

Procedures

A Simplified approach for fabrication of custom tray for Facial prosthesis

Jyotsna Vimal¹, Sunit Kumar Jurel², Raghuwar Dayal Singh^{3*} and Pooran Chand⁴

¹Junior Resident, King George's Medical University, UP, Lucknow, India

²Professor, Jr Grade, King George's Medical University, UP, Lucknow, India

³Professor, King George's Medical University, UP, Lucknow, India

⁴Professor and Head, King George's Medical University, UP, Lucknow, India

Abstract

Maxillofacial defects are very common and can be due to congenital defect, trauma, infections and neoplasms of facial region. These defects can be restored using different materials and retention methods to give a life like appearance. Rehabilitation of facial defect is a very challenging task. Every good prosthesis needs a skillful hand and it all starts with making a good impression of that defect and to proceed with the same. The aim of present paper was to present a simplified approach for the fabrication of custom tray to take facial impression of the patient with maxillofacial defect.

Introduction

Maxillofacial defects can be either congenital or acquired defect. Defect is not acceptable for the patient nor to the family of the patient in view of esthetic appearance and function. It hampers patient's life and socially unacceptable [1]. Defects can be due to squamous cell carcinoma or basal cell carcinoma [2]. Malignancies of the nasal septum are considered rare, and accounts for 9% of all cancers of nasal cavity [3]. Squamous cell carcinoma comprises about 66% of such lesions [4]. In the past several techniques have been defined for taking impression for facial defects using stock trays or not using stock trays [5-7]. Various materials have also been given in past with which impression can be made [8]. Kusum, et al. defined an innovative technique of taking facial impression by fabricating a stock tray of acrylic and with hinge attachment for accurate impression taking [9].

Most of the facial defect's impression can be obtained by using the present described technique. The stock tray, fabricated by this method can be used to take the final impression of the facial defect by using any suitable impression materials. This technique is simplified as well as cost effective.

The quality of life reduced due to such maxillofacial defect. Prosthetic management after trauma or surgery has been well documented. The purpose of this technical note was to

describe a custom sculpted definitive facial custom tray for making facial impression.

Technique

1. Make the patient sit in a comfortable position on dental chair in at 45-degree angle.
2. Apply Vaseline over patient's face.
3. Then take a sheet of modelling wax (Pyrax Polymars, Estate Roorkee, India), put it in hot water and adapt over patient's face.
4. Adapt modelling wax all over the face (Figure 1).
5. Make this wax hard and rest it in a position.
6. To reinforce the wax, put a gauge dipped in plaster of paris and adapt it all over the modelling wax (Figure 2).
7. Let it set for about 24 hours.
8. Adapt a layer of self-cure acrylic ((Pyrax Polymars, Estate Roorkee, India) over the reinforced model.
9. This custom tray can now be retrieved from model as shown, and small holes with straight fissure bur can be made (Figure 3).
10. This tray can also be used in other patient with facial defects.

More Information

*Address for Correspondence: Dr. Raghuwar Dayal Singh, Professor, Department of Prosthodontics, King George's Medical University, UP, Lucknow 226003, India, Tel: +919919089227; Email: raghuwards@rediffmail.com

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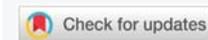




Figure 1: Modeling wax adaptation on the face.



Figure 2: Plaster of Paris reinforced with gauze over the wax.



Figure 3: Final custom tray for facial impression.

Discussion

Facial defects result in esthetic, functional and psychosocial difficulties [10]. Surgical reconstruction techniques, prosthetic rehabilitation or a combination of both the methods to restore these facial disfigurements may improve the level of function and self-confidence for patients [11]. The site, size, and etiology of the defect, patient's age, general medical condition and desire are used to determine the methods of reconstruction [12,13].

Prosthetic rehabilitation can be preferred due to probability of recurrence, complexity of the surgical reconstruction procedure, radiation therapy, and esthetic importance.

Conclusion

The approach for fabricating the custom tray, described in this article is simple and easy to use and can be used in any kind of extraoral defect in whom impression making is required. This custom tray can easily be used with any impression materials like irreversible hydrocolloid or elastomeric impression.

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