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국문 강연제목: 뇌전증 환자의 미주신경자극(VNS)과 발작 조절의 생리학적 관계 분석

영문 강연제목: Analysis of Physiological Relationship between Vagus Nerve Stimulation (VNS) and Seizure Control in Epilepsy Patients

Abstract:

Epilepsy is a prevalent neurological disorder that affects individuals across diverse demographic groups, including age, race, socioeconomic status, and geographic location. The condition is characterized by the occurrence of recurrent seizures. The underlying pathophysiology of seizures involves a disruption in the balance between excitatory and inhibitory neurotransmitters within the neural network, though the precise mechanisms underlying these events remain to be fully elucidated. The prevailing treatment for epilepsy is medication with antiepileptic drugs (AEDs), yet for approximately 35% of patients who do not respond to medication, vagus nerve stimulation (VNS) is an effective treatment option. However, the effectiveness of VNS is highly variable across patients, and preclinical studies are underway to develop more effective treatments. In this study, we conducted an analysis of physiological signals (EEG, electrocardiogram) to investigate the physiological relationship between VNS and seizure control in the course of researching parameters for effective VNS.

Brief Biosketch

Research area: multimodal neuromodulation, neural signal analysis, and closed-loop systems.

Senior Specialist, Samsung Medical Center, 2018-Current

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Senior Research Engineer, Hyundai Mobis, 2017-2018

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