New Therapeutic Option for Drug-resistant Epilepsy

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In this issue, we welcome the study by Chayasirisobhon et al. entitled "Vagus nerve stimulation therapy for drug-resistant epilepsy"[1]. This report deals with the efficacy and safety of vagus nerve stimulation (VNS) in 34 patients with drug-resistant epilepsies, including 22 patients with partial seizures with or without generalized seizures and 12 patients with multiple types of generalized seizures. During the 6-month study period, 62% of patients had >50% reduction in seizure frequency and about 10% had >90% reduction, whereas 38% had no clinical benefit from VNS. Among 9 patients who were 12 years of age and under, 7 (78%) showed >50% reduction, and VNS seemed to be particularly effective in atonic seizures and complex absense seizures. In addition, 19 patients (56%) became more alert after VNS despite that their anti-epileptic medications were not changed or adjusted. Major implantation or stimulation complications were not observed, but up to 50% had mild hoarseness or voice changes during VNS. This side-effect seemed to be tolerable because none of the patents discontinued VNS.

Although this study is small in sample size and short in the follow-up period, it neverthless indicates the efficacy and safety of VNS for medically refractory seizures. Their data seem to be compatible with those reported previously[2]. Therefore, VNS can now be considered a new non-pharmacological therapeutic option for drug-resistant epilepsy[3]. Recent expert consensus proposes that for patients with refractory epilepsies, non-pharmacological approach should be considered[4]. The non-pharmacological therapies include epilepsy surgery, VNS, ketogenic diet, and others.

VNS, marketed initially as the NeuroCybernetic Prosthesis (Cyberonics Inc, Houston) and now as the Vagus Nerve Stimulation Therapy System, was approved by the U.S. Food and Drug Administration (FDA) in 1997 to be used "as an adjunctive therapy in reducing the frequency of seizures in adults and adolescents over 12 years of age with partial seizures which are refractory to antiepileptic medications"[2]. Up to now, over 16,000 patients have received VNS therapy[3].

Although VNS has been tried on a small scale in Taiwan, formal report is yet to be seen. We welcome and anticipate such study from our colleagues hopefully to be published in this Journal.

References:

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