



## A Pilot Study of Continuous Limited-Channel aEEG in Term Infants with Encephalopathy

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Résumé en anglais	<p>ObjectiveTo evaluate the accuracy, feasibility, and impact of limited-channel amplitude integrated electroencephalogram (aEEG) monitoring in encephalopathic infants. Study design Encephalopathic infants were placed on limited-channel aEEG with a software-based seizure event detector for 72 hours. A 12-hour epoch of conventional EEG-video (cEEG) was simultaneously collected. Infants were randomly assigned to monitoring that was blinded or visible to the clinical team. If a seizure detection event occurred in the visible group, the clinical team interpreted whether the event was a seizure, based on review of the limited-channel aEEG. EEG data were reviewed independently offline. Results In more than 68 hours per infant of limited-channel aEEG monitoring, 1116 seizures occurred (&gt;90% clinically silent), with 615 detected by the seizure event detector (55%). Detection improved with increasing duration of seizures (73% &gt;30 seconds, 87% &gt;60 seconds). Bedside physicians were able to accurately use this algorithm to differentiate true seizures from false-positives. The visible group had a 52% reduction in seizure burden (P = .114) compared with the blinded group. Conclusions Monitoring for seizures with limited-channel aEEG can be accurately interpreted, compares favorably with cEEG, and is associated with a trend toward reduced seizure burden.</p>
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## **Liens**

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