11-CR

A Three-Visit Digital Rehabilitation of Existing Ill-Fitting Removable Prostheses

Saeed Karimipour, DMD*; Mohamed Sherif Omar, BDS, MSc; Sherif Hosney, BDS, MS, FACP

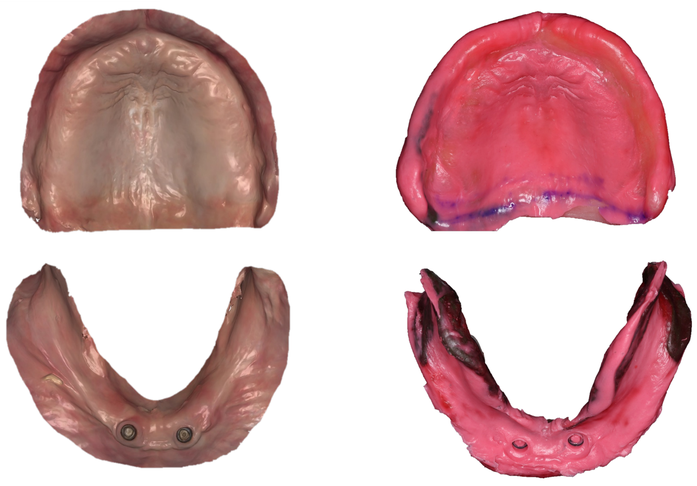
Background

The patient presented edentulous with a maxillary complete denture and a mandibular overdenture supported by two implants. The maxillary denture demonstrated poor retention and poor esthetics. The VDO remained intact.

Treatment Plan

Fabrication of a new maxillary complete denture and mandibular overdenture utilizing the patient's existing prosthesis to preserve the existing maxillomandibular relationship.

Visit 1

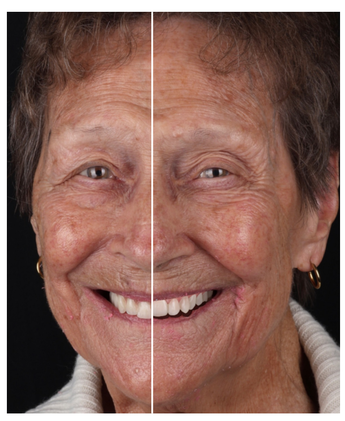


Clinical Visit 1:

Data Acquisition

Intraoral scan was taken for fabrication of new teeth try in. Wash recorded for superimposition to maintain the maxillomandibular relationship. Extraoral photographs (frontal repose, frontal smile, and lateral views) were captured.

Laboratory Step

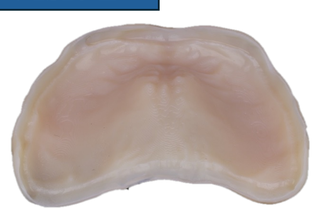


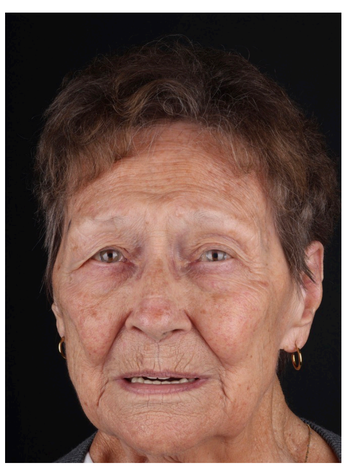
Laboratory Step:

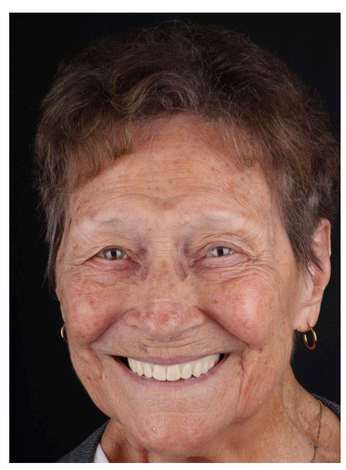
AI Driven Tooth Setup

2D facial photos were aligned with maxillary record existing denture. Tooth library and arch form were chosen based on facial width and smile arc. Teeth setup was exported to the CAD software for denture base

Visit 2





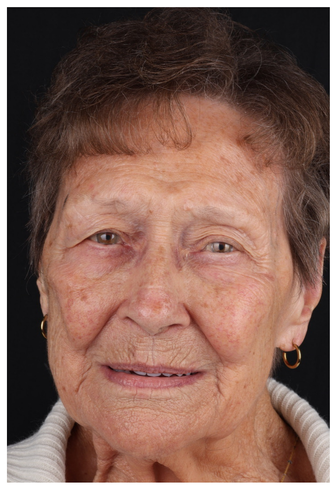


Clinical Visit 2:

Teeth Try-in

Maxillary and mandibular printed prototypes were tested.
Esthetics, phonetics and occlusion were verified

Visit 3



Clinical Visit 3:

Delivery

Delivery of milled maxillary CD and mandibular overdenture was completed with minor adjustments needed.

Conclusion

Utilizing an existing unesthetic and ill-fitting prosthesis with photography-assisted virtual tooth arrangement offers a predictable, patient-specific pathway for digital complete denture fabrication within 3 visits. This approach reduced chair-time & improved esthetic & functional outcomes with minimal post-delivery adjustments

References