Mystery Case: Sawtooth waves
Another normal variant not to over-read as epileptiform discharges

A 20-year-old-woman demonstrated sawtooth waves but no epileptiform discharges while undergoing EEG-video monitoring for new-onset generalized tonic-clonic seizure-like activity and staring spells (figures 1 and 2). Sawtooth waves are an uncommon EEG pattern of REM sleep. They have a unique morphology, first described in 1937 by Alfred Lee Loomis, are maximum in the central regions, and typically occur in repetitive bursts. They are seen in REM sleep, typically in the vicinity of eye movements, but at times they can be found seconds or minutes away from REM. The identification of sawtooth waves is important to avoid their misinterpretation as epileptic discharges and the (common) misdiagnosis of epilepsy.

AUTHOR CONTRIBUTIONS
Yazan M. Suradi: drafting/revising the manuscript, accepts responsibility for conduct of research and final approval, contribution of vital reagents/tools/patients, acquisition of data. Fahad Salih Algreeshah: study concept or design, analysis or interpretation of data, accepts responsibility for conduct of research and final approval, acquisition of data. Noemi Rincon-Flores: analysis or interpretation of data, accepts responsibility for conduct of research and final approval, acquisition of data. Selim R. Benbadis: drafting/revising the manuscript, study concept or design, analysis or interpretation of data, accepts responsibility for conduct of research and final approval, acquisition of data, study supervision.

STUDY FUNDING
No targeted funding reported.

DISCLOSURE
Y. Suradi, F. Algreeshah, and N. Rincon-Flores report no disclosures relevant to the manuscript. S. Benbadis has served as a consultant for Cyberonics, Lundbeck, Supernus, and UCB Pharma; is on the speakers bureau for Cyberonics, Glaxo Smith Kline, Lundbeck, Supernus, and UCB Pharma; has received grant support from Cyberonics, Lundbeck, Sepracor, Sanoftion, Supernus, UCB Pharma, and Upsher-Smith; received royalties as an author or editor for Emedicine-Medscape-WebMD and UpToDate; and is on the Editorial Board for Emedicine-Medscape-WebMD, European Neurology, Epileptic Disorders, Epilepsy and...
REFERENCES


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Neurology 2015;84:e87-e88
DOI 10.1212/WNL.0000000000001386

This information is current as of March 23, 2015

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