

Korea lays focus on AI-based seizure detection medical device

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Despite the availability of many anti-epileptic therapies, more than one-third of people with epilepsy are not able to achieve seizure freedom, meaning they have epilepsy that remains uncontrolled



Seoul National University Bundang Hospital (SNUBH) presented its preliminary study result of seizure monitoring for patients with epilepsy using SK Biopharmaceuticals' multimodal wearable device, at the American Epilepsy Society (AES) Annual Meeting 2022 in Nashville, Tennessee, December 2-6. This is the first study of the wearable device developed by South Korea-based SK Biopharmaceuticals.

A SNUBH research team led by Prof Hunmin Kim conducted the study from March 11, 2021, to March 10, 2022, with 14 patients aged 9-27 regularly using the device for more than a month. The wearable device monitored patients daily and recorded seizure data on a mobile app while measuring bio-signals such as brain electrical activity (electroencephalography, EEG), heart rhythm, and body movement.

Prof Kim said at the AES that it has shown to be useful in collecting data for potential seizure detection as it continuously measured brain activity for more than 8 hours, and transmitted the data to a server in real-time. During the 3,723 hours of recording, it identified 1,686 seizures.

SK Biopharmaceuticals and SNUBH plan to further pursue clinical research with Zero Wired, aiming to develop it into an artificial intelligence (AI)-based seizure detection and forecast device.