

CLINICAL ORAL IMPLANTS RESEARCH

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**31st Annual Scientific Meeting of the
European Association for Osseointegration
October 24th – 26th 2024**

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ABSTRACT

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were placed by the same surgeon appertaining to the same brand and type. The study determinant was the type of protocol and the outcomes were the ISQ distribution, variability and regression as derivatives of RFA. RFA was performed to implants at the time of insertion and 2 or 4 months later for mandible and maxilla, respectively. A mean ISQ value (out of 4) per implant at each time was registered. ISQ lower than 55 and torque values lower than 30 Ncm at the time of insertion were excluded. IBM SPSS Statistics 29.0.2.0 Statistical Package for Social Sciences was used for the data analysis performing Independent Samples T-test concerning the total sample of implants and patients and the sex associated sub-totals.

Results: Statistical analysis of the total sample resulted in a mean variation/ regression between the first and second ISQ measurement of 4.42 for OS and 0.031 for TS group. Correspondingly, the males' mean variation of ISQ increased by 4.8 at OS group whereas decreased by -1.59 at TS group. Concerning the females' values, an increase of 4.03 and a slighter one of 1.65 was shown, respectively. Special Radar, Linear and Bar charts were designed and demonstrated a strong upward trend of ISQ at the male OS group and a fall of ISQ at the male TS group between the first and second measurements. Slightly milder variations were demonstrated for female group. For the total sample, a Levene's Test for Equality of Variances (EV) showed a Significance of.083 (EV assumed) and both One-and Two-sided $p < 0.001$. For the male group, the respective values were.058, $p < 0.001$ and $p < 0.001$. For the female group, the respective values were.003, $p < 0.005$ and $p < 0.010$. Oneway ANOVA test was also executed with same results.

Conclusion and Clinical Implications: ISQ values of OS group proved to be statistically higher after healing at both female and male patients. The strong correlation between OS protocol and the quality of osseointegration may be associated to the intercurrent to the soft tissue healing and maturation of the cortical bone around the implant. Within the limits of this study, OS besides reduction of treatment time and operative morbidity/discomfort demonstrate beneficial role at bone healing and a positive impact on osseointegration.

I confirm that ethical permits and approvals are in place in accordance with regulations: Not applicable.

Disclosure of Interest: None Declared.

Keywords: Osseointegration, Resonance frequency analysis, Retrospective study

IAO-EAO-SIdP-701/PO-SU-063 | Use of mini-implants in intrusion of overerupted molars-case report

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Background: Early loss of mandibular permanent molars with overeruption of maxillary permanent molars is a common

clinical finding that routinely occurs. Molar intrusion is one of the most difficult movements in orthodontic mechanics requiring efficient anchorage to achieve success.

Aim/Hypothesis: Throught this case report, we emphasize the versatility of orthodontic mini-implants as a form of temporary anchorage devices (TADs) in the biomechanics of molar intrusion attempted to create interocclusal space for adequate prosthodontic restoration with osseointegrated implants and prosthesis.

Material and Methods: An adult patient, with Class I occlusion on both sides, minor spacing and irregularities in the maxillary front teeth position and normodivergent facial pattern, was referred with overerupted maxillary right first molar and second premolar, encroaching upon the antagonistic missing dental space. Two mini-implants were installed: one in the palatine alveolar process in the interdental space between the second premolar and the first molar, and the other in the vestibular process of the maxilla in the interdental space between the molars. To avoid inadvertent palatal tipping and to favor a synchronous intrusion with the aid of chain elastics, a partial orthodontic appliance consisted of molar tubes bonded to the upper first and second molar, brackets to the premolars and a 0.017×0.025 inch TMA wire.

Results: After 5 months of treatment, approximately 2.5 mm of intrusion was achieved. Subsequently, the occlusal clearance was sufficient to rebuild the posterior occlusion by a prosthesis placed in the area of the missing antagonistic tooth. The intrusive tooth movement maintained the vitality of the intruded teeth and was not aggressive to the periodontal structures, did not cause root resorption and no change of the pulp flow was detected.

Conclusion and Clinical Implications: In contrast to traditional orthodontics, mini-implants were demonstrated to be clinically efficient in providing sufficient anchorage against orthodontic forces, reestablishing a functional posterior occlusion and reducing the need for prosthetic crown reduction.

I confirm that ethical permits and approvals are in place in accordance with regulations: Yes, I confirm that ethical permits and approvals are in place.

Disclosure of Interest: None Declared.

Keywords: Biomechanical stability, Dental implants, Orthodontics

IAO-EAO-SIdP-713/PO-SU-065 | Long-term results of tilted implants placed in the atrophic posterior mandible

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Background: Implant treatment of atrophic mandibular molars is a challenging issue. One approach is the angled placement of endosseous implants.

Aim/Hypothesis: Previously, we evaluated the short-term outcome of tilted implants placed in the atrophic posterior mandible and found that the survival rate was good, but peri-implantitis remained a problem. In this presentation, we report the long-term outcome of these implants.

Material and Methods: The subjects were 12 patients who underwent intentional tilting placement of implants in the atrophic



