



Introduction

Planning treatment for implant-supported prostheses in patients without maxillary dentition can be challenging without a clear prosthesis design and esthetic risk assessment. It is crucial to have a prosthetically driven approach to ensure implants are placed correctly. This case report examines how the combination traditional methods with modern digital technology, along with a focus on edentulous esthetic risk assessment and lip-tooth-ridge (LTR) classification contributes to creating a well-rounded treatment plan.

Case Description

A 77-year-old male patient arrived at the University of Florida Prosthodontic Department seeking a functional and esthetically pleasing set of teeth. Upon clinical examination, the patient had a maxillary overdenture supported by three malpositioned implants, worn down natural teeth in the lower anteriors, a unilateral implant-supported fixed partial denture and unilateral implants with no prosthesis. The first phase of his treatment plan involved designing a maxillary interim denture prosthesis tailored to the proposed position of the lower teeth. This phase also aimed to assess whether the patient would be a suitable candidate for a fixed implant-supported prosthesis or an overdenture.

Analog-Digital Workflow

I. Analog Workflow



II. Flange vs Flangeless: Determine Low, Medium, High Level of Risk

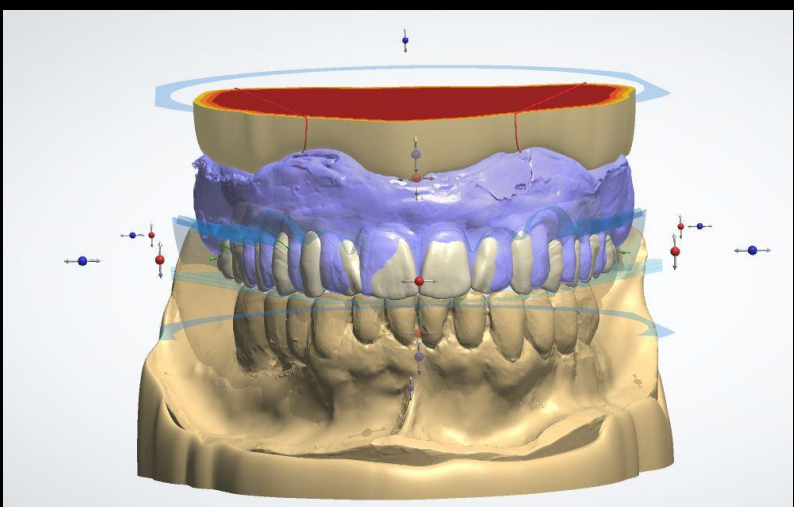
Esthetic Risk Factors - Edentulous	Level of risk		
	Low	Medium	High
Arch	Mandible		Maxilla
Facial Support (Fixed)	Alveolar process provides adequate facial support	Minimal changes tolerated by the patient	Flange required for adequate facial support
Facial Support (Removable)	Flange provides adequate facial support	Minimal changes tolerated by the patient	Insufficient space for a flange
Labial Support	Desired tooth position provides satisfactory labial support	Minimal changes tolerated by the patient	Desired tooth position causes unsatisfactory labial support
Upper Lip Length	Long upper lip (> 20mm)		Short upper lip (< 20mm)
Buccal Corridor* (Alveolar Ridge)	Removable Prosthesis		Fixed Prosthesis
Smile Line	No display of the ridge(s) at full smile (maxilla or mandible)		Display of the ridge(s) at full smile (maxilla or mandible)
Maxillo-mandibular relationship	Class I	Class II	Class III



VS



III. Fabrication of CAD/CAM Interim Denture (Ivotion)



I



II



III



Conclusion

Incorporating an edentulous esthetic risk assessment protocol alongside an analog-digital workflow allowed for a comprehensive evaluation of risk, identifying patient as high esthetic risk with an LTR Class II. This approach facilitated the planning of a fixed implant-supported prosthesis ensuring a more predictable and successful outcome

References

