; 13: 197-201)

To the editor

Despite the fact that migraine and epilepsy are among the more common brain diseases and that comorbidity of these conditions is well known, to date neither the International Headache Society nor the International League Against Epilepsy mention that headache/migraine may be the sole ictal epileptic manifestation of an epileptic seizure (Parisi *et al.*, 2007; Parisi, 2009). We read with interest the case report by Italiano and co-workers (Italiano *et al.*, 2011) showing that recurrent occipital seizures may be easily misdiagnosed as status migrainosus.

At least five cases of simple partial status epilepticus in occipital lobe epilepsy, which were misdiagnosed as status migrainosus, have been thus far reported (reviewed in Belcastro *et al.*, 2011a). Like the patient described by Italiano *et al.* (2011), all patients share two main findings: a) the epileptic nature of headache was recognised only by ictal EEG recording; and b) the intravenous administration of benzodiazepines resulted in the complete suppression of symptoms and EEG abnormalities. Interestingly, while clinical characteristics were misleading, EEG and MRI findings allowed correct diagnosis and treatment in two cases (Belcastro *et al.*, 2011b; Perucca *et al.*, 2010). The ictal EEG recording during migraine-like complaints in these patients showed no specific EEG picture: a) high voltage, rhythmic, 11-12 Hz activity with intermingled spikes over the right temporo-occipital regions; b) high voltage theta activity intermingled with sharp waves over the occipital region; and c) bilateral continuous spike-and-slow-wave discharges (Belcastro *et al.*, 2011a).

The report by Italiano and colleagues, according to previously published cases, highlights once again that the sequence “migraine-triggered seizure” (*i.e.* migralepsy) is unlikely to exist as such (Verrotti *et al.*, 2011). On the other hand, ictal headache as the only clinical feature of an epileptiform EEG abnormality probably represents an epileptic event rather than episodes with both migraine and epileptic mechanisms (Parisi, 2009). In this sense, large, multicentric

studies are required to confirm the findings from these case reports and provide better definition of relevant clinical profiles.

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