Assessment the Effectiveness of Vestibular Rehabilitation in an Audiology Department in the UK

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Introduction

The main treatment for vestibular disorders is Vestibular rehabilitation (VR). VR involves exercises that promote the vestibular compensation process.

The VR programme at the Royal Surrey County Hospital (UK) is conducted by a team of specialised audiologists and psychologists and consists of one to one appointments involving individualised exercise programmes and counselling on pacing. The exercise programme consists of habituation, substitution, postural and gaze stabilisation exercises tailored to the individual patient's needs. On average patients received 4 VR sessions. A wide variety of vestibular diagnoses are seen in this clinic, including vestibular migraine, unilateral vestibular disorder and BPPV.

The Vestibular Rehabilitation Benefit Questionnaire (VRBQ) is used as the main outcome measure. The VRBQ is a validated questionnaire designed to assess the outcome of individuals undergoing VR, it investigates patient's symptoms and the effect on quality of life.

The main objectives where to assess (1) the change in the score of the Vestibular Rehabilitation Benefit Questionnaire (VRBQ) before and after VR treatment in patients seen in an Audiology Department in the UK, (2) factors predicting VR outcome.

Methods

This was a retrospective study. Data was gathered from records of 69 consecutive patients who enrolled in and completed a VR programme in an audiology clinic in the UK. VRBQ scores were collected pre and post treatment, as well as the number of appointments and diagnosis.

The average age of the patients was 63.5 years (standard deviation, SD = 16 years, ranged between 21 and 93 years). Sixty five percent (45/69) were male.

Results

There were statistically significant differences in the mean scores for VRBQ and its subscales between pre and post treatment assessments. The mean scores for Dizziness subscale of VRBQ pre and post treatment were 56 (SD=17.9) and 32 (SD=22.7), respectively ($p<0.001$). The mean scores for the Anxiety subscale pre and post treatment were 23.7 (SD=21.3) and 14.9 (SD=18.2), respectively ($p<0.001$). The mean scores for Motion-provoked dizziness subscale pre and post treatment were 34 (SD=20.1) and 17.8 (SD=15.5), respectively ($p<0.001$). The mean scores for Quality of Life subscale pre and post treatment were 36 (SD=23.1) and 13.6 (SD=18.8), respectively ($p<0.001$).

A clinically significant change of more than 7% in VRBQ total was observed in approximately 80% of the patients (55/69).

Multinomial logistic regression model showed that the patients' pre-treatment diagnostic categories (i.e., vestibular migraine, unsteadiness, PPPD and BPPV) did not significantly predict the odds of clinically significant improvement following VR.

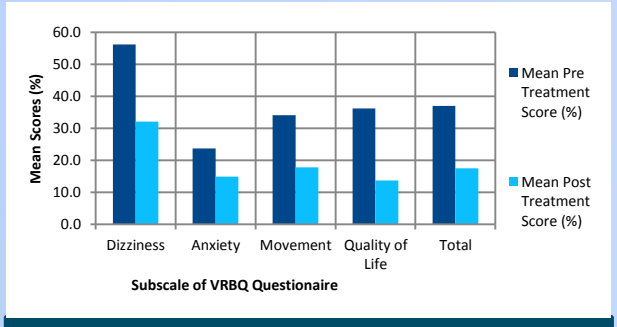

Figure 1. Comparing Means of VRBQ Scores Pre and Post Treatment

Conclusions

Results show the effectiveness of an individualised VR programme as a treatment of vestibular disorders, with 80% of patients showing significant improvement in VRBQ scores after treatment. The study suggested patient's diagnostic category did not affect the likelihood of improving with VR, however, the patients were not evenly distributed in each of the categories, and this could have skewed the data.

References

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