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Digitally Assisted Maxillary Obturator and Speech Aid Device Fabrication: a Case Report

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Abstract

I. Introduction

The maxillary obturator is a common treatment option for the functional recovery and improvement of the quality of life of patients with maxillary defects. A removable maxillary obturator prosthesis is a device that separates the oral cavity from the nasal and/or antral cavities and is used to close a congenital or acquired defect in the maxilla. The prosthesis enables the patient to perform the functions of mastication, deglutition, speech and at the same time is comfortable and esthetic. The conventional method of obturator fabrication requires several impressions to construct the diagnostic, master, and altered casts, which may be uncomfortable for patients with maxillary defects. By utilizing the evolution of conventional computer-aided design/computer-assisted manufacturing technology we can reduce the amount of discomfort for our patients.

II. Clinical presentation

A 35 years old male patient was presented to my clinic with a satisfactory medical history and general health . Intra-oral examination revealed a congenital hard and soft palate cleft extended anteriorly from the 1st molar area (Aramany's Class I) to the pharynx posteriorly . He had speech difficulty and never used a prosthesis or any surgical repair previously.

III. Treatment details

Intra-oral scanning was performed as a digital impression and virtual cast was made to fabricate the metal framework of the final prosthesis. A pick-up impression of the defect was done to gain the (altered master cast). Finally, the conventional approach in prosthesis fabrication was carried

IV. Treatment Outcome

By utilization of this digital approach , we minimized the amount of discomfort during the impression making. Maxillary obturator and a speech aid device will be delivered to the patient and a 3-months follow-up visit will be scheduled to evaluate the periodontal health and insure the hygiene compliance to intervene early if the patient fail to maintain a clean and infection free environment.

Biography

ABDULAZIZ S ALDAYEL, Saudi Board Prosthodontics Resident-R3, Saudi Arabia.

Publications

1. Maxillary obturators: The relationship between patient satisfaction and speech outcome.
2. Maxillofacial Prosthetic Materials: A Literature Review
3. Patient Satisfaction with Maxillofacial Prosthesis.

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