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Short Communication

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[Advancing Oral Health and Craniofacial Science through Microchip Implants](#)

Microchip implants have emerged as transformative tools in the realm of oral health and craniofacial science, offering novel solutions to longstanding challenges. This paper aims to explore the diverse applications of microchip technology in dentistry and craniofacial medicine, envisioning a future where these implants play a pivotal role in diagnostics, treatment modalities, and ongoing patient care. The integration of microchips enables real-time monitoring of oral conditions, facilitating early detection of dental issues and providing personalized treatment strategies. Additionally, these implants open avenues for smart prosthetics and orthodontic devices, optimizing patient comfort and treatment outcomes. However, ethical considerations, patient perceptions, and the societal impact of such technology should also be addressed. By examining the multifaceted implications and applications of microchip implants in oral health and craniofacial science, this research overview seeks to contribute valuable insights to the intersection of technology and healthcare in the dental domain.

Research Article

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[Hygiene and Care Protocols for Implant-supported Dental Prostheses in Patients with Diabetes](#)

Background: Prophylactic dental procedures following implant placement are critical to the long-term success of implants and are also dependent on the patient maintaining effective home care.

Purpose: Evaluation of the effectiveness of preventive measures in patients with diabetes during long periods after prosthetic treatment with implants.

Materials and methods: The study included 62 patients with diabetes with edentulism using 146 dental implants. Patients underwent constant monitoring, including regular occupational hygiene during follow-up examinations. Their frequency was set individually from 2 to 4 times A clinical index including Bleeding on Probing (BOP), Probing Depth (PD), and Marginal Bone Loss (MBL).

Results: In patients included in the preventive protocol after 12 months, the mean BOP was 1.4 ± 0.15 , and PPD was 2.46 ± 0.42 . After 12 months in patients mean MBL was 0.72 ± 0.6 mm, after 3 years MBL was 1.24 ± 0.25 mm. For patients who were excluded from preventive services after 12 months, the mean BOP 1.9 ± 0.25 , and the mean PPD was 3.56 ± 0.28 . After 12 months in patients mean MBL was 0.87 ± 0.7 mm, after 3 years MBL was 1.52 ± 0.32 mm ($p > 05$). Compared to persons enrolled in the preventive protocol, those in the group without services were more likely to develop peri-implantitis (42.4% vs. 12.6%). The survival rate of implants after 3 years was 98.4%. The survival rate of implants in those patients who were excluded from preventive services after 3 years was 95.4%.

Conclusion: For patients with diabetes, regular medical examinations, accompanied by professional oral hygiene procedures, prevent the development of negative reactions of the soft tissues surrounding the implant.

Clinical Trial

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[Treatment Outcome in Patients with Myofascial Orofacial Pain: A Randomized Clinical Trial](#)

Background: Temporomandibular Disorder (TMD) pain attributed to myalgia is a common condition and patients should get advice on the best treatment option.

Objectives: The aim was to evaluate the effect of two different exercise programs, or bite splint therapy, respectively, in patients with chronic frequent primary myofascial orofacial pain.

Methods: The study was a randomized clinical trial including patients fulfilling criteria of chronic frequent primary myofascial orofacial pain with a reported pain intensity of ≥ 4 on a numerical rating scale (0-10). Ninety subjects were randomized to either bite splint, home exercises, or a supervised exercise program. Two examiners blinded to the treatment modality examined the same subject at baseline and a 3-month follow-up. Non-parametric statistical methods were applied for the outcome of treatment in intended-to-treat analyses. A P-value <0.05 was considered statistically significant.

Results: The pain severity index was significantly reduced ($p < 0.001$) in all treatment groups. Jaw opening capacity improved significantly ($p < 0.05$) for those randomized to bite splint and for those in the home exercise program.

About 70% of the participants reported improvement in their TMD pain severity with no significant difference between treatments. Both exercise groups improved in jaw function at the 3-month follow-up compared to baseline. Those who had a bite splint reported significantly more improvement in their headaches compared to those in the exercise programs.

Conclusion: Jaw exercise programs and bite splint treatments had similar positive effects on TMD pain severity attributed to myalgia after 3 months.
