

## Rehabilitation Of A Patient With Auricular Prosthesis

### Abstract

The fabrication of ear prosthesis is considered by many prosthodontists to be one of the more difficult replacements in maxillofacial reconstruction. Repair of auricular defects can be a challenging endeavor due to a broad variety of clinical presentations and available reconstructive options. The severe undercuts and pronounced convolutions of the ear's surface present a challenge in simulating a natural proportioned prosthesis. Acquired auricular deformities most commonly result from a wide range of traumatic injuries. A choice of repair ultimately depends on patient factors, amount of soft tissue loss, and location of the auricular defect. Meticulous re-establishment of proper physical dimensions, smooth external contour, and complex surface landmarks ensures satisfactory aesthetic outcomes for surgeons and their patients. This article presents an outlined procedure in the basic fabrication of a prosthetic ear by a conventional technique.

### Key Words

Auricular prosthesis, room temperature vulcanizing silicone, rehabilitation.

### Introduction:

Normal facial appearance is one of the inherent human traits. A congenital defect or any acquired defects like disease, trauma or surgery can cause facial disfigurement leading to a great psychological trauma to the patient. Reconstruction plastic surgery can be done to restore the defect. However, in certain situations age, medical condition or financial constraint of a patient does not permit surgery. Silicone auricular prosthesis provides a cost-effective and cosmetically acceptable means of camouflage for patients who decline or postpone surgical reconstruction<sup>[1]</sup>. Prosthesis should be provided as soon as possible to raise the spirit and ease the mind of the afflicted and reinstate him to acceptable normalcy.

### Case Report:

A 22 year old male patient reported to the Department of Prosthodontics, M.N.D.A.V. dental college and hospital, Solan, Himachal Pradesh. He gave history of burns and had esthetic problems due to burnt left ear. It was decided to rehabilitate the case with auricular prosthesis using room temperature vulcanizing (RTV) silicone material.

Procedure: The skin over the defect appeared normal [Figure: 1].

The procedure and the limitations were explained to the patient and consent

taken. Impression of the defect area was taken in irreversible hydrocolloid and cast poured [Figure: 2]. Impression of the left ear of his real brother was made in irreversible hydrocolloid, because his brother had similarly proportioned ear. Wax was poured in irreversible hydrocolloid impression of left ear of his brother. This wax pattern so achieved was placed on defect area cast [Figure: 3].

Necessary modifications were made on this pattern on the cast and final wax tryin was done in patient [Figure: 4]. Three piece mold for auricular prosthesis was prepared<sup>[2],[3]</sup> [Figure: 5].

Flasking and dewaxing was done in the conventional manner. Room temperature vulcanizing (RTV) silicone material was manipulated following manufacturer's



Figure 1 : Defect Area



Figure 2 : Cast Of Defect Area



Figure 3 : Wax Pattern

<sup>1</sup> Katoch Shiva

<sup>2</sup> Grewal Dilpreet S

<sup>1</sup> Reader

<sup>2</sup> Sr. Lecture, Department of Prosthodontics  
M.N. DAV Dental College & Hospital, Solan  
**Address For Correspondence:**

Dr. Shiva Katoch

Flat no. 3, Building No. 6, Surya Apartments,  
Surya Vihar, Rajgarh Road, Solan, Himachal Pradesh.

Phone number: 09418472131

E-mail: shivadattal@gmail.com

**Submission :** 10<sup>th</sup> October 2012

**Accepted :** 4<sup>th</sup> March 2014

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Figure 4 : Wax Pattern Tryin



Figure 5 : Three Piece Mold

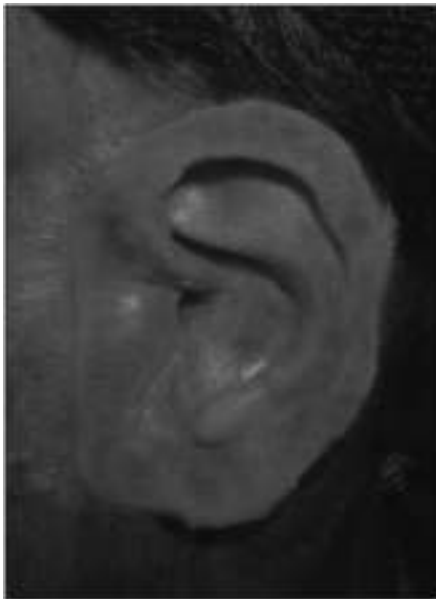


Figure 6 : Final Prosthesis

instructions. Subsequently packing was done with a curing time of 48 hours. After complete curing, the silicone prosthesis was carefully retrieved from the flask and the residual flash was trimmed back to the margins with a sharp scissor. Colouring was done with extrinsic stains to match the skin colour of the patient to provide a realistic appearance. The silicone prosthesis was placed on the



Figure 7 : Auricular Prosthesis In Place

working cast to ensure proper adaptation and tried on the patient for the same [Figure: 6], [Figure: 7].

Instructions were given for maintenance and care of the prosthesis and it was finally delivered to the patient.

#### Discussion:

If an auricular prosthesis is planned, accurate impressions of both the affected and unaffected ears are essential<sup>[4]</sup>. Severe anatomic undercuts associated with tissue remnants or a defect site can often be an obstacle in achieving an accurate impression for a facial prosthesis<sup>[5]</sup>. Maxillofacial prosthetic rehabilitation for acquired defects has become more complex and sophisticated with advancement in techniques and materials<sup>[6]</sup>. The ideal material for maxillofacial prosthesis is yet to be achieved. Presently the most commonly used material is silicone. RTV (room temperature vulcanizing) silicone being soft, light weight and comfortable was preferred. Realistic colouration of prosthesis is important to achieve aesthetically pleasing results. Colouration can be done extrinsically and intrinsically. The base colour of RTV silicone being white makes intrinsic staining difficult. Hence, it was planned to stain the prosthesis extrinsically. The retention of auricular prostheses is a major factor influencing the successful outcome of rehabilitative treatment following cancer surgery or trauma<sup>[7]</sup>. Retention of extra oral maxillofacial prosthesis can be achieved by adhesives, anatomic undercuts, magnets and implants. Osseointegrated implants are

an ideal method of retention. But, this is an expensive choice. So, the best means of retention for this patient was to use silicone adhesives. An auricular prosthesis, in this case, not only improved esthetics but also contributed immensely to the physical and mental well being of the patient.

#### Conclusion:

The placement of a good artificial prosthesis serves as a great psychological, social, and cosmetic benefit in rehabilitation of the patient. As Jean Cocteau has rightly said, "If there is a defect in the soul it cannot be corrected, but if there is a defect on the face and one corrects it, it corrects the soul."

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Source of Support : Nil, Conflict of Interest : None declared