



Teaching *NeuroImages*: A broadly distributed ictal rhythm easily missed on bipolar montage

“Now you see it...”

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A 23-year-old woman was admitted for brief, recurrent spells of intense fear and visual hallucinations. During video-EEG study, one of the spells showed no definite ictal EEG changes on longitudinal bipolar montage for 26 seconds while evolving rhythmic discharges were readily visible on Cz reference. Because the pattern was evenly distributed in the temporal region at onset (figure), it “canceled out” in the bipolar montage.¹ It is conceivable that a shorter seizure would have been missed if reviewed only in bipolar montage. Hence, this case is a reminder of why EEG should be reviewed in bipolar and referential montages before concluding that a spell has no EEG correlate.

AUTHOR CONTRIBUTIONS

Rup K. Sainju: collection of data, interpretation of data, and drafting manuscript. Jeremy Moeller: interpretation of data and revision of the

manuscript. Lawrence J. Hirsch: conceptualization of the study, interpretation of data, and revision of the manuscript.

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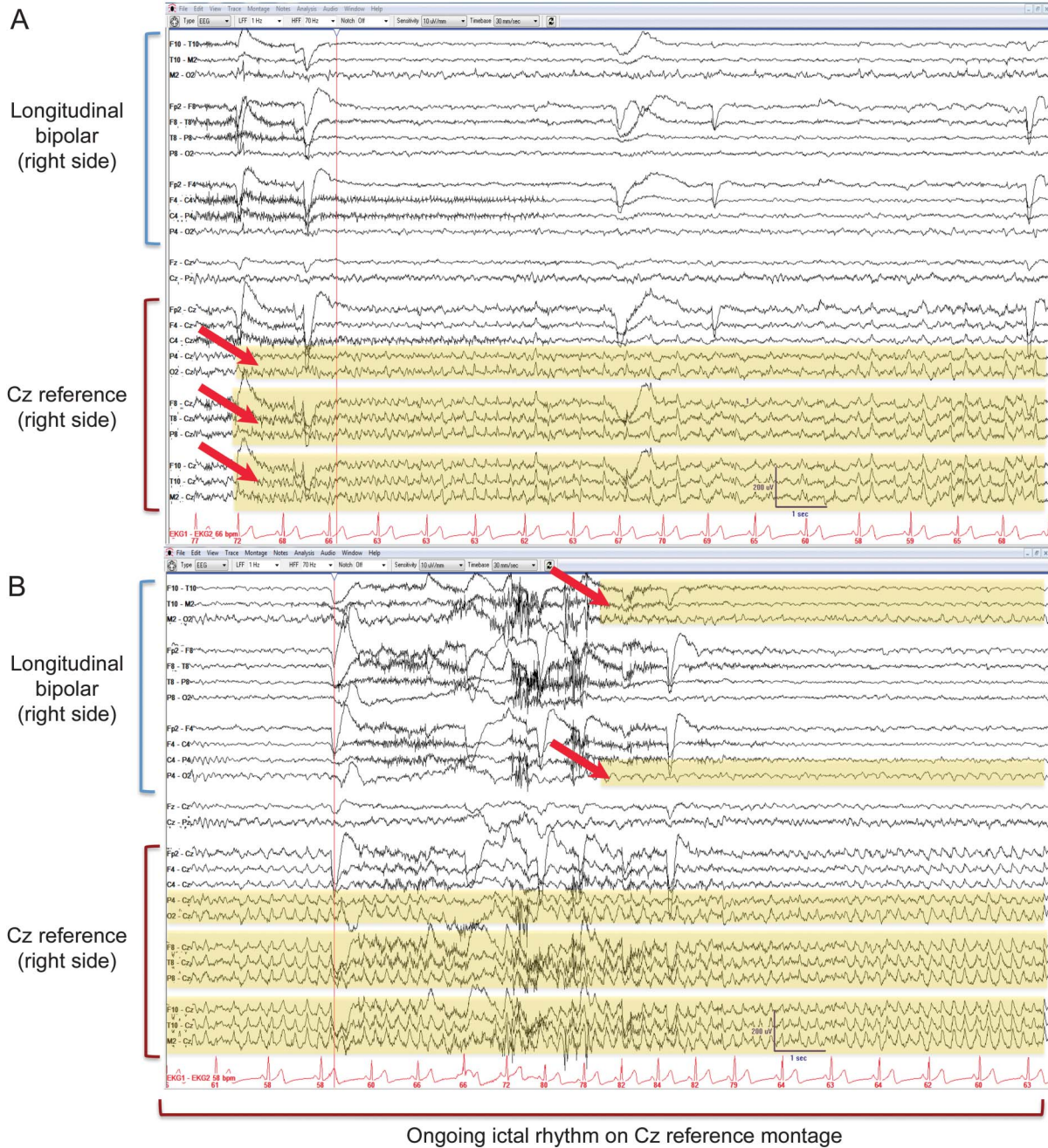
DISCLOSURE

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REFERENCE

1. Scherg M, Ille N, Bornfleth H, et al. Advanced tools for digital EEG review: virtual source montages, whole-head mapping, correlation and phase analysis, *J Clin Neurophysiol* 1999;19:91–112.

Figure EEG findings



Onset of evolving rhythmic discharges (red arrows) in Cz reference (A) and in anteroposterior bipolar (B) montages.

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