

## Dwarfism in complete denture – A Case Report

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### Abstract

Pituitary dwarfism is the most striking feature of the affected patient and the low growth velocity for age. The maxilla and mandible of affected patient are smaller with the permanent teeth showing a delayed pattern of eruption. The dental arches are smaller than the normal and therefore cannot accommodate all the teeth resulting in dental malocclusion. In this patient receive dental treatment for physiologic and psychosocial reason. In this case pertain to the prosthodontic treatment of this disorder with customized acrylic teeth and cross bite in complete denture treatment.

**Keywords:** Short stature, Pituitary dwarfism, Complete denture, Growth hormone deficiency.

### Introduction

Dwarfism is a condition of short stature, is defined by the advocacy group little people of America [LPA] as an adult height of 4 feet 10 inches or under, as a result of medical or genetic condition. Although other groups may extend the criteria for certain forms of dwarfism to 5 feet, the average height of an adult with dwarfism is 4 feet

Two main categories of dwarfism:

1. Disproportionate
2. Proportionate

Disproportionate dwarfism is characterized by an average size torso and shorter arms and legs or shortened trunks with longer limbs. In proportionate dwarfism, the body parts are in proportion but shortened. Low muscle tone is common, but intelligence and life span are usually normal. Dwarfism can result from myriad medical conditions, each with its own separate symptoms and causes. Extreme shortness in humans with proportional body parts usually has a hormonal cause, such as growth hormone deficiency once called pituitary dwarfism.

Two disorders, achondroplasia and growth hormone deficiency [also known as pituitary dwarfism] are responsible for the majority of human dwarfism causes.<sup>(1-4)</sup>

### Case Report

A 37 yrs male patient reported with a chief complaint of missing teeth and wants to get replaced with artificial teeth.

On examination patient has small stature with proportioned body [height 3.6, wt 35 kgs].

On intra oral examination revealed completely edentulous moderately resorbed maxillary and severaly resorbed mandibular alveolar ridges with small archs.

Past dental history revealed that only permanent 1st molar was erupted and lost due to periodontal problems six months back.

### Treatment procedure

1. Preliminary impression was made using zero sized plastic stock trays with irreversible hydrocolloid material and cast was poured with type II dental plaster.
2. Special trays were made with self cure acrylic resin.
3. Border molding was done by using low fusing material and final impressions were made with Zinc oxide Eugenol impression paste.
4. Master cast was poured and occlusal rims were fabricated and jaw relation was recorded.
5. Try in was done by arranging customized acrylic teeth set by excluding 2<sup>nd</sup> molars, and cross bite teeth arrangement done [Fig. 1].



**Fig. 1: Try in**

Finally dentures were finished and delivered, Post insertion instructions was given [Fig. 2].



**Fig. 2: Final insertion**

Preoperative and post-operative pictures of patient [Fig. 3A, B].



**Fig. 3a**



**Fig. 3b**

**Fig. 3a, b: Pre-operative and postoperative pictures of patient**

## Discussion

Growth hormone is vital importance for normal growth and development. Individuals with growth hormone deficiency results in a condition known as pituitary dwarf with disproportionate delay growth of skull and facial skeleton giving them a small facial appearance for their age. Growth hormone excess leads to gigantism, if it occurs before completion of growth and acromegaly results if it occurs after the fusion of the growth plates. Dentist may be the first health care provider to see the signs and symptoms of growth disorders and thus have the first opportunity to correctly diagnose this serious disease. Deciduous and permanent teeth will be affected and sometimes partial development of teeth and complete absence of teeth with this deficiency of growth hormones.<sup>(5-7)</sup>

## Summary

Pituitary dwarfism patients face a lot of difficulties in speaking, eating and also in society because of physical appearance. Rehabilitation of missing teeth in this case improved form, function and esthetics.

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