

# CAN VESTIBULAR REHABILITATION THERAPY BE A VITAL SUPPORT FOR PATIENTS TRANSITIONING HOME AFTER UNDERGOING ACOUSTIC NEUROMA SURGERY?

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## Background and Aims

The surgical removal of an acoustic neuroma impacts the patient's balance system, leading to symptoms such as dizziness, nausea, visual disturbances, and instability during daily activities. Vestibular exercises are an evidence-based approach for managing vertigo and are effective for various balance disorders. This study aimed to evaluate the effects of Vestibular Rehabilitation Training (VRT) on enhancing patients' walking performance, as measured using the Functional Gait Assessment (FGA) scale.

## Methods

: In a pilot study approved by the Medical Ethics Commission on September 19, 2017 (No. 0120-472/2017/5), a total of 22 male and 28 female participants were enrolled, with a mean age of 47.3 years ( $\pm 7.8$ ). All patients underwent unilateral surgical resection of an acoustic neuroma. Each patient scored at least 25 out of 30 on the Mini-Mental State Examination (MMSE) and a minimum of 30 out of 56 on the Berg Balance Scale (BBS). During the 14-day recovery period in the hospital, patients participated in vestibular exercises to enhance their eye, head, and body movements while seated, standing, or walking. After being discharged to their home environment, patients continued to perform vestibular vestibular VRT exercises. The functionality of their walking was assessed using the FGA scale both before discharge and three months after surgery.

## Results

To determine a clinically significant change between two FGA measurements, we used an external criterion of 5 points, as established in the literature. Our analysis revealed that 75% of patients surpassed this minimum clinically significant change of 5 points, indicating improved dynamic adaptation during functional walking.

## Conclusion

VRT enhanced walking performance and balance in our patients, resulting in improved daily functioning and greater self-confidence in their home environments. Further research with a larger patient group and ongoing monitoring of their rehabilitation progress is needed.

**Keywords:** Surgery, Vestibular, Disorders, VRT, FGA