



A Conservative Approach for A Adult with the Over Denture with Ectodermal Dysplasia – A Case Report

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ABSTRACT: This article is about the rehabilitation of a patient with Ectodermal Dysplasia. It is a hereditary disorder of ectodermal origin. The results were significant improvements in speech, masticatory function, and facial esthetics, contributing to the development of normal dietary habits, and the improved and more rapid social integration of these adults. This clinical report describes the multidisciplinary approach to the diagnosis and treatment of a 22-year-old patient with partial expression of ED.

Keywords : Complete Denture, Caucasian race, Ectodermal Dysplasia, Over-denture.

I. INTRODUCTION

Hypohidrotic ectodermal dysplasia (HED) is a hereditary disorder of ectodermal origin and affects approximately 1 to 7 per 100,000 births. HED is manifested as a triad of defects that includes hypohidrosis (diminished perspiration), hypotrichosis (decreased amounts of hair), and hypodontia (abnormal tooth development).¹

Prosthetic treatment can play an important role in the dental management of children whose dentition fails to develop normally. The principles and techniques are essentially identical to those applied for adult therapy. The congenital absence of teeth, along with tooth loss due to caries and traumatic injuries, is one of the most frequent reasons for the need to provide complete or removable partial dentures (RPDs) for young children.²

Worldwide around 7,000 people have been diagnosed with an ectodermal dysplasia condition. It can occur in any race but are much more prevalent in caucasians than any other group and especially in fair caucasians.

It is described as "heritable conditions in which there are abnormalities of two or more ectodermal structures such as the hair, teeth, nails, sweat glands, salivary glands, cranial-facial structure, digits and other parts of the body.

Oral rehabilitation of the HED patient is recommended to improve both the sagittal and vertical skeletal relationship during craniofacial growth and development, as well as to provide improvements in esthetics, speech, and masticatory efficiency.

This article is about a young boy of 22 years of age with associated with severe anodontia in the primary dentition and wanted to replace his missing teeth.

II. Case Report

A young boy with the age of 22 years reported to the department of prosthodontics in Sharad Pawar Dental College, with the chief complaint of missing teeth with the upper and lower arch since birth. On examination the teeth growth was peg-shaped or pointed. No sign of mobility with the teeth, tender on percussion was negative and on radiological examination well formed roots, lamina dura was intact no sign of any infection seen. (Fig. 1 a,b)



The treatment plan was over-denture with the metal coping. Tooth preparation was done and size of the tooth was reduced in conical shape. Gingival retraction along with the final impression was made with double mix double stage technique with polyvinyl siloxane material. (3M ESPE).



The copings were cemented with zinc phosphate cement (Harvard Co.)(Fig.2a). Primary impression was made with the impression compound. Final impression was along with the boarder molding with low fusing green stick impression compound and polyvinyl siloxane material (3M ESPE) was used for washed impression with upper and lower arch (Fig. 2 b,c).

Permanent record bases were made with upper and lower arch and occlusion rims were made for the jaw relation. Vertical and centric was recorded with the common methods and face-bow record was done for the orientation of the maxilla onto the semi-adjustable articulator. (Fig. 3)



This face-bow record was transferred onto the semi-adjustable Hanu wide veu articulator for the teeth arrangement with the value of $H = 30^{\circ}$ and $L = 15^{\circ}$ to remove occlusion interferences. And try-in was done. (Fig. 4)



Flasking was done and de-waxing was done. After de-waxing metal mesh was incorporated into the heat cure

acrylic resin (Melodent, Heat Cure Acrylic) for the increasing the strength of the upper denture. And lower denture was flaked in the normal manner. And curing was done. The denture was de-flaked, finishing and polishing was done. The insertion was done into the patient mouth and he was recalled after 24hrs, 7 days and 15 days for the any post denture complications.



III. DISCUSSION

Dental therapy as a phase in the treatment of ectodermal dysplasia is essential. The method of treatment of a patient with ectodermal dysplasia and associated oligodontia has been reported. As a result of prosthodontic therapy, the child has been improved esthetically, psychologically, and physiologically.

IV. SUMMARY

This clinical report demonstrated that over-denture associated with metal copings that can be relatively inexpensive method of treatment for ectodermal dysplasia patients with a reduced number of teeth and limited finances. For the patient described, the treatment improved esthetics and oral function and established a more favorable plane of occlusion. The patient's social confidence also improved significantly as a result of the dental treatment.

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