Little Things Make Many Things – A Case Report

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ABSTRACT

Prosthodontists are not only restricted to oral rehabilitation” this statement will be justified through this paper. Hand is a body part which is of major significance for communication, body language & social contact along with its fundamental function of grasping and feeling. Finger and partial finger amputations are some of the most frequently encountered forms of partial hand loss. This case report presents the fabrication of custom made silicone finger prosthesis with newer technique in order to avoid costly procedures and to maintain possible esthetic results.
INTRODUCTION:
Prosthodontics is an art and science which offers a natural appearance to the lost structures of the patient. We never realize how important some things are until we lose it. Finger and partial finger amputations are some of the most frequently encountered forms of partial hand losses. Loss of even one finger produces significant esthetic and functional deficiencies. The main causes for finger amputation are Infections and nerve injuries, Congenital malformations, Malignancy and Traumatic injuries which can be replaced either with Endo or Exo prosthesis. The little finger has great peripheral positioning and greatly enhances the power grip. The little finger affects the capacity of the hand and holds objects against the hypothenar eminence. The little finger accounts for 10% loss in function. This case report mainly dealt with replacement of lost little finger with silicone prosthesis.

Case report:
A 43 years old male patient reported to our Department of Prosthodontics with a chief complaint of his right hand little finger missing. On examination a palpable stump was remaining. He revealed the history of trauma. Patient was explained about both surgical and nonsurgical treatment options. As the patient is not affordable to go for surgical treatment, we proceeded with a Nonsurgical treatment option for the patient i.e, provision of silicone prosthesis. First Preparative photographs were made(Figure-1).

Figure-1 Later alginate impression(Figure-2) was made for both right hand as a whole and also to the defect area in particular.

Figure-2 Later the casts(Figure-3) were poured and obtained.

Figure-3 In order to obtain the wax pattern, impression of the little finger of contralateral hand(Figure-4) was made and molten wax is poured into it.
Later it is carved (Figure-5) and shaped into the little finger of the defective area.

The wax pattern(Figure-6) was tried in patient and modifications were done accordingly.

Later shade selection(Figure-7) was done and artificial nails(Figure-8) were selected.
Figure-8 A customized stump(Figure-9) was fabricated and threads were tied to it for easy removal after the prosthesis fabrication.

Figure-9 Then the conventional procedure of dewaxing(Figure-10) was done.

Figure-10 After dewaxing the silicone has been packed into the mold with separate shades for both dorsal and ventral side. After the finger prosthesis was fabricated artificial nail(Figure-11) was attached to it with the help of adhesive.
Later this was tried in patient. Though silicone has many advantages, it has a minute disadvantage of discoloration when exposed to u.v light. So in order to overcome this drawback, the finger prosthesis was covered with a splint, which not only covered the drawback of discoloration but also added as an aid for extra retention.

**Procedure for splint fabrication:**

The impression of the final finger(Figure-12) prosthesis was made and poured.

Figure-12 Later it was transferred to vacuum press(Figure-13) and the splint was fabricated with thermoplastic material(Figure-14)

Figure 13&14 Later it was transferred to the final finger prosthesis(Figure-15). In addition to it, a ring (Figure-16) was also placed for retention.
DISCUSSION:
The acrylic resin and silicone are the most common materials used for rehabilitation. Although resin can be easily characterized and presents great durability, it is a very hard material and uncomfortable for the patient. On the contrary, silicone has texture and flexibility similar to the skin, provides a more comfortable prosthesis, and presents better capacity for skin–prosthesis linkage. However, this material is more difficult to pigment and degrades due to color instability when exposed to ultraviolet rays. Hence in our case we used the splint to protect it from UV rays thereby the discoloration of the prosthesis will be reduced.
Retention is the primary determinant factor for the success of prosthetic restoration in any part of the body. Finger prostheses are retained by a vacuum effect on the stump. To improve the appearance and aid retention on short stumps, patients can wear a ring at the junction between the prosthesis and stump. Though the retaining property can be effective using ring, in order to gain extra retention we added ring and also splint. Silicone finger restorations may have additional functional benefits. Many traumatic amputees experience painful hypersensitivity at the termination of finger remnants. The gentle, constant pressure of elastomer prosthesis can help desensitize and protect the injured tip.
CONCLUSION:
Our treatment option might not be a permanent solution but it gives patient’s psychological satisfaction along with maintenance of aesthetics and function and finally it is justified that even little replacements leads to better improvements.
REFERENCES:

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