

Soft Tissue Grafting To Improve Implant Esthetics - A Case Report

Abstract

A connective tissue graft, is treatment of choice in many cases for thickening periimplant tissues around implant. The aim was to present a case with connective tissue graft around implant to augment the gingival tissue.

A Healthy 52 years old woman with chief complaint of replacing her missing teeth attended to the Department of Periodontics with missing 46 & 47 teeth were treated with connective tissue graft over the recession around the implant of mandibular right first molar tooth and successful treatment outcomes in the form of increase in gingival dimension were obtained.

Key Words

Implant, Recession, Graft, Esthetics

Introduction:

Gone are the days when vanity was for the riches. Now everything and anything is available for everyone, Implant is no more a exception. It is no more a distant star, it has arrived at the common man's door step. Doctors strive for conservation. What we want is maximum result with minimum damage and here the need for revolution comes, a new technology in a new era that is **IMPLANTS!!!**

The successful use of dental implants to replace missing teeth has been one of the most popular, exciting and evolving areas of clinical dentistry^[1]. When implants are thought as a treatment option, treatment planning has become more complex for the dental practitioner and an interdisciplinary team approach is recommended^[2]. Failure to demonstrate such an approach may lead to an undesirable implant complication.

Successful implant therapy can no longer be judged by whether or not the implant simply osseointegrates. Even precise ceramic duplication of the shade, contour and translucency of natural dentition may still result in an esthetic failure if the gingival profile, colour and texture are inadequate. Therefore functional and esthetic success of implant treatment depend not only on the quality of the restoration but also on the final aspect of the contour and stability of the marginal gingiva and the proximal papilla in harmony with the adjacent teeth^[3].

Soft tissue grafting can be one of the treatment of choices for thickening implant tissues at implant placement, to treat gingival recession and augment the keratinized gingiva^[4]. Autogenous and allografting material have been used to augment the gingival dimensions^{[5],[6],[7],[8]}.

A connective tissue graft, a thick biotype with large amount of attached keratinized gingiva is treatment of choice in many cases for treating gingival recession or for thickening periimplant tissues around implant. The aim of this case report was to present a clinical case with connective tissue grafting procedure around implant to augment the gingival tissue.

Case Report

A Healthy 52 years old woman with chief complaint of replacing her missing teeth attended to the Department of Periodontics & Implantology in VSPM's Dental College & Research Centre, Nagpur. On examination mandibular right first & second molar teeth was missing because of caries 6 yrs back. She presented with excellent oral hygiene, no history of periodontal disease, non-smoker and radiographic X-ray revealed normal bone morphology. So according to situation and patient willingness we had planned for implants in the area of missing teeth. For that she was anesthetized using 2 % lidocaine with 1: 100,000 epinephrine followed by a full thickness flap reflection, then Addin implants were inserted in the area of mandibular right first & second molar

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teeth. Then flap was sutured using 3-0 mersilk suture and after 8 days patient came for suture removal. Healing was uneventful.

After 3 month, when she came for further



Fig 1: Recession Around Implant



Fig 2: Template For CT Graft

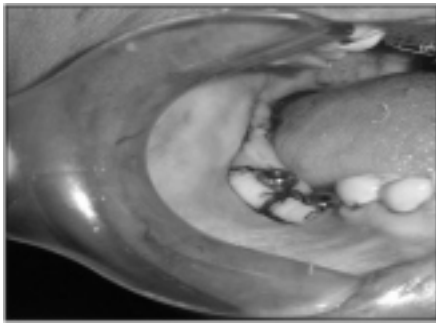


Fig 3: CT Graft Placed



Fig 4: After 3 Months



Fig 5: Final Restoration

treatment we noticed gingival recession on buccal side of mandibular right first molar implant (**Fig1**). Osseointegration was proper at this time. Taking in consideration future recession around that implant, we recommended connective tissue graft to augment the keratinized gingiva and improve esthetics. For this a partial thickness flap was reflected from the palatal area of maxillary left first & second premolar and molar teeth. A palatal trap door flap design was used to obtain the desired subepithelial connective tissue donor graft(**Fig 2**). The harvested CT graft was placed over the dental implant(**Fig 3**) and mersilk 3-0 sutures and cyanoacrylate dressing was placed over that. Patient came after 8 days for suture removal.

When she came after 1 month, healing was uneventful and there was increase in gingival dimension(**Fig 4**). So we proceed with the gingival former and crown over the implants (**Fig 5**).

Discussion

The use of a dental implant to replace a tooth is considered a predictable and successful treatment. Periimplant recession around implants can be prevented by the overbuilding of the site and the addition of the bone on the buccal cortical plate before in conjunction with implant placement. In addition connective tissue grafts can be added in combination with implant placement or during the integration phase, and/or at the abutment connection/temporary restoration.

A thick biotype with a large amount of attached keratinized gingiva will have greater resistance to traumatic or inflammatory recession, whereas a thin biotype is more susceptible to periimplant recession induced by the

resorption of the thin labial cortical plate. The use of connective tissue graft converts a thin gingival biotype into a thick one. Gingival biotype also plays an important role in tissue levels achieved around implants, therefore these graft can enhance gingival margin stability and improve tissue management throughout the restorative treatment phase. An adequate zone of attached gingiva may also be necessary around implants to conceal the implant collar and the abutment/restoration interface interproximally^[9].

There were minimal clinical trials favoring certain surgical procedure to augment keratinized gingiva around implants. In recent study, successful results were obtained with the CT graft over recession around implant. Study done by Andre P. Saadoun et al (2007) showed that biotype thickness around implant improves the esthetic results^[10].

Since the periimplant stability is a complex multifactorial issue, summarizing the ideal approach is not an easy task. Additional research and development is needed along with a better understanding of the biological environment to address this problem for everyday practice.

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