LETTER TO EDITOR

Vagus Nerve Stimulator: A Breakthrough for Refractory Epilepsy in Pakistan

Gul e Zehra, Afshan Salah Uddin, Fareeha Masood
Student, Dow Medical College, Karachi, Pakistan.
https://doi.org/10.36283/PJMD10-4/019

Dear Editor,

Epilepsy is the fourth most common neurological illness around the world characterized by abnormal electrical activity in the brain manifesting itself as seizures[1]. Currently the number of epileptic patients in Pakistan is 1.38 million and most rely on Anti Epileptic Drugs (AEDs) for treatment[2]. Despite having a huge success rate, 20-30% of the patients who have refractory epilepsy fail to have complete seizure control with AEDs and can benefit from Vagus Nerve stimulator (VNS) implantation[3]. VNS has been used in the west for over 30 years and more than 30,000 patients have benefited from this therapy[3]. Pakistan recently made a breakthrough when such pacemakers were successfully implanted in two female patients in Lahore[4].

In VNS surgery, a stimulator is placed under the left clavicle and a wire is wrapped around the vagusnerve, which stimulates it and sends signal up to the brain producing norepinephrine. This eventually increases the threshold and decreases seizure frequency in patients[5]. According to a study, there has been a 50-60% decline and even complete cessation of seizures with VNS[5]. No cognitive effects or pharmacologic interactions have been reported and it is safe for use in all age groups[3]. The cost of this surgery is comparatively less than that of a new AED, when spread over a span of 8 years thus saving expenses on medications[3]. However, some laryngeal and respiratory side effects are noticed but they usually resolve with time[3].

A number of steps could be taken to expand VNS implants in Pakistan, where people with refractory epilepsy have to face worse consequences. It is pertinent to guide the general public regarding different aspects of epilepsy. Health care professionals should be trained about the various treatment modalities being practiced globally including VNS. Research should be promoted on its clinical aspects and psychosocial consequences. Pakistani neuroscientists who practice abroad may be requested for their active participation in the care of such patients. Furthermore, Government may be requested to reduce heavy taxes on instruments to make VNS surgery cost effective[2]. To conclude, we aim to emphasize that VNS implantation is emerging as an efficacious strategy globally to counter intractable epilepsy with promising results, which should be promoted locally as this, could be a revolutionary change in the years to come.

ACKNOWLEDGEMENTS

We like to acknowledge and extend our gratitude to Dow Medical University, Karachi, Pakistan.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

AUTHORS' CONTRIBUTION

All authors equally contributed in this write up.

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Corresponding Author:
Fareeha Masood
Dow Medical College,
Karachi, Pakistan.
Email: fareehamasood5@gmail.com