Evaluation of the effect of non-surgical periodontal treatment on oral health-related quality of life: estimation of minimal important differences 1 year after treatment


Relevant background to study:
Primary outcome measures of periodontal treatment are usually clinical outcomes such as changes in clinical attachment, plaque levels, bleeding on probing and change in probing pocket depth. However, the patient’s perspective may also be important for the understanding of the effects of the disease and its management upon symptoms, function and psychosocial factors. One way to evaluate patient related outcomes (PRO) is oral health-related quality of life (OHRQoL) measures which ascertain patients’ perceptions of their oral health and its impact upon their well-being.

Study Aims:
To evaluate PRO at 12 months following non-surgical periodontal treatment (NSPT) using two different oral hygiene educational programmes in patients with chronic periodontitis and to calculate in this population the minimal important differences (MID) for two different quality of life measurements.

Methods:
This randomised clinical trial recruited 87 patients with moderate-advanced chronic periodontitis, who after a baseline clinical examination, were divided into 2 groups: 40 patients were assigned to an individually customised oral health program (ITOEP) based on cognitive behavioural principles, while the other group (ST) consisted of 47 patients who received standard oral health information and individual oral hygiene instructions. Both groups received non-surgical periodontal treatment and were asked to complete individualised questionnaires containing OHRQoL measures at baseline and 12-months later. Two different instruments were used: 1) the General Oral Health Assessment Index (GOHAI) that focuses on the frequency of symptoms (disease); and 2) the UK Oral Health related quality of life measure (OHRQoL-UK) that assesses the positive effects of oral conditions on patient well-being. The patient’s global rating of oral health and socio-demographic information were also recorded.
Results:

- There were no differences between the two educational programmes for any of the variables studied, with both programmes demonstrating higher OHRQoL measures after periodontal treatment, which indicates more positive well-being and reduced frequency of oral problems in both groups.

- After pooling the results from both educational interventions and comparing the PRO between baseline and one year after therapy, 58 (67%) participants perceived “improved” oral health after NSPT.

- From the 16 different aspects evaluated by the OHQoL-UK, 8 aspects had significantly improved in mean value from baseline to 12 months (general health, confidence, mood, finances, personality, comfort, breath odour and overall).

- Of the 12 different aspects evaluated by GOHAI, five aspects significantly improved from baseline to 12 months (discomfort when eating, unhappy with appearance, use of medication to relieve pain, worried or concerned, nervous or self-conscious and overall).

- The Minimally Important Differences (MID) were calculated for both OHQoL-UK and GOHAI indices. The mean change scores for those who reported “improved” oral health was 5.1 for OHQoL-UK and 3.0 for GOHAI. In total, 46% reported improvements equal to or higher than 5.1 in OHQoL-UK and 50% equal or higher than 3.0 in GOHAI.

- There was a correlation between the changes in self-rated oral health and the mean change scores for both questionnaires.

Conclusions and impact:

What can we learn as practitioners?

- Non-surgical periodontal treatment improves patients’ perceptions of oral health-related quality of life measures including increased well-being and a positive impact on the person’s daily life.

- Both oral health programmes resulted in similar outcomes of oral health-related quality of life.

- The evaluation of PRO should be considered in all studies assessing the efficacy of periodontal interventions.