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Clinical Image

Surgical Techniques and Management of Gingival Graft Associated with Implant: A Case Report

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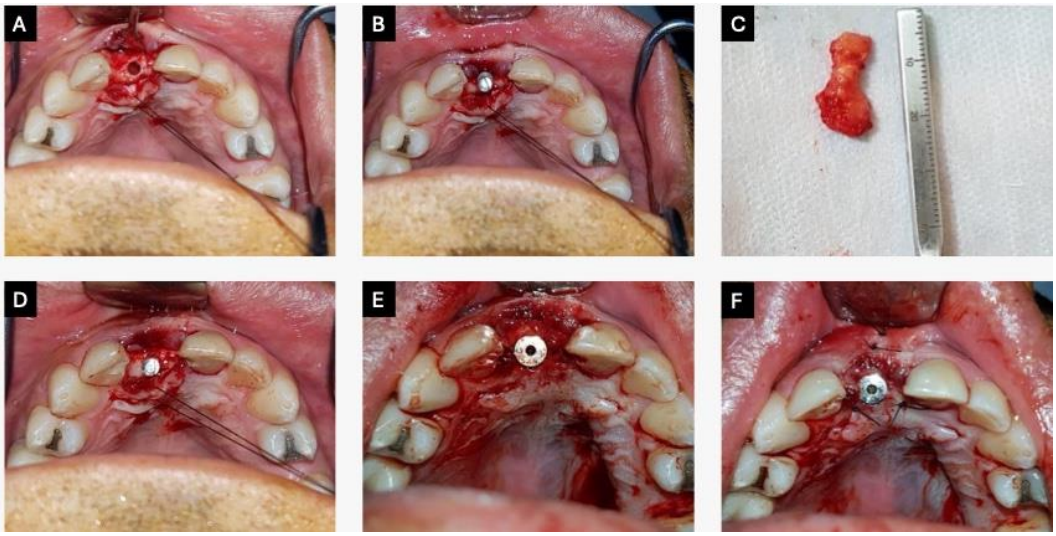

Figure 1: A. Radiographic image showing bilateral trifid mandibular canal. This variation in the mandibular canals underscores how intricate and diverse mandibular canal structures can be. B. The cone beam computed tomography (CBCT) image highlights the trifid mandibular canals. C. On the right side of the image, red arrows clearly point out the three distinct branches of the trifid mandibular canal. On the left side, black arrows indicate the three branches of the trifid mandibular canal, providing precise identification of each branch. D. An orthoradial slice on the right side of the mandible displaying a trifurcated root canal. The image clearly reveals three distinct branches of the root canal, indicating a complex anatomy.

Oral rehabilitation with implants has become an increasingly common practice in modern dentistry, offering patients a quick and effective solution for replacing missing teeth [1]. However, the aesthetics and health of the peri-implant tissues are challenges that require special attention. Gingival graft in conjunction with implants is a strategy aimed at ensuring the aesthetics and integrity of the tissues surrounding the implant, preventing gingival recessions and improving the integration between the implant and the soft tissue [2].

A 55-year-old non-smoking patient with no history of systemic diseases was referred for the rehabilitation of a missing upper central incisor due to trauma. During the clinical examination, the absence of the tooth with good remaining bone condition was observed, suggesting viability for the implant. The treatment plan, which included the installation of the implant with a gingival graft, was discussed and approved (Figure 1). The surgery was performed under local anesthesia. The implant was precisely positioned, followed by the placement of an autogenous gingival graft harvested from the patient's own palate. The graft was sutured around the implant to maximize the aesthetics and stability of the gingival tissue.

The literature indicates that the placement of gingival grafts in association with implants can significantly improve the aesthetics and health of peri-implant tissues. According to recent studies, the preservation of the gingival contour and the prevention of recessions are crucial for the long-term success of implants [3]. In this case, the technique used proved effective in maintaining the aesthetics and function of the peri-implant tissue [4]. Postoperative follow-up included weekly visits during the first month, followed by monthly visits to monitor the healing and integration of the graft and the implant. No complications were observed, and the patient reported a high degree of satisfaction with the aesthetic results [5].

The success of treatment with gingival grafts in implants, as demonstrated in this case, reinforces the importance of detailed surgical planning and rigorous postoperative follow-up. The aesthetic and functional integration of the peri-implant tissues is essential for the longevity of the implant and patient satisfaction. This case report contributes to the literature by illustrating an effective approach to soft tissue management in implant procedures.

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References

1. Tavelli L, Barootchi S, Avila-Ortiz G, Urban IA, Giannobile WV, Wang HL. Peri-implant soft tissue phenotype modification and its impact on peri-implant health: A systematic review and network meta-analysis. J Periodontol. 2021 Jan;92(1):21-44. doi: 10.1002/JPER.19-0716. Epub 2020 Aug 9. PMID: 32710810.
2. Zucchelli G, Mounssif I. Periodontal plastic surgery. Periodontol 2000. 2015 Jun;68(1):333-68. doi: 10.1111/prd.12059. PMID: 25867992.
3. Thoma DS, Naenni N, Figuero E, Hämmerle CHF, Schwarz F, Jung RE, Sanz-Sánchez I. Effects of soft tissue augmentation procedures on peri-implant health or disease: A systematic review and meta-analysis. Clin Oral Implants Res. 2018 Mar;29 Suppl 15:32-49. doi: 10.1111/clr.13114. PMID: 29498129.

4. Buser D, Chappuis V, Belser UC, Chen S. Implant placement post extraction in esthetic single tooth sites: when immediate, when early, when late? Periodontol 2000. 2017 Feb;73(1):84-102. doi: 10.1111/prd.12170. PMID: 28000278.
5. Lemos CAA, Verri FR, de Oliveira Neto OB, Cruz RS, Luna Gomes JM, da Silva Casado BG, Pellizzer EP. Clinical effect of the high insertion torque on dental implants: A systematic review and meta-analysis. J Prosthet Dent. 2021 Oct;126(4):490-496. doi: 10.1016/j.prosdent.2020.06.012. Epub 2020 Sep 8. PMID: 32917400.