Digital electroencephalography and long-term video electroencephalography
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EEG is the name commonly used for electroencephalography. EEG is an important test for diagnosing epilepsy. Conventional EEG has relatively low sensitivity in epilepsy, ranging between 25-56%. The combination of wake and sleep records gives a yield of 80% in patients with clinically confirmed epilepsy. Video-EEG is most helpful in determining whether seizures with unusual features are actually epilepsy.

Keywords:
EEG, epilepsy, video EEG

Video EEG is most useful in determining whether seizures with unusual features are actually epilepsy, identifying the type of seizures and pinpointing the region of the brain where seizures begin. Locating the region precisely is essential if epilepsy surgery is being considered.

Also, video EEG is indicated for:
1. the diagnosis of paroxysmal neurological attacks,
2. differentiation between nocturnal epilepsy and parasomnias,
3. the diagnosis of psychogenic nonepileptic seizures,
4. characterization of seizure type,
5. quantification of interictal epileptiform discharge or seizure frequency,
6. evaluation of candidates for epilepsy surgery [7,8].

Epilepsy is a neurological condition, which affects the nervous system. Epilepsy is also known as a seizure disorder. It is usually diagnosed after an individual has had at least two seizures that were not caused by some known medical condition such as alcohol withdrawal or extremely low blood sugar [1,2].

An epileptic seizure, occasionally referred to as a fit, is defined as a transient symptom of ‘abnormal excessive or synchronous neuronal activity in the brain’. It can manifest as an alteration in mental state, tonic or clonic movements, convulsions, and various other psychic symptoms [1].

EEG is the name commonly used for electroencephalography. EEG is an important test for diagnosing epilepsy because it records the electrical activity of the brain. It is safe and painless. Computerized, paperless EEGs are now being used more often.

Conventional EEG has a relatively low sensitivity in epilepsy, ranging between 25 and 56%. Specificity is better, but again variable at 78–98%. These wide ranges can be attributed partly to diverse case selections and different types of epilepsy [3].

The combination of wake and sleep records gives a yield of 80% in patients with clinically confirmed epilepsy. Standard activation procedures of hyperventilation (up to 3 min) and photic stimulation are techniques that are used to increase the EEG sensitivity [3].

In healthy adults with no declared history of seizures, the incidence of epileptiform discharge in routine EEG was 0.5%. A slightly higher incidence of 2–4% is found in healthy children and in nonepileptic patients referred to hospital EEG clinics. The incidence increases substantially to 10–30% in cerebral pathologies such as tumor, previous head injury, cranial surgery or congenital brain injury [4–6].

In long-term video EEG, the recording is carried out for a long period of time. The neurophysiologist usually views the video and EEG images side by side on a split screen.

References
2. Scottish Intercollegiate Guidelines Network (SIGN). Diagnosis and management of epilepsy in adults; Guideline No. 70. Scotland: Scottish Intercollegiate Guidelines Network (SIGN); 2003.

Acknowledgements
Conflicts of interest
There are no conflicts of interest.