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Teaching Video NeuroImages: Nonepileptic myoclonus in a neonate following severe hypoxic-ischemic injury

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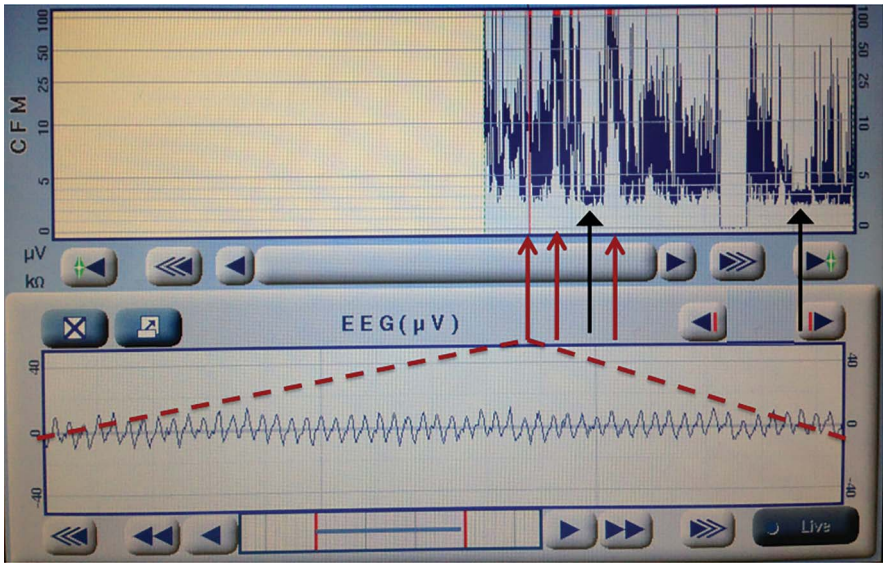
Figure Amplitude-integrated EEG



Amplitude-integrated EEG monitoring shows transient increases in amplitude concerning for possible seizures (red arrows) in contrast to baseline (black arrows). Concurrent raw EEG trace (dashed lines) shows an intermittent rhythmic pattern time-locked to the paroxysmal limb movements.

A newborn boy had a profound hypoxic-ischemic insult at birth. He developed rhythmic myoclonus within 1 hour, which was initially assumed to be seizures, but was unresponsive to escalating antiepileptic therapy. On careful examination, it was evident that myoclonus could be induced and suppressed. Amplitude-integrated (figure) and video EEG (video on the *Neurology*® Web site at Neurology.org) demonstrated a suppressed background with intermittent rhythmic pattern correlating with the movements. Laterality of this pattern changed with head positioning, suggesting artifact from pressure on dependent electrodes. Care was ultimately redirected when neuroimaging confirmed severe injury.

Nonepileptic myoclonus is a brainstem release phenomena[1] that can be difficult to distinguish from seizures without detailed clinical examination combined with EEG.[2] Timely diagnosis can prevent unnecessary treatment and can inform prognosis.

AUTHOR CONTRIBUTIONS

Dr. Walsh drafted the manuscript, created the figure, and approved all final changes. Dr. Baumer edited the manuscript, created the PowerPoint, and approved all final changes. Dr. Bernson-Leung edited the manuscript and approved all final changes. Dr. Lerou edited the manuscript and approved all final changes. Dr. Peters edited the manuscript, created the video file, and approved all final changes.

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REFERENCES

1. Huntsman RJ, Lowry NJ, Sankaran K. Nonepileptic motor phenomena in the neonate. Paediatr Child Health 2008;13:680–684.
2. Mizrahi EM, Kellaway P. Characterization and classification of neonatal seizures. Neurology 1987;37:1837–1844.

Supplemental data at Neurology.org

Download teaching slides: Neurology.org

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