

Carpe Diem – Seize the Day Blog

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What is continuous EEG monitoring and what does it do? For one thing, continuous EEG monitoring could detect unusual brain wave patterns according to new research. When a patient is in an intensive care unit, the medical professionals pay close attention to many of the patient's vitals. They are monitoring the heartbeat, O2 levels, and blood pressure. Many ICUs are finding that it is also beneficial to monitor a patient's brain activity, as it can give them some valuable information. The information gleaned from EEG monitoring could help with proper, faster diagnosis and treatment.

When a doctor can detect seizures early, it can allow them to treat seizures and other symptoms quickly. Continuous EEG monitoring can also help doctors to detect brain patterns and issues that might not have been found and diagnosed without this monitoring.

EEG Monitoring Can Make Major Differences

However, not all hospitals are offering cEEG monitoring. University Hospitals is one of the healthcare systems in the country that does offer cEEG in the ICU. The addition of continuous EEG monitoring lets the specialists at the Reinberger Neuroscience Intensive Care Unit have faster insight into what is happening in their patients' brains. They can look at any anomalies in the brain to get a better understanding of what is happening and how to treat their patients.

Michael DeGeorgia, MD, is the Director of the Neurocritical Care Center at University Hospitals Neurological Institute and the Co-Director of the Stroke and Cerebrovascular Center at UH Neurological Institute. He is also a Professor of Neurology at Case Western Reserve University School of Medicine. He said, "There was data emerging that if you monitor intensely, you can detect things you couldn't detect clinically. It also provides another biomarker that, combined with other vitals, gives a holistic view of the patient."

EEG Has Improved

Although EEG has always been beneficial, it used to be difficult to use in an ICU. In cases where a doctor believed that a patient may have had a seizure or was at risk of having a seizure, they would have to bring in an EEG machine to the ICU. The technician would get things set up and then monitor the patient for about half an hour. Once the test was completed, the machine would be removed.

A specialist would then have to look at the results of the test, create a report, and then provide it to the doctor. Getting the report into the hands of the doctor could sometimes take days. If the specialist or the technician were not available, it could take even longer. Although this sounds like an antiquated way of doing things, it was common up until just a few years ago. Today, things are much different. EEG has improved significantly.

Hospitals like UH and their Neuroscience Intensive Care Unit are using different techniques. This includes quantitative and digital EEG. The systems today can be used to continuously monitor a patient for 24 hours or more, and it is faster and easier to get the reports. It is easier to see even small changes that would be difficult—or impossible—to see when using the traditional methods.

However, these are not the only advances being made. At the Cleveland Medical Center, Dr. DeGeorgia and engineers from Case Western Reserve University are working on methods to integrate EEG and data from other ICU devices. They call this the Integrated Medical Environment.

The goal is to help improve the overall results and efficiency of the machines. They feel that doing this will help to create better outcomes for the patients. Having all of that information easily accessible is promising, even though this is still being tested. If it works well, it could start to find its way into other hospitals around the country.

Editor's Note: The Carpe Diem – Seize the Day Blog will be distributed and posted weekly.
Always remember – **CARPE DIEM – SEIZE THE DAY!**

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