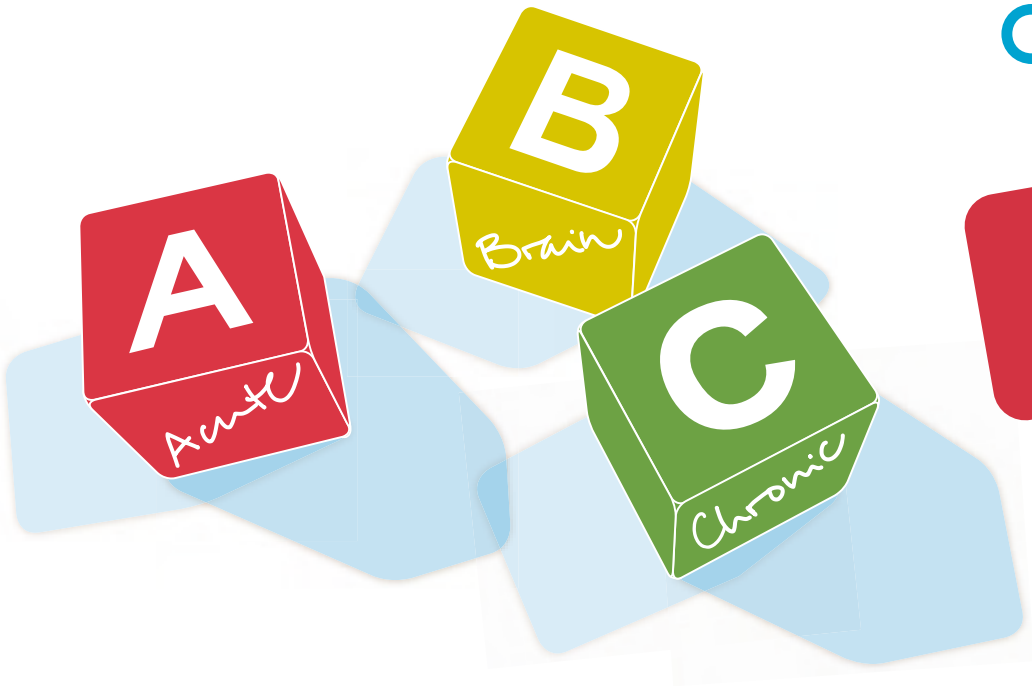
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**Abstract Book**

A · Acute
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# ABSTRACTS

Topic: Neurorehabiltation

## EPNS25_909 - The Investigation of The Effect of VNS Efficacy on Sleep Structure and Characteristics in Pediatric Patients with Refractory Epilepsy

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### Objectives

Sleep disorders are significant concern in children with resistant epilepsy, impacting quality of life and overall well-being. Studies have shown a high prevalence of various sleep disturbances,such as sleep-disordered breathing,insomnia,and excessive daytime sleepiness.The exact impact of VNS efficacy on sleep structure and characteristics in pediatric patients with refractory epilepsy is not well understood. This study aims to investigate the effects of VNS therapy on sleep structure and characteristics in children with refractory epilepsy.

### Methods

Twenty-eight children diagnosed with refractory epilepsy between 2021 and 2023 who underwent VNS therapy at tertiary level pediatric neurology department were included. Those deemed suitable for VNS therapy after discussion in the epilepsy surgery council underwent polysomnography evaluation prior to VNS implantation. Polysomnography was repeated in these patients at the 12th month of VNS therapy. Additionally,the Pittsburgh Sleep Quality Index and the Epworth Sleepiness Scale were used for these patients before and after VNS therapy.

### Results

Of the 28 patients hospitalized and evaluated at the epilepsy center, 60% were male.The average age of the patients was 10.5 years.The patients were using an average of 2.4 antiseizure medication.At the 12th month of VNS therapy, a statistically significant reduction in daily seizure frequency was observed in the patients.Additionally,according to the PSG results,there was a statistically significant increase in total sleep efficiency.Improvements in sleep quality were noted based on the Pittsburgh Sleep Quality Index and the Epworth Sleepiness Scale.No significant difference was observed in the frequency of apnea among the patients.Furthermore,it was noted that families reported a reduction in anxiety levels with VNS therapy.

### Conclusions

This is the first study to examine the effects of VNS treatment on sleep structure and characteristics in patients with drug-resistant epilepsy in childhood.It was observed that VNS treatment reduced anxiety levels in both patients and their families,leading to a positive impact on quality of life.