

Auricular Prosthesis

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An auricular defect can be caused by any of several conditions, including trauma, congenital malformation, or surgical removal of a neoplasm. One treatment option is to fabricate an auricular prosthesis, a procedure requiring impressions of both the affected and unaffected ears. Several impression techniques have been advocated, including the use of a 2 piece plaster mold, reversible hydrocolloid enclosed by a wax collar, irreversible hydrocolloid reinforced by a plaster matrix, and irreversible hydrocolloid contained in a wax ring.¹⁻³ Kubon et al presented an impression procedure using the distinct properties of 2 different impression materials. Polyether material was syringed under the remaining parts of the helix or lobe, allowing the impression material to support the remnants in their natural resting position. Light body vinylpolysiloxane was used to record the rest of the areas.⁴

A 17 year old patient named Nagaraj reported to the Department of Prosthodontics, College of Dental Sciences, Davangere, with a chief complaint of congenitally missing right ear. His main concern was regarding esthetics and wanted an artificial ear to obscure his defect. It was decided to treat his problem by giving him an auricular prosthesis resembling his natural ear using room temperature vulcanizing silicone.

Procedure

1. Vertical and horizontal orientation lines were marked on the unaffected side to locate the exact position of the ear and the area of the tragus. These lines were extended on to the defect side.
2. An impression was made of the normal ear and of the defect side using alginate; boxing wax was used as a tray to hold the impression material in the correct place. It was reinforced using dental stone with the help of paper clips.
3. After that the impressions were poured in dental stone and stone casts of the normal and defect side were retrieved.
4. Wax pattern was fabricated using the normal ear as a guide and then it was tried on the patients face. The necessary modifications were made at chair side.
5. The pattern was invested using dental stone in three pour technique. The three main objectives of this technique are the (A) construction of a multisectional mold for the fabrication of prosthetic ears with multiple anatomic undercuts, (B) to decrease the risk of tearing the prosthesis during deflasking and recovery, and (C) to decrease the risk of fracturing the mold during deflasking procedure and thereby rendering it unusable.⁵
6. The room temperature vulcanizing silicone was mixed on a glass slab and pigments were added step by step. Shade matching was done according to the patient's skin color. After the desired shade was obtained, the material was packed in the flasks and was allowed to set.
7. The final ear prosthesis was retrieved, finished and polished.
8. It was tried on the patients face, excess material was trimmed.
9. The anterior and posterior margins of the prosthesis were thinned out to merge with the skin.
10. It was adhered on the patients face using medical grade adhesive.

Summary

A technique for restoring a patients missing ear by fabricating an auricular prosthesis using room temperature vulcanizing silicone has been described. The patient is well satisfied with the prosthesis and is using it regularly

References

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