Other journals in brief

A selection of abstracts of clinically relevant papers from other journals.
The abstracts on this page have been chosen and edited by Reena Wadia.

TMD in vocalists

van Selms M K A, Wiegers J W, Lobbezoo F, Visscher C M. Are vocalists prone to temporomandibular disorders? *J Oral Rehabil* 2019; DOI: 10.1111/joor.12849.

Singing is not associated with reports of TMD pain and TMJ sounds, after adjusting for potentially confounding variables.

Singing is frequently mentioned as a risk factor for temporomandibular disorders (TMDs). This study investigated whether vocalists report a higher prevalence of TMD pain and temporomandibular joint sounds compared with instrumentalists who do not load their masticatory system while performing. A total of 1,470 musicians from 50 different music ensembles completed a questionnaire. Of these, 306 vocalists and 209 musicians were enrolled in the control group. The prevalence of self-reported TMD pain among vocalists was 22%, as compared to 12% in the control group. Of the vocalists, 20% reported TMJ sounds versus 15% of the controls. The multiple regression models indicated that being a vocalist was not a risk indicator for the presence of self-reported TMD pain or TMJ sounds. Instead, it appeared that the report of TMD pain among musicians was positively associated with female gender, next to the level of physical workload, depicted as frequency of oral behaviours and the hours of daily practice.

<https://doi.org/10.1038/s41415-019-0799-0>

Complications of angulated implant abutments

Omori Y, Lang N P, Botticelli D, Papageorgiou S N, Baba S. Biological and mechanical complications of angulated abutments connected to fixed dental prostheses. A systematic review with meta-analysis. *J Oral Rehabil* 2019; DOI: 10.1111/joor.12877.

Prosthetic complications such as screw loosening and abutment loosening were frequent.

This systematic review aimed to evaluate the biological and mechanical complications of angulated abutments on full-arch and partial jaw rehabilitations. An electronic search was carried out and studies published between 2000–2019 with a follow up for at least one year were included. Of the nine studies included, three were prospective and six retrospective cohort studies. They reported on 797 patients that received 4,127 implants. The total number of abutments were 4,079 of which 1,673 were angulated. All abutments were prefabricated. Angulated abutments were associated with increased implant failure rates – an effect that was both statistically significant and clinically relevant. Three studies reported differentiated data for mechanical and technical complications at one year of follow-up, being mostly related to the retention screw while screw fracture. Angulated abutments were associated with a statistically significant increase in marginal bone loss one year after insertion compared to straight abutments, however, this might be clinically negligible.

<https://doi.org/10.1038/s41415-019-0805-6>

Oxygen saturation during clenching

Satokawa C, Nishiyama A, Suzuki K, Uesugi S, Kokai S, Ono T. Evaluation of tissue oxygen saturation of the masseter muscle during standardised teeth clenching. *J Oral Rehabil* 2019; DOI: 10.1111/joor.12863.

Weak-force, long-duration clenching is more harmful than strong-force, short-duration clenching, suggesting a greater effect of awakening bruxism than sleep bruxism on myalgia.

This study aimed to clarify factors influencing tissue blood oxygenation recovery after clenching with altered muscle activity and duration, but constant total muscle activity. The following tasks were based on constant maximum voluntary clenching (100% MVC): (a) 50% MVC × 30 seconds; (b) 30% MVC × 50 seconds; and (c) 10% MVC × 150 seconds. Tissue oxygenated (oxy-Hb), deoxygenated (deoxy-Hb) and total haemoglobin (total-Hb) were recorded using near-infrared spectroscopy in the masseter muscle. Participants rested for 30 seconds before each task; average resting values were set as baseline. Respective ratios to baseline at 20, 60, 120 and 180 seconds after each task were calculated. Oxy-Hb and total-Hb decreased and deoxy-Hb increased during the tasks and recovered thereafter. For group (c) not all values recovered to baseline, even after 180 seconds. Oxy-Hb and total-Hb were significantly lower, and deoxy-Hb was significantly higher for (c) than other tasks, at all times during and after recovery.

<https://doi.org/10.1038/s41415-019-0806-5>

Unilateral implant-supported prosthesis

Khoury-Ribas L, Ayuso-Montero R, Willaert E, Peraire M, Martinez-Gomis J. Changes in masticatory laterality three months after treatment with unilateral implant-supported fixed partial prosthesis. *J Oral Rehabil* 2019; DOI: 10.1111/joor.12873.

Treatment with ISFPPs alters the masticatory laterality, moving it to the treated side and increasing the degree of bilateral chewing in patients with unilateral posterior missing teeth.

This prospective study assessed changes in masticatory laterality in patients with unilateral posterior missing teeth three months after treatment with an implant-supported fixed partial prosthesis (ISFPP). Thirty patients were treated with one-, two- or three-unit ISFPPs. The control group comprised ten healthy individuals with complete natural dentition. Each participant performed masticatory assays at baseline and at three-month follow-up, chewing pieces of silicon inside a latex bag. Masticatory laterality was determined using three different methods: assessment of the first chewing cycle, of all cycles, and application of a visual analogue scale. Three months after treatment a significant change in the asymmetry index towards the treated side and a significant reduction in the Unilateral Chewing Index were observed in the ISFPP group. No significant differences in masticatory laterality between groups were detected at three-month follow-up.

<https://doi.org/10.1038/s41415-019-0804-7>