Seizures may be detected through sound

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A new *Epilepsia* study indicates that individuals without electroencephalogram (EEG) training can detect ongoing seizures in comatose patients through a novel method by which patients' brain waves are converted to sound.

The traditional approach to interpreting EEGs requires physicians with formal training to visually assess the waveforms. This approach may not be practical in critical settings where a trained EEG specialist is not readily available.

Although sonification of EEG cannot replace the traditional approaches to EEG interpretation, it provides a potential tool for quickly assessing patients with suspected subclinical seizures such as nonconvulsive status epilepticus.

"The majority of seizures in critically ill patients are non-convulsive and many comatose patients do not recover because their brains keep seizing. Kids with these silent seizures, if they survive, will leave the hospitals with major cognitive impairment," said the lead author, Dr. Josef Parvizi, Professor of Neurology and Neurological Sciences at Stanford University Medical Center. "If detected in time, however, these seizures can be treated quickly and patients can recover without major harm to their brain. So it is time to think about alternative methods by which everyone, including even medical students, can detect such seizures."

More information: Josef Parvizi et al, Detecting silent seizures by their sound, *Epilepsia* (2018). DOI: 10.1111/epi.14043

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