

Validity of method for perceptual assessment of velopharyngeal function and dysfunction

Background

An overall variable for perceptual assessment of velopharyngeal function has sometimes been used for evaluation of velopharyngeal function during speech (e.g. McWilliams et al., 1990). Such an overall variable was found representative of the observers overall impression of degree of impairment (Dotevall et al., 2002). A sum of ratings of speech symptoms of velopharyngeal insufficiency (composite score) has been shown to correlate well with an overall perceptual rating of velopharyngeal function (Dotevall et al., 2002; Lohmander et al., 2009). Overall variables or composite scores have been used in addition to assessment of speech errors related to cleft palate (e.g. Pereira et al., 2013). The VPC-Sum score is based on assessment of the main speech characteristics of velopharyngeal impairment. A first version of the VPC-Sum was used in the Scandleft pilot project and found to have moderate to good agreement with an overall perceptual judgment of the velopharyngeal competence (Lohmander et al., 2009). The aim of the present study was to investigate the construct validity of the score and the validity of perceptual rating of VPC.

Method

Available VPC-Sum scores on 391 five-year olds with repaired cleft palate, were used for investigation of the association with the included variables (hypernasality, active non-oral errors, and VPI symptoms combined of audible nasal leakage and weak pressure consonants). The VPC-Sum score was also compared with an overall judgment of velopharyngeal competence (VPC-Rate) from connected speech on a three-point ordinal scale on the same patients.

Results

Significant positive correlations were found between the VPC-Sum and each of the included variables ($r_s = .91; .72; .61$). A moderate significant positive correlation between VPC-Sum and VPC-Rate was found ($r_s = .70$). The latter classified cases well when VPC-Sum was dicotomized with 67% predicted VPC and 90% predicted VPI.

Conclusion

The validity of the VPC-Sum was good and the VPC-Rate a good predictor suggesting possible use of both depending on the objective.

References

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