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Epileptic Asystole

Nils Peters, Hannah Pellkofer, Andreas Straube

Department of Neurology, Klinikum Grosshadern,
Ludwig-Maximilians-University Munich, Munich, Germany

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A 53-year-old man with focal epilepsy following encephalitis 30 years ago (medication: levetiracetam and oxcarbazepine) was treated and ECG monitored on our emergency ward due to increased seizure frequency. He was otherwise healthy, especially without cardiac disease. ECG monitoring (fig. 1) captured epileptic asystole, lasting for 18 s. Concomitantly, he lost consciousness and exhibited tonic posturing. Regular sinus rhythm recurred spontaneously, afterwards there was prolonged aphasia, suggesting a left hemispheric seizure origin. Consistent with this clinical semiology, previous studies have suggested left hemispheric lateralization of epileptic asystole, with the left insular region producing inhibitory effects on cardiac function via the parasympathetic nervous system [1, 2]. In case of epileptic asystole, thorough seizure control is warranted.

References

1 Rocamora R, Kurthen M, Lickfett L, Von Oertzen J, Elger CE: Cardiac asystole in epilepsy: clinical and neurophysiologic features. Epilepsia 2003;44:179–185.
2 Oppenheimer SM, Gelb A, Girvin JP, Hachinski VC: Cardiovascular effects of human insular cortex stimulation. Neurology 1992;42:1727–1732.

Nils Peters, MD
Department of Neurology, Klinikum Grosshadern
Ludwig-Maximilians-University Munich
Marchioninistrasse 15, DE–81377 Munich (Germany)
Tel. +49 89 7095 7806, Fax +49 89 7095 7802
E-Mail nils.peters@med.uni-muenchen.de

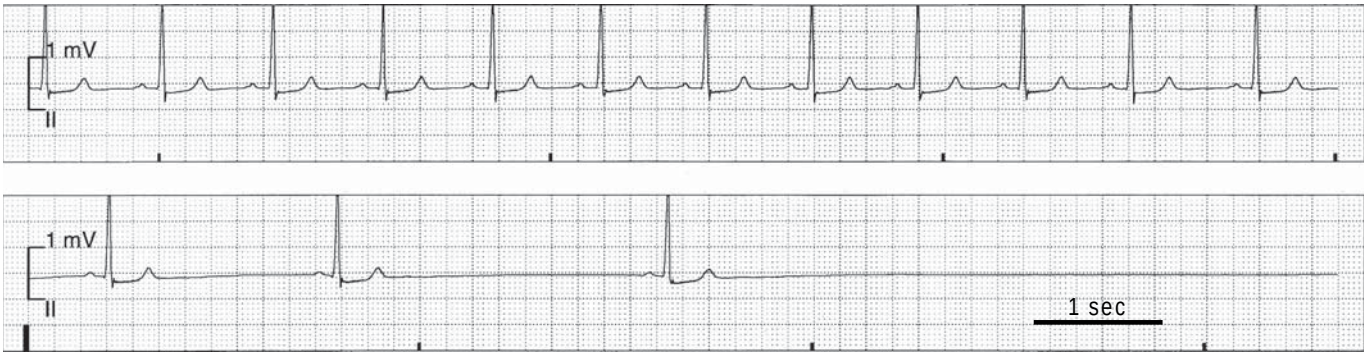

Fig. 1. Three-lead ECG captured increasing sinus bradycardia over 4–5 heart beats leading to complete sinus arrest. Detailed cardiologic evaluation was unremarkable. Epileptic asystole is a rare complication in focal epilepsy, especially temporal/frontal lobe epilepsy with involvement of the insular cortex [1], and may contribute to sudden unexplained death in epilepsy.

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