Denture Hygiene: an audit conducted in general dental practice and a role for the Dental Hygienist and Therapist?

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Background
Good denture hygiene is important to the well being of patients, and the causes for poor denture hygiene are multi-factorial in nature. It can negatively impact on both oral and general health and the clinical consequences of poor denture hygiene ranging from increased risk of periodontal disease in the partially dentate, to denture stomatitis and oral ulceration [1-3].

Dental hygienists play a very important role within the dental team in helping to motivate and educate patients in the maintaining good oral hygiene, as well as assisting in the treatment of patients, and helping to deliver patient-centred care focusing on prevention [4].

The following audit on denture hygiene was conducted in general dental practice, in order to help improve the denture hygiene of our patients.

Aims
A Denture Cleanliness Index (DCI) was created in order to assess denture cleanliness, and general health and the clinical consequences of poor denture hygiene ranging from increased risk of periodontal disease in the partially dentate, to denture stomatitis and oral ulceration [1-3].

Dental hygienists play a very important role within the dental team in helping to motivate and educate patients in the maintaining good oral hygiene, as well as assisting in the treatment of patients, and helping to deliver patient-centred care focusing on prevention [4].

Methods
A Denture Cleanliness Index (DCI) was created in order to assess denture cleanliness, scores ranged from 0 – 4, using a staining method, with 0 being best score, and 4 being the worst.

An analysis of the quality of record keeping with respect to denture hygiene instruction was undertaken retrospectively (n=30).

Thirty patients wearing acrylic dentures, 9 complete denture wearers were included in the study. After the first cycle, 24 patients clinical notes (80%) had no indication of denture hygiene being recorded, this increased to 100% after review. It can be seen from Graph 2 that 25 patients (84%) had DCI scores 3 or greater, indicating patients at the practice unfortunately had poor levels of oral hygiene. A number of factors such as lack of evidence of denture hygiene in notes, no denture hygiene leaflets in practice, and a lack of standardisation in giving denture hygiene instructions, may have contributed to the present findings. After one-month review DCI scores had vastly improved with 90% patients scoring 2 or less (Figure 3).

Results

[A] Record Keeping

Figure 1. Pie chart showing recording of denture hygiene in patient notes. Light green area denoting ‘yes’ and ‘no’ respectively

Thirty patients wearing acrylic dentures, 9 complete dentures and 21 partial denture wears were included in the study. After the first cycle, 24 patients clinical notes (80%) had no indication of denture hygiene being recorded, this increased to 100% after review. It can be seen from Graph 2 that 25 patients (84%) had DCI scores 3 or greater, indicating patients at the practice unfortunately had poor levels of oral hygiene. A number of factors such as lack of evidence of denture hygiene in notes, no denture hygiene leaflets in practice, and a lack of standardisation in giving denture hygiene instructions, may have contributed to the present findings. After one-month review DCI scores had vastly improved with 90% patients scoring 2 or less (Figure 3).

[B] Denture Cleanliness

Figure 2. Pie chart showing baseline Denture Hygiene Scores for 1st Audit Cycle

Discussion
Providing tailored DHI may have contributed to the vast improvement in DCI scores noted between first and second cycle results; a dramatic improvement in both quality and consistency of clinical record keeping was also evident. Higher DCI scores were noted in partial denture wearers, where the majority of staining was seen on the areas adjacent to the abutment teeth.

The DCI index worked well as a proof of concept in standardising patient’s denture hygiene and subsequent compliance, as well as clinical record keeping.

Conclusions
The Denture Cleanliness Index allowed for the simplified and standardised method of clinical record keeping for denture hygiene, and as a patient education and motivation tool. Targeted DHI for patients resulted in an improvement in DCI scores after one-month review.

Where a patient has been issued a new denture or has an existing denture, provision of both oral hygiene and denture hygiene instructions should be carried out on a regular basis. We commend recording denture hygiene instructions in clinical notes as “DHI”, in a manner similar to “OHI” used for noting oral hygiene instruction.

Dental hygienists and therapists have an increasingly important role in the dental team, and we envisage their skill set expanding in the future to include the provision of tailored denture hygiene instructions to help manage patients’ denture hygiene.

References