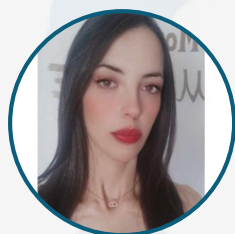


# WORLD CONGRESS OF ADVANCES IN OTORHINOLARYNGOLOGY, HEAD & NECK CARE

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## Revolutionizing Maxillary Obturator Prosthesis Fabrication: Synergy of CAD/CAM Technologies and Traditional Methods

### Abstract:

**Background:** Soft and hard tissue defects resulting from respective surgeries for carcinomas located in the maxillary arches can cause functional, esthetic, and psychological damage. A removable obturator prosthesis offers several advantages, restoring oral functions, esthetics and improving patients' quality of life. Technological advancements, such as the use of intraoral scanning and computer-aided design (CAD) and manufacturing (CAM), reduce laboratory working time, eliminate the risk of impression material aspiration, and address challenges related to whole tissue undercut impression. Purpose: Here, we report the case of a partially edentulous female patient with a velo-palatal defect for whom a rigid maxillary obturator prosthesis was fabricated.

**Methodology:** Digital impressions were taken and the standard tessellation language files of the scans were sent to the laboratory. Using dental CAD software, the maxillary metallic framework was designed and manufactured using selective laser melting technology. The obturators and artificial teeth were conventionally processed, with acrylic resin used for the rigid obturators. Results and conclusion: The resulting obturator prosthesis made it possible to close the oro-nasal communication and to improve swallowing, speaking, and chewing.

**Keywords:** squamous cell carcinoma, optical impression, obturator, prosthesis, computer-aided design, computer-aided manufacturing, selective laser melting

**Biography:** Ines Saadellaoui is originally from Sidi Bouzid, Tunisia. She studied at the faculty of dentistry in Monastir, where she got her doctorate in dentistry. She passed the residency exam and she chose the specialty of prosthodontics. She has been practicing in the dental clinic of Monastir since 2020.

She is a current member of the Tunisian Association of Prosthodontics and Dental Aesthetics (ATPED). She obtained the diploma in advanced implant and periodontal surgery certified by the university of Monastir and the Federico Naples university of Italy. In 2024, she became an assistant professor. She has great respect for her profession and spends countless hours studying, taking continuing education courses and applying the advances of dentistry.

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