

Technique To Fabricate A Facial Moulage Using Party Face Mask

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ABSTRACT

Even when the patient is not present, it is easier to comprehend how the face prosthesis is oriented and positioned in relation to other facial landmarks because to the precision of the facial moulding. When creating imprints for the purpose of creating facial mouldings, a patient's face is directly cast on dental plaster, alginate, and elastomeric impression material, each of which has drawbacks of its own. These factors led to the development of a unique clinical approach that is shown here to manufacture stock trays utilizing party masks in order to make precise impressions and support the impression material as it sets and pours.

Keywords: Facial moulage, Facial defects, Party Face masks

1. INTRODUCTION

Patient's with congenital or acquired maxillofacial defects of face have poor facial appearance. To restore it, facial prostheses often provide an alternative rehabilitation approach when surgical reconstruction cannot be performed.[1]

Correct impression technique is essential for adaptation of a prosthesis. This criteria is important in the fabrication of facial prosthesis as it is in conventional dental procedures. The size, irregular contour, and displaceable soft tissues involved with facial impressions make it a difficult procedure to perform correctly with less distortion. [2]

There are various materials used for recording facial deformities and structures. The defect, nearby structures, and undercuts should all be precisely and minimally distortedly recorded by the impression material. In order to prevent soft tissues from being deformed by the weight of the imprint material, it should have low viscosity, dimensionally stable, adequately elastic, and adaptable with a minimum of bulk. [3]

The process of constructing a face moulage by traditional means is exceedingly laborious and can be frustrating for both the Prosthodontist and the patient. Since using large amounts of elastomeric impression materials increases the patient's treatment expenditures [3] most published procedures included painting a thin coating of low viscosity irreversible hydrocolloid over the face and picking it up with plaster of Paris [4]. The drawbacks of this procedure are as follows. Because alginate has a thin consistency and insufficient structure to bear the weight of the poured plaster, the moulage may become deformed. When painting directly into the face, it might be difficult to control the alginate flow, especially if entire facial

moulage is needed. The thin film of alginate fails to protect the skin from the heat emitted during plaster setting, causing inconvenience to the patient. [3,4]

Therefore, a rapid and inventive way for making the complete face moulage using an irreversible hydrocolloid impression material and a party face mask as a backing has been described here in order to overcome these issues.

2. TECHNIQUE

1. Selection of a party face mask from the store that fits the patients face was done. Using the following method, the party face mask served as a stock tray for recording the facial moulage. (Fig 1)
2. Nose portion of the mask was cut open to allow for breathing by the patient, a round bur was then used to create a perforated tray for the creation of facial moulage and for retention of irreversible hydrocolloid impression material.
3. After disinfecting the mask it was washed in a soap solution, before creating an impression the facial moulage area was prepared by applying a thin layer of petroleum jelly to protect the surrounding tissues and hair.(Fig 2)
4. Make sure that the patient's head was 30 degrees off the horizontal by tilting the head rest.[5]
5. As directed by the manufacturer blend irreversible hydrocolloid (Tropicalgin, Zhermack) to the proper consistency. A higher water ratio increases the flow to the alginate material and decreases the possibility of air trapping, while a lower water temperature allows for more working time.[5]
6. Impression process was separated in two stages.
7. Impression material was loaded by one clinician onto the mask for the initial part and mixed flowable material was applied by the fingers by another clinician to the defect and surrounding areas.
8. To prevent dislodging from the surrounding tissues the loaded mask with irreversible hydrocolloid on the face was held by applying light passive pressure. (Fig 3)
9. When the facial moulage was set, it was carefully removed and checked for any defects. (Fig. 4)
10. Dental stone, type III (Kalstone, Kalabhai Dental Products Pvt. Ltd., Mumbai, India) was poured into it after cleaning and disinfecting it with 2% Glutaraldehyde to create a permanent cast. (Fig.5)



Figure 1- Face mask served as a stock tray for recording the facial moulage.



Figure 2- Prepare facial moulage area by applying a thin layer of petroleum jelly (Vaseline) to protect the surrounding tissues and hair.



Figure 3- Mask loaded with irreversible hydrocolloid placed on the face.

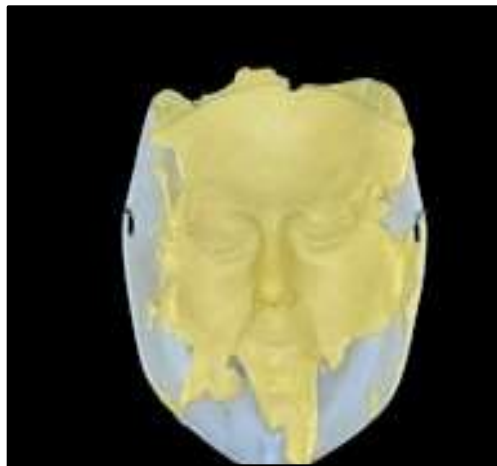


Figure 4- Set impression material



Figure 5- Definitive cast.

3. DISCUSSION

With properly fitted maxillofacial prosthesis, significant facial deformities may be restored to normality. Accurate facial moulage and a definite cast with good dimensional stability are essential for a good prosthesis adaption; yet, the scarcity of

stock impression trays makes impression taking difficult. The traditional method to capture a face mouldage has significant flaws is laborious and time-consuming. We suggest creating backings from party face masks in order to minimize distortion of the mouldage.

Creating a custom acrylic resin tray for facial mouldage can be an intricate process. However, this approach may not be suitable for large maxillofacial defects with deep undercuts, as retrieving the impression could be difficult and distort [6]

Various techniques of making facial mouldage backing are

- Radiotherapy moulds [6]
- Cardboard and Plastic Boxes [5,6]
- Aluminium frames, visible light polymerizing or thermoplastic custom trays [6,7,8]
- Dental plaster, acrylic resin [6,9,3]
- Modelling wax, clay, Impression compound [2,6]

Unlike multi-stage impressions, this approach streamlines the procedure by allowing the impression to be recorded in a single stage. Time may be saved, and the likelihood of mistakes related to several steps can be decreased. It has been observed that making impressions is more efficient for the practitioner and more pleasant for the patient. This may result in more satisfied patients and more efficient dental office operations. Masks can be customized according to the patient's face. This customization makes it easier to trim or adjust the masks as needed, ensuring a better fit and potentially improving the accuracy of the impression. The technique is cost-efficient because single masks (or trays) can be used for multiple patients. This reduces the need for disposable materials and can lower the overall material costs for the dental practice. Masks may be used to many different types of face prosthetics. They enable the creation of personalized and realistic-looking prosthetic devices by accurately capturing fine details like skin texture, curves, and asymmetries. Once the mouldage is built, it is simple to make modifications to guarantee the best possible fit and aesthetically pleasing integration with the patient's residual facial structures. This adaptability aids in reaching the intended aesthetic and practical results.

The drawback of this technique is that it is not suitable for patients with claustrophobia.[10] It is important to explain the procedures to the patients to avoid the patient feeling claustrophobic. If a patient is claustrophobic, a complete facial mouldage may not be an option. [6]

With the advent of digital dentistry, in future the use of conventional methods may be obsolete and may get eliminated. The integration of digital technologies in the facial prosthesis manufacturing process can enhance patient comfort and production efficiency.[11]

4. CONCLUSION

A variation on the traditional method, the facial mouldage technique offers a number of advantages and uses party face masks and irreversible hydrocolloid impression material. The perforations in the party face mask provide enhanced mechanical retention for the irreversible hydrocolloid, reducing the amount of impression material needed compared to traditional methods. This method eliminates the use of dental plaster backing, which has been known to cause distortion due to its bulk and weight, as well as the heat generated by dental plaster. In contrast to conventional facial mouldage techniques, this impression is more comfortable and quick as it is created in a single step.

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