

CASE REPORT

Rehabilitation of Oro-Nasal Fistula: A Case Report

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Abstract

Leprosy remains one of the important causes of facial disfigurement and continues to be an important public health problem. In this case, a patient suffering with Lepromatous Leprosy, was treated with an Oro-nasal prosthesis which not only esthetically, but functionally proves effective in restoring normal mastication functions.

Key words: Complete Dentures, Hansen's disease, Leprosy, Oro-Nasal Fistula, Prosthesis

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Introduction

Hansen's disease or commonly known as leprosy is a chronic disease caused by Mycobacterium leprae affecting the peripheral nervous system, the skin, and certain other tissues such as the reticulo endothelial system, bones and joints, mucous membranes, eyes, muscles, adrenals, etc. M.leprae, was the one of the first bacterial pathogens of humans to be discovered and described over a hundred years ago by Armauer Hansen, it is yet to be cultivated in an artificial medium.¹ Leprosy continues to be an important public health problem in most parts of Asia, Africa, Latin America. Every third leprosy patient in the world is a resident of India.²

Clinical leprosy can vary from an insignificant skin lesion to extensive disease causing profound disability and disfigurement by damaging peripheral nerves, eyes, bonds and other tissues. These variations from one patient to another are the result of the chronic, slowly progressive nature of the disease and due to the basic derangement of the immune system.

There is no other human disease, which, in addition to its inherent and intrinsic capacity to cause pain and suffering, has a number of attendant handicaps and associated man- made causes of alienation, ostracism, extreme disproportionate mental suffering and reckless abandon as this disease.³

Case Report

A 68 year old woman reported to the Department of Prosthodontics, with a chief complaint of ill fitting complete dentures and requested for a new set of the same. A medical history revealed that she had been a known case of Lepromatous Leprosy since her early twenties, with prominent nasal destruction communicating with the oral cavity confining to the labial vestibule only. Dental history revealed the loss of teeth as a sequel of the disease. The patient was edentulous since the last three decades. Intraoral examination showed a nasal defect confining to the labial vestibule. This hampered routine activities like speech and mastication.

Fabrication of Prosthesis: Initially the primary impression of the edentulous maxillary and the mandibular arches were made with the help of Low fusing and medium fusing impression compound. The impression of the nasal extension was made from the old denture with the help of Polyvinyl Siloxane (Putty Index). This putty index was then filled with modeling wax and the wax nasal block retrieved, was used to make a split mould. The auto polymerizing resin was packed in this split mould. Upon setting the nasal block was made of autopolymerizing resin was used as a template for making final impression of the nasal defect. A small handle was attached to this autopolymerising block and the retentive holes were made all over the surface to retain the

polyvinyl putty material. A small amount of polyvinyl siloxane material was loaded over this nasal block and the impression was made of the defect, and a split cast was made to prepare a wax pattern.

A wax pattern was made from this split cast which was then flaked, dewaxed and packed with heat cure denture based resins. Conventional steps of fabricating a complete denture i.e impression, jaw relation, try - in were performed and the denture was packed, cured with heat cure denture base resin. The two separate components were then joined intraorally with the help of autopolymerising denture base resin.

The final prosthesis was then finished and polished. Post insertion instructions were given and the patient was recalled for follow up at the end of 24 hrs, first and third weeks respectively. The denture was relieved on subsequent visits.

The patient was satisfied with the prosthesis which restored mastication, speech and esthetics (Figure- 1&2).

Figure- 1: Profile view of patient before (Left) & after the prosthesis insertion (Right)



Figure- 2: Nasal tray with handle, Nasal impression, Finished Maxillary & Mandibular Denture



Discussion

Oro-nasal defects can result from, traumas, infections, congenital anomalies or neoplasms. Restoration of these defects poses a challenge for the prosthodontist who is limited by inadequate material availability for facial restoration, movable tissue beds, difficulty in retention of large prosthesis and finally patient compliance. Rehabilitation is an essential phase of treatment and should be considered from the time of diagnosis in a complete and comprehensive plan. Oro-nasal defects are often accompanied by dysfunctions related to speech, swallowing, and control of saliva, and mastication which all may be affected to variable extents. Particularly for the edentulous patient, because of resorbed ridges and tissue which seal the dentures for retention. ^{4,5,6,7.}

The primary objective of prosthodontic rehabilitation is the restoration of appearance and function. How successfully this is accomplished, depends upon both the judgment and skill of the prosthodontist and the anatomic, physiologic, and psychological makeup of the patient. ^{8,9,10.}

More recently, Hsu YT and Hao SP found silicon button as useful tool. They conducted a retrospective study in which repair of oronasal fistula with silicone button in four patients with head and neck cancer was done. The diameter of defect was varied from 1 to 1.5 cm. They found that in all the cases, nasal regurgitation symptoms were relieved. In one case, hypernasality improved, while in another case nasal crusting and foul odors decreased. They have not observed any major complications. They opined that silicon button can act as a

temporary obturator to improve quality of life of patients and suggested that it can be used in patients of chronic fistula (>6 months), small defect (1-2 cm) and trismus.¹¹

Conclusion

The purpose of this oronasal prosthesis was to restore the physical separation between the oral and nasal cavities, along with dentures to restore function and treat facial disfigurement resulting from lepromatous leprosy in this particular case, which still remains a social stigma, a scourge of humans which makes the individual afflicted by it not only suffer but undergo the odium of an outcast.

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