



IMPORTANCE OF VIP -CT FLAP IN IMPLANT ESTHETICS- A REVIEW

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ABSTRACT:-

Esthetics play an important role in dentistry along with functioning prosthesis. Anterior maxilla is a high esthetic demand region^[2]. Achieving esthetics in anterior maxilla is a challenge independent to the type of restoration^[1]. Achieving excellence in anterior rehabilitations include knowledge in esthetics and preservation without damaging much tissues. Reconstruction of the soft tissue loss after pathologic resection needs special techniques^[2]. Many techniques can be used to restore the lost alveolar hard and soft tissues^[1]. Various soft tissue augmentation procedures are available to correct the ridge defects in anterior region^[3]. The newer technique , namely Vascularized Inter-positional Periosteal Connective Tissue flap[VIP-CT], having the potential to augment predictable amount of tissue and has many benefits when compared to other techniques^[3]. This article discusses in detail the importance of Vascularized Inter-positional Periosteal Connective Tissue flap in oral surgery.

Key words: Vascularized interpositional periosteal connective tissue graft, interpositional bone grafting, subepithelial dissection, esthetic zone

INTRODUCTION:-

Achieving esthetics in anterior maxilla is a challenging one^[1]. The prosthetic replacement of missing tooth should be in harmony with the natural dentition to fulfill patient's esthetic demand. The majority of the remaining post extraction defect of ridge is classified as Seibert class III. Management of ridge defects after implant placement are challenging , as the loss of more walls, more chances of failure occur^[1]. The advantages of using vascularized palatal pedicle flap includes acceptable vascularization, excellent thickness and tissue bulk and easy accessibility, maintaining the vestibular sulcus depth. The pedicled flaps are used for the soft tissue closure of grafted extraction sockets. It is

then used as VIP-CT to optimize esthetics in dental implant rehabilitation^[1]. This was introduced by Sclar in 2003 as anteriorly based pediculated tissue of palatal submucosa composed of periosteum^[4]. Blood supply of the flap is mainly a random pattern and its pivot point near incisive papilla^[4]. Hard and soft tissue augmentation is possible along with the bone grafting include onlay or interpositional bone grafting^[4]. It protects underlying bone graft, nourishes it and simultaneously augments the region.

DISCUSSION:-

VIP-CT flap is a well nourished anteriorly pediculated flap from palate^[2]. It is used for coverage of small bone grafts in anterior maxilla. It is recommended when there is an interdental space resulting pathologic tooth migration and bone resorption. This flap simultaneously corrects the labial soft tissue defect, covers the raw reduced interdental bone and augments the soft tissue. Donor site morbidity is low and primary closure of palatal mucosa is possible. The limitation is that, due to the pedicled nature of flap, this technique is applicable in anterior region of maxilla. There is a high incidence of residual ridge defect following anterior tooth loss, which becomes an esthetic challenge of anterior maxilla^[1]. The patient presented with ridge defect that required additional hard and soft tissue grafts. Patients who have underwent repeated ridge augmentation, were suggested for VIP-CT grafts in anterior maxilla for successful esthetic result^[1]. The flap has its own limitations namely difficulty in correcting additional mucogingival defect in the same procedure and lack of prolonged stability with soft tissues^[1].

buccal aspect of recipient site. Abbreviated vertical releasing incision made on palate of mesial and distal aspect of recipient site^[3]. The donor site was prepared by extending the incision on the distal aspect of recipient bed palatally. Horizontal incision made connecting vertical incision and the buccal flap was elevated by blunt dissection. The incision was given parallel to marginal gingiva of teeth and 2mm apical to marginal gingiva upto distal aspect of second premolar. A single incision denotes the sub-epithelial dissection made from distal aspect of second premolar and carried anteriorly toward the distal aspect of the cuspid tooth. A vertical incision made distal to subepithelial dissection^[3]. Tension releasing incision was extended into base of pedicle flap for rotation of flap^[3]. Now the flap is rotated into the recipient site and rigidly immobilized with sutures apically and laterally. The sutures used are chromic catgut with interrupted suture method and gentle pressure was applied with moistened gauze for 10 minutes.

POST OPERATIVE INSTRUCTIONS:-

The patients were given post-operative instructions and medications. The medications are amoxicillin 500mg TID for five days and ibuprofen TID for three days. Continuous rinsing with 0.12% chlorhexidine solution BID for three weeks. The patient was refrained from brushing and flossing over the grafted area for 6 weeks. The sutures were allowed to remain inside the mouth for 2 weeks. The follow up was done every three months and 1 year.

The complications of this flap includes palatal sloughing similar to donor morbidity^[4]. Survival of the flap is high and is a reliable method for reconstruction of small defect in maxillary region in implant dentistry.

CONCLUSION:-

VIP-CT flap is a reliable source of soft tissue for replacement of mucosa in maxilla in implant dentistry^[4]. It is an acceptable alternative to esthetic challenges in cases of repetitive unsuccessful conventional hard and soft tissue grafting procedures for the resolution of mucogingival deformities and conditions around dental implants in esthetic zone. Survival of this flap is high. However it offers more advantages, a detailed study of this flap is essential to expand its usage in the years to come.

REFERENCES:-

1. Optimizing anterior implant esthetics with a vascularized inter-positional periosteal connective tissue graft for ridge augmentation: A case report
Cimara Fortes Ferreria , Edival de Magalhaes Barreto junior , Barbara Zini
2. Esthetic management of gingival lesions in anterior maxilla: The role of VIP-CT flap , a technical note
Amin Rahpeyma, Saeedeh Khajehahmadi
3. Vascularized inter-positional periosteal connective tissue flap: A modern approach to augment soft tissue
Chitra Agarwal, Savita Deora , Dennis Abraham, Rohini Gaba, Praveen Kudva
4. Vascularized inter-positional periosteal connective tissue flap in implant dentistry
Amin Rahpeyma, Saeedeh Khajehahmadi