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Vagus nerve stimulation: Tunisian clinical experience in drug-resistant epilepsy**Nadia Ben Ali**
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Background & Aim: Vagus Nerve Stimulation (VNS) is a new therapeutic approach of drug-resistant epilepsy, when surgery is not indicated. Though effective, few data from developing countries exist. The aim of this work is to draw out the Tunisian experience in VNS, concerning its efficacy in patients with different intractable epileptic syndromes.

Methods: We retrospectively reviewed 6 patients with different epileptic syndromes who underwent VNS therapy. All patients have a neurological exam, EEG recording, MRI and neuropsychological tests. The mean duration of the follow-up was 48 60 months. Demographic data, epileptic syndrome, the different stimulation parameters, seizure frequency as well as clinical response after implantation and side effects were described.

Results: The mean age was 19.6 year. Output current, pulse duration, frequency, and off time changed significantly between the 3 and 48 month long-term follow-ups. The global mean decrease in seizure frequency at last follow-up was over than 50%. Some seizure types responded better than others did: Complex partial seizures with secondary generalization and atonic seizures. Improvements in memory, mood, alertness and postictal recovery period were observed in all patients.

Conclusion: The Tunisian experience agrees with others showing that intermittent VNS reduces frequency of seizures in medically refractory epilepsy. The seizure types that respond best to VNS are atonic seizures and complex partial seizures. Further elucidation of the mechanism of action of VNS may increase its clinical efficacy and our general understanding of some physio-pathological aspects of epilepsy.

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