



Subjective Evaluation of Patients with Substitute Voice

Assessment of Subjective Aspects in Laryngectomized Patients with Tracheoesophageal Substitute Voice

background

The question of how patients experience their disease and the preservation of quality of life are focused on in a modern and holistic medicine and especially in the oncological field. Total laryngectomy because of laryngeal or hypopharyngeal cancer

means loss of quality of life to a certain degree for most of the affected persons even in cases when voice rehabilitation was successful. This study focuses on two topics:

1. Under a methodical point of view,

two methods of measuring subjective handicap arising from distorted voice were compared.

2. As both quality of life and coping are supposed to be impaired in laryngectomees, the correlation of these two features was investigated.

subjects

33 male laryngectomees participated after informed consent. Laryngectomy and radiation had

been performed at least one year prior to the present examination. All patients had successfully been

equipped with a Provox® shunt valve device. None of the patients had recurrent tumor growth or metastases.

methods

All patients were evaluated by means of the questionnaires Voice-Related Quality of Life (V-RQOL) and the Voice Handicap Index (VHI). The V-RQOL comprises 10 closed questions. Answers at first are transferred into raw values and afterwards into percent with a high percentage depicting high voice-related quality of life. The VHI comprises 30 closed questions. Answers are transferred into raw values ranging from 0 to 120 with high values depicting a high voice-related handicap.

Health-related quality of life was assessed by the German version of the Short Form (SF)-36 Health Survey. The SF-36 comprises eight scales: Physical Functioning, Role Physical, Bodily Pain, General Health, Vitality, Social Functioning, Role Emotional and Mental Health. The raw scores of the eight domains of the SF-36 were normalized to a range from 0 (worst) to 100 (best) according to the procedure described in the test manual. Based on the eight scales, two summary scales are calculated: the Physical

Component Summary and the Mental Component Summary scale.

Coping was assessed using a German test on coping strategies (Trierer Skalen zur Krankheitsbewältigung TSK). The TSK is a questionnaire comprising 37 items in five subscales: rumination RU, retrieval of social integration SS, defence of threat BA, retrieval of information and exchange of experiences SI and retrieval of religious support SR.

results

VHI vs. V-RQOL: As results of both questionnaires are normally distributed, the Pearson correlation coefficient was calculated for comparison of the results of both the V-RQOL and the VHI. There is a statistically significant interrelation

between the results of both questionnaires ($r = -0.82$, $p < 0.001$).

SF-36 vs. TSK:

There are few significant correlations between the sum scales of the SF-36 and the subscales of the TSK,

namely SF-36_{Psych} (psychic sum scale) vs. TSK RU "Rumination" with $p=0.005$, and SF-36_{Körper} physical sum scale vs. TSK SE "Suche nach sozialer Einbindung" (retrieval of social integration) with $p=0.046$.

conclusions

Due to the high linear correlation between both the V-RQOL and VHI questionnaires, it is possible to restrict measurement of the subjective burden of laryngectomees with tracheoesophageal substitute voice to only one of them. In clinical applications, the V-RQOL with its lower number of items (10 vs. 30) is more advantageous than the VHI.

The subscales SF-36_{Psych} and TSK RU, which focus on psychological aspects, are related. This reveals their similar theoretical foundation. The desire for social integration, the ability, and the realization of this integration obviously depend on general physical well-being. This has to be considered in the frame of a holistic approach of oncologic

aftercare in laryngectomized patients. In the clinical field, these aspects should not only be assessed with questionnaires but in a dialog between the physician and the patient. But especially the application of the TSK will help to identify individual needs and possibilities for specific intervention.

references

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