The long-term clinical and esthetic success of an implant-retained restoration is determined by stable peri-implant soft tissues in harmony with the surrounding soft tissues and natural dentition. In addition to successful osseointegration of the implant, the surrounding soft tissues play an important role in vascularization of the bone. Insufficient peri-implant tissues may cause a nutritive undersupply of the bone resulting in implant loss due to resorption. Proper gingival architecture is especially important in relation to anterior esthetics.

Several surgical techniques may be applied to obtain an adequate emergence profile of the restoration with sufficient keratinized gingiva:

- Vestibular-oral transposition
- Pedicle graft/Roll flap techniques
- Split thickness flaps
- To reconstruct new keratinized gingiva:
  - Free soft-tissue grafts in combination with vestibuloplasty
- Future techniques (tissue engineering):
  - Transplantation of autologous keratinocytes cultivated Invitro, in combination with vestibuloplasty.

Case Report: (Case 1 and Case 2)

Following the surgical protocol for stage two implant surgery, local anesthesia and partial thickness paracrestal incision was made and connective tissue was undermining from the palate (Figs. 1 and 2), which was raised to the margin of the placed dental implant and rolled to achieve required gingival contour. The implant was covered with a healing cap so that the gingiva augments according to the contour of the healing cap (Fig. 3). The site was suture using 5-0 nonresorbable suture. Postoperative instruction and medication was advised. Regular recall was done to evaluate the gingival status. One month postoperatively, excellent emergence profile, gingival and papilla contour was achieved.

**Key words:** Roll flap, keratinized gingiva, emergence profile
CASE REPORT

Discussion

The outcome achieved from this treatment was to achieve emergence profile with adequate amount of gingival tissue. Use of connective tissue graft (CTG) for gingival augmentation is a common practice in periodontics.

Case 1

Figure 1. Initial incision.

Figure 2. Gingival roll flap.

Figure 3. Closure around healing cap.

Figure 4. Gingival augmentation (occlusal).

Figure 5. Augmentation (Facial).

Figure 6. Gingival final prosthesis.
Case 2

Although, it helps in achieving gingival augmentation there are two surgical sites which have to be prepared for the procedure. In this case, the second surgical site is blended with the same surgical site extracting the CTG for gingival augmentation. As mentioned earlier, insufficient peri-implant tissues may cause a nutritive undersupply of the bone resulting in implant loss due to resorption. Proper gingival architecture is especially important in relation to anterior esthetics.

References