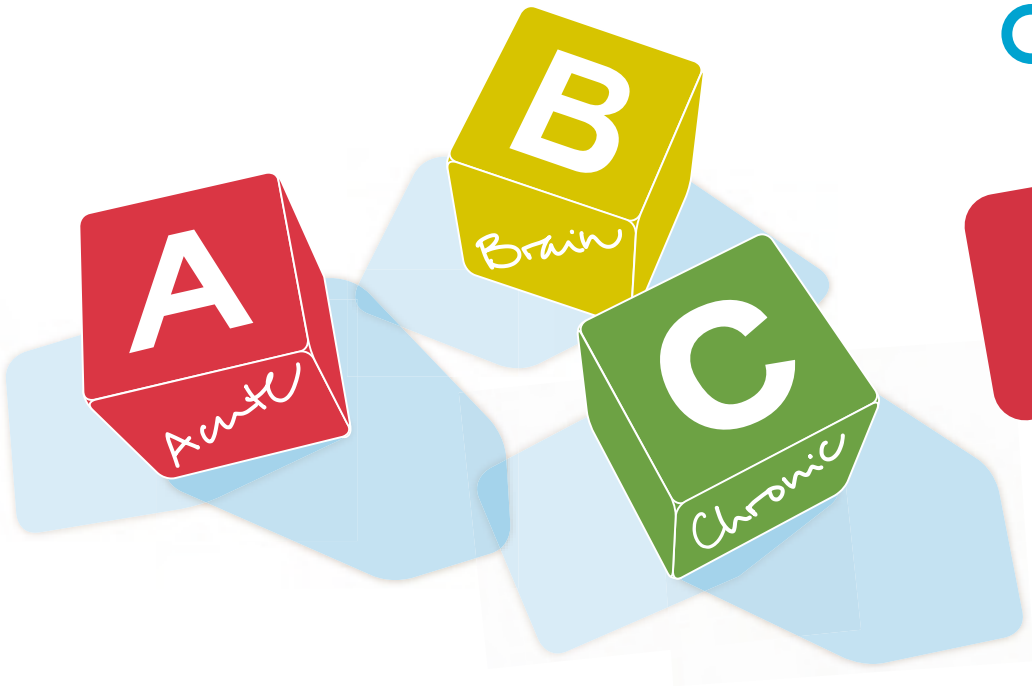
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ABSTRACTS

Topic: Epilepsy: Medical and Surgical treatment

EPNS25_772 - Vagus Nerve Stimulation Therapy for the Treatment of Seizures in Lennox-Gastaut syndrome

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Objectives: Lennox-Gastaut syndrome (LGS) is among the most severe epileptic and developmental encephalopathies. This retrospective study aimed to evaluate the effectiveness of adjunctive vagus nerve stimulation (VNS Therapy) in patients with LGS.

Methods: 55 pediatric patients with refractory LGS were included who were followed up at Gazi University Child Neurology Department between 2010 and 2024 in our study. VNS and medical therapy efficacy was evaluated based on seizure reduction, effective rate (percentage of cases with seizure reduction ≥ 50%), modified Early Childhood Epilepsy Severity Scale (E-Chess) score, and Grand Total EEG (GTE) score. The follow-up time points were 12 months after VNS and medical therapy. Pre- and postoperative data were compared and analyzed.

Results: A total of 55 patients were included in the study, of whom 63% were male and 37% were female, with a mean age of 14.7 years (range: 7–18 years). Vagus nerve stimulation (VNS) was implanted in 52% (n=29) of these patients. E-chess scores before medical treatment group and VNS surgery group were 13.81(12-15) and 14.11(12-15), respectively, while after 12 months of medical treatment and VNS surgery groups, it was 11.31(9-15) and 10.96,(8-14) ($p<0.01$). GTE score before medical treatment grup and VNS surgery grup was 13.96 (8-24) and 15.15(5-22), respectively, whereas after 12 months of medical treatment and VNS surgery, it were 10.23 (4-22) and 9.89 (3-17), ($p<0.01$). A statistically significant relationship was found between the efficacy rate and -chess scores after VNS surgery ($p<0.01$). No intraoperative complications or severe post-operative adverse effects were reported.

Conclusions: Our study shows that VNS can reduce the frequency and severity of seizure in patients with refractory LGS. VNS has a good application prospect in patients with refractory LGS. A clinical and surgical overview has been included to facilitate the use of VNS in LGS.