OLYMPIC CFM™ 6000

Infant aEEG Cerebral Function Monitor

Case Report: aEEG Monitoring Suspect Seizures
South Bend, Indiana, USA

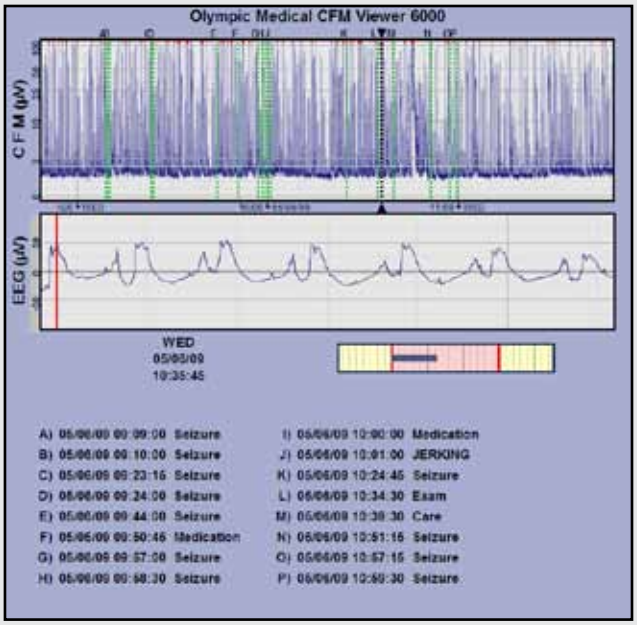
Continuous full-montage EEG is not always available when you need it. The effects of seizure medication and the ability to document its progress can be enhanced by the use of limited channel continuous bedside monitoring as opposed to multi-lead EEG monitoring. This case report documents one such case where aEEG monitoring was started as soon as seizures were suspected so treatment could begin.

A 24-week pregnant woman presented to hospital at onset of labor. The mother had fallen down steps 8 hours prior to labor onset but did not come to hospital because she did not notice any evidence of abdominal trauma.

A 667g, 24-week male baby was delivered precipitously with Apgar scores of 4^0 and 7^5. Foul-smelling amniotic fluid and tracheal fluid were noted on intubation at birth. Surfactant and moderate ventilator support were administered. Indomethacin was added as prophylaxis. The complete blood count (CBC) was benign and cultures were negative, therefore, antibiotics were stopped after two days.

At 3 days of age, the baby's respiratory status deteriorated and the baby was treated with jet ventilation. Serum Na^+ was 155, and the baby was treated with liberalized fluid intake. The urine output was poor and low-dose dopamine was started. Metabolic acidosis, hyperglycemia, and a left shift on the CBC were diagnosed and antibiotics were reinstated for three days, but cultures were again negative.

At 7 days of age, an ultrasound showed grade IV bleed on the left. The following day clinical seizures were suspected and amplitude integrated EEG monitoring was started with Olympic CFM™ 6000 (Natus Medical Incorporated).



This case report documents how a bedside brain monitor can help in continuously monitoring suspected seizures so medication can be administered in a timely manner. Although the jet ventilator elevates the baseline in the tracing, note that the infant's burst-suppression background activity and the seizures are still easily identified. In addition, effects of seizure medication and the ability to document the progress would not be possible with conventional EEG alone.

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