

Integration Of Unique Conventional And Digital Protocols For Fabrication Of Complete Arch Implant Supported Fixed Prosthesis For A Patient With A Pronounced Gag Reflex.

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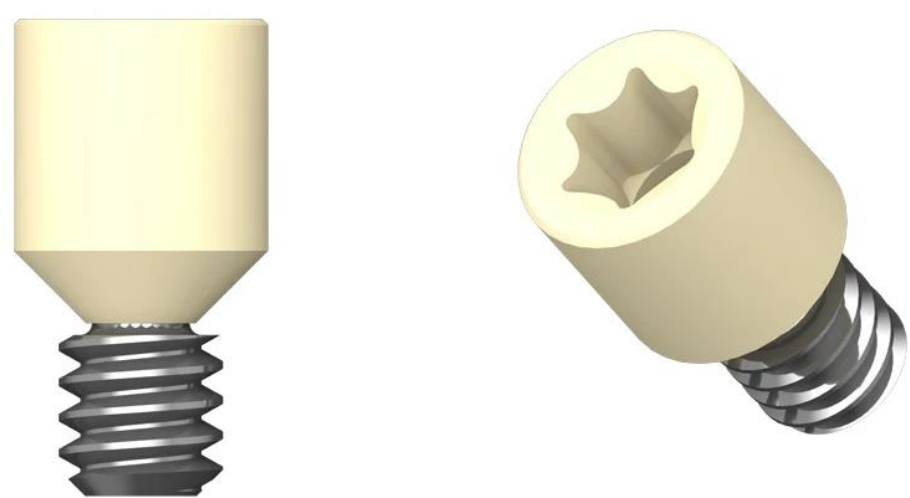
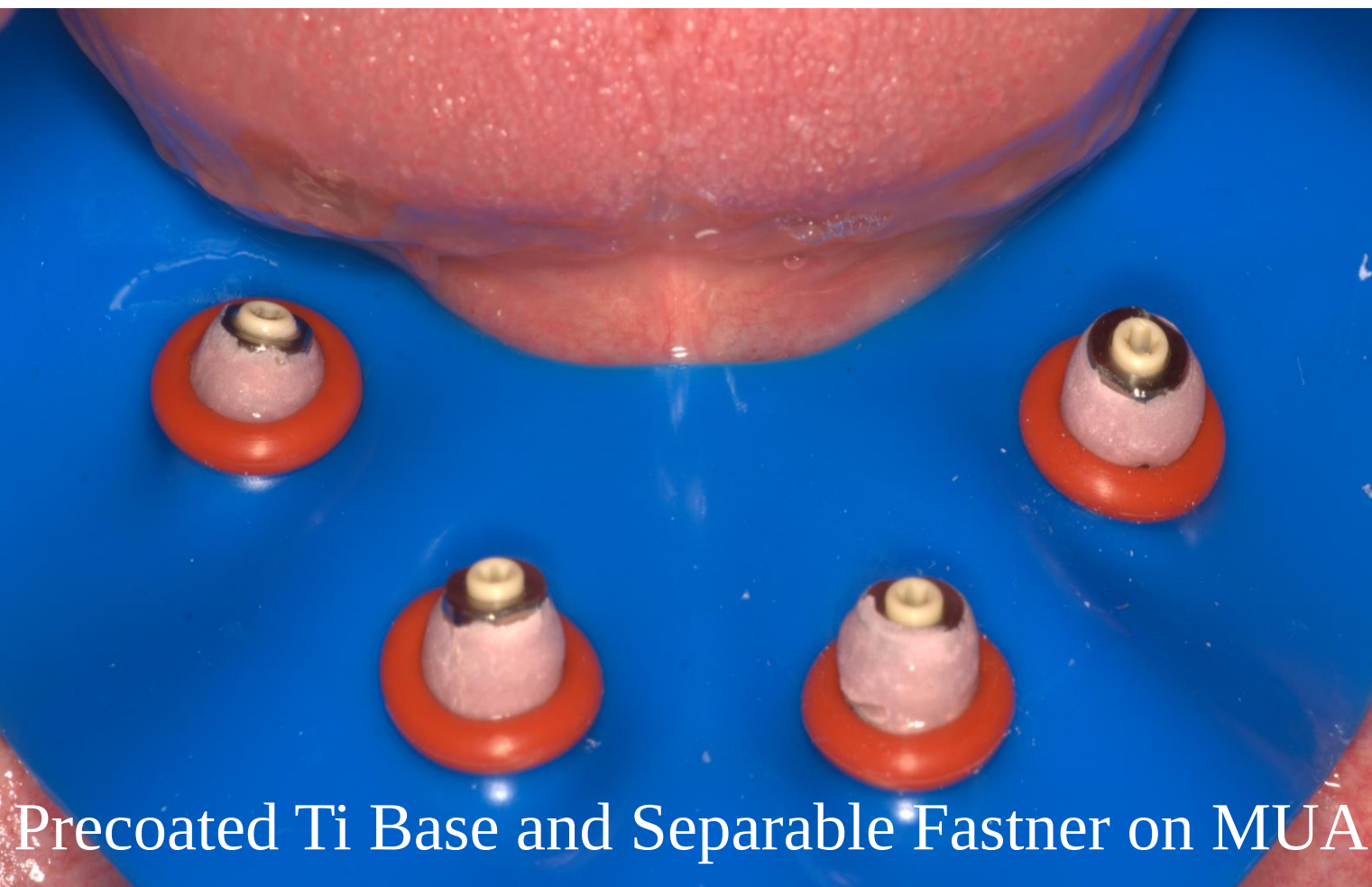


BACKGROUND

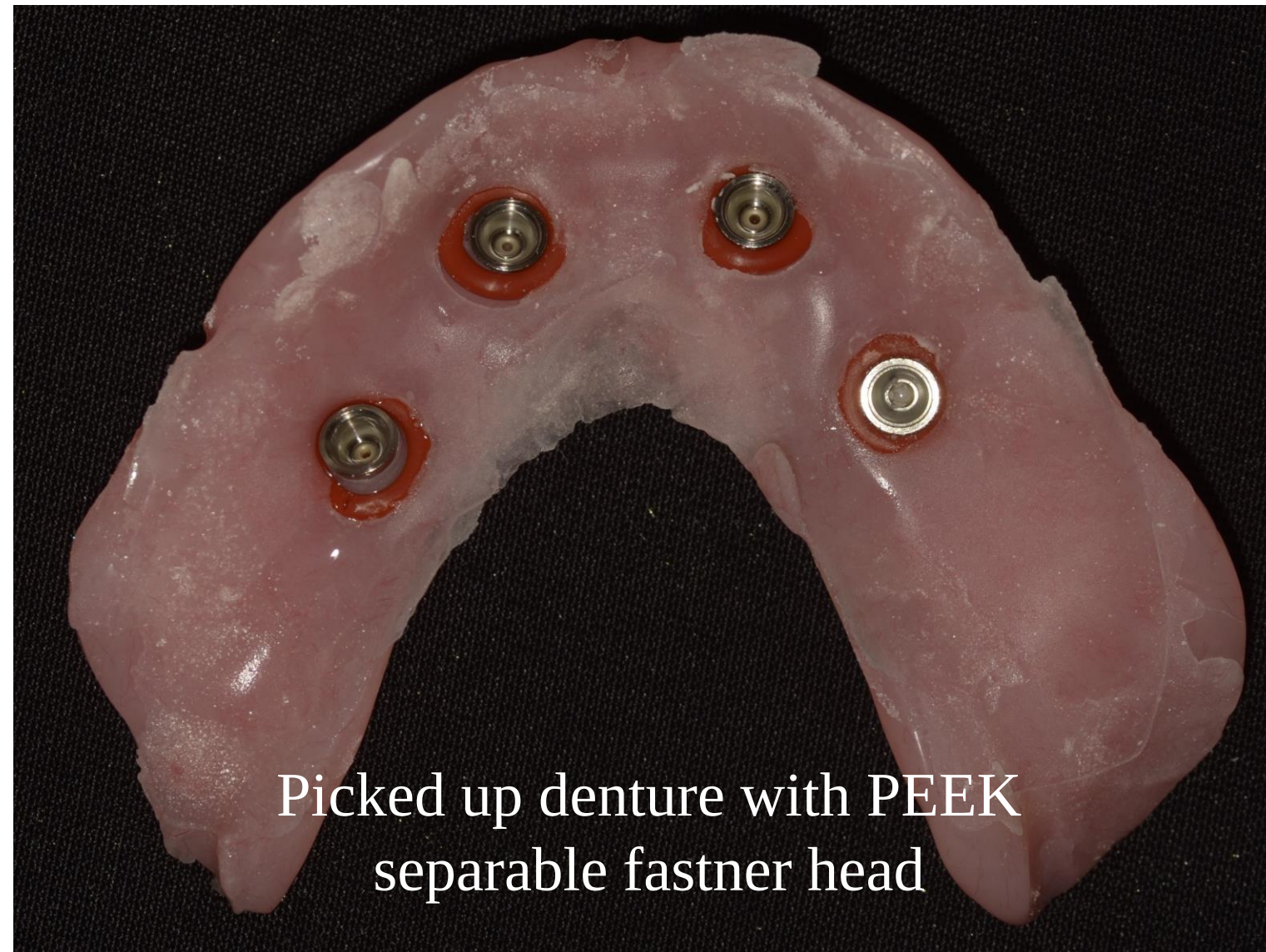
Managing patients with severe gag reflexes presents a significant challenge in prosthodontics. Traditional methods often exacerbate discomfort, complicating the fabrication of the prosthesis and have poor acceptance by the patients. Recent advancements in providing implant supported fixed interim prosthesis with the newer techniques of conversion protocol, facial scan and photogrammetry offer potential solutions for improved patient outcomes. The purpose of this poster is to present management of a patient with pronounced gag reflex with a new technique of chairside conversion and photogrammetry for fabrication of definitive implant-supported fixed prosthesis

CASE REPORT

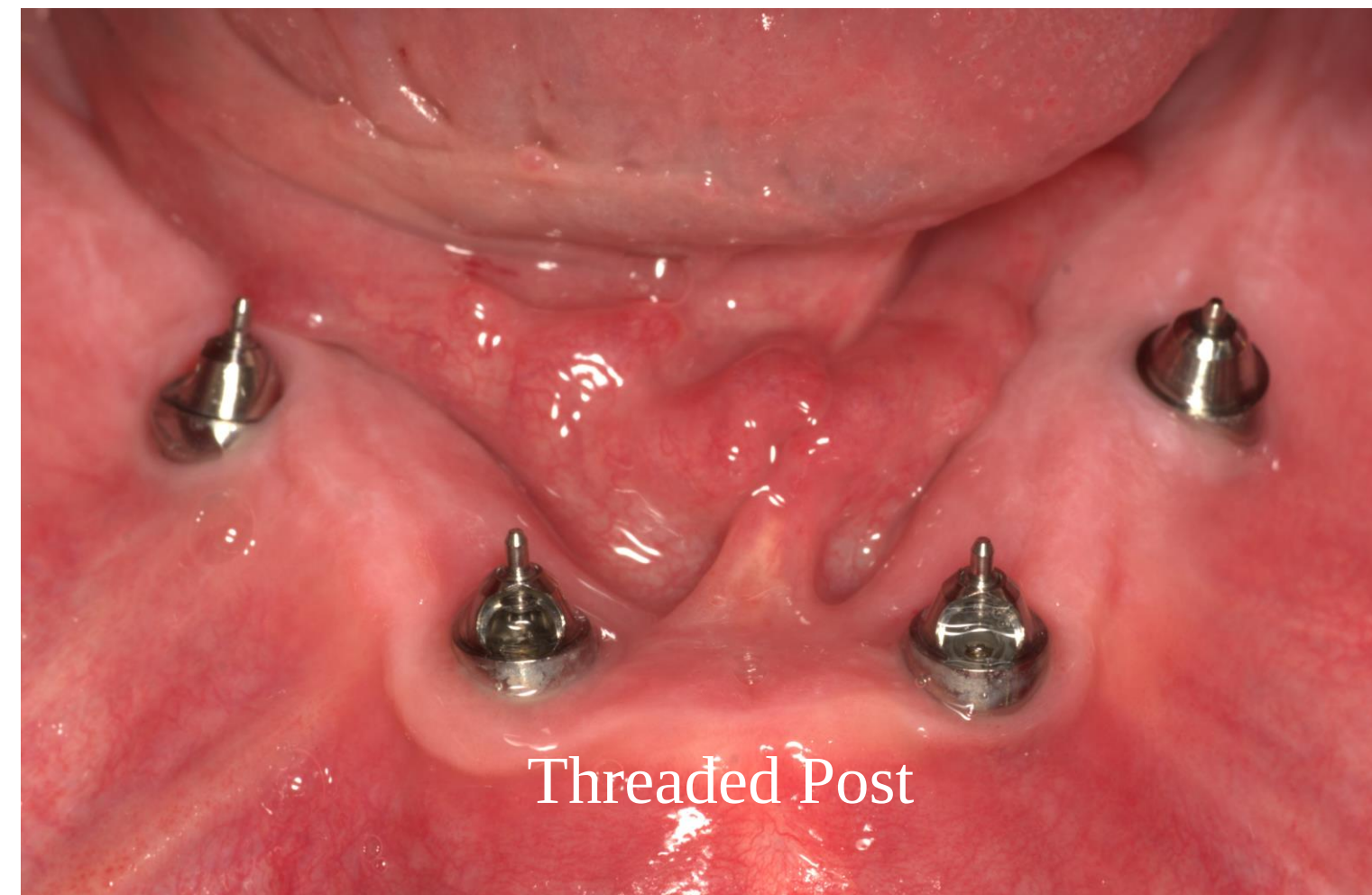
- A 46 year old healthy, male patient with a severe gag reflex was treated using a new chairside conversion technique of denture conversion, digital facial scan and photogrammetry.
- The patient previously had received interim removable prosthesis but could not wear due to his gag reflex.
- The novel conversion protocol allowed for quick, precise and effective adjustment and customization of the interim prosthesis to a functional fixed provisional prosthesis.
- Photogrammetry was employed as an alternative to traditional impression making to accurately capture the implant position.
- The prosthesis was designed based on digital designing software Exocad utilizing the tissue and prosthetic scans.
- The final prosthesis was milled, anodized titanium bar with zirconia luted to it.



Separable Fastner



Picked up denture with PEEK separable fastner head



Threaded Post



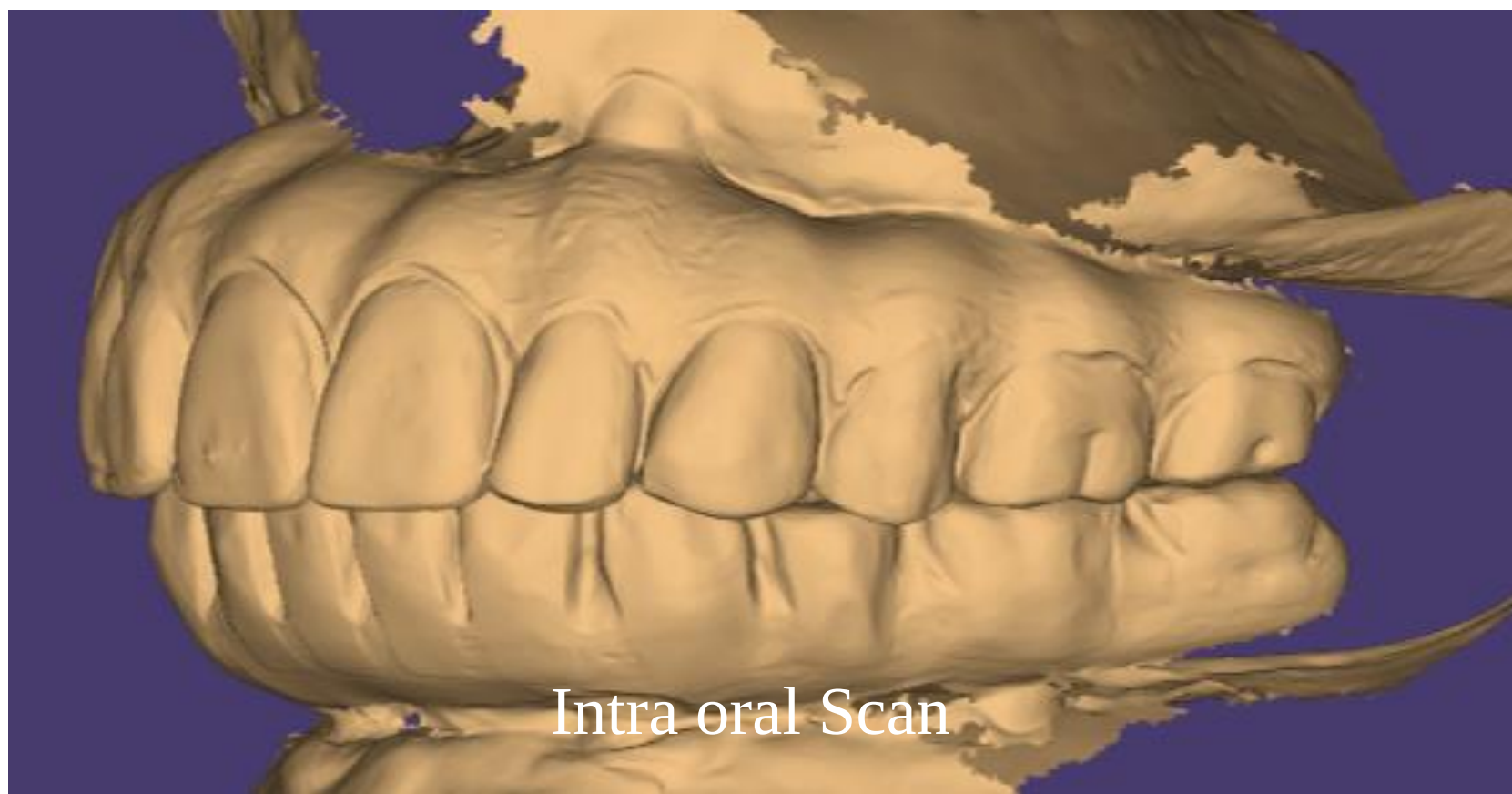
Press on Caps



Pilot Holes on the Converted Denture

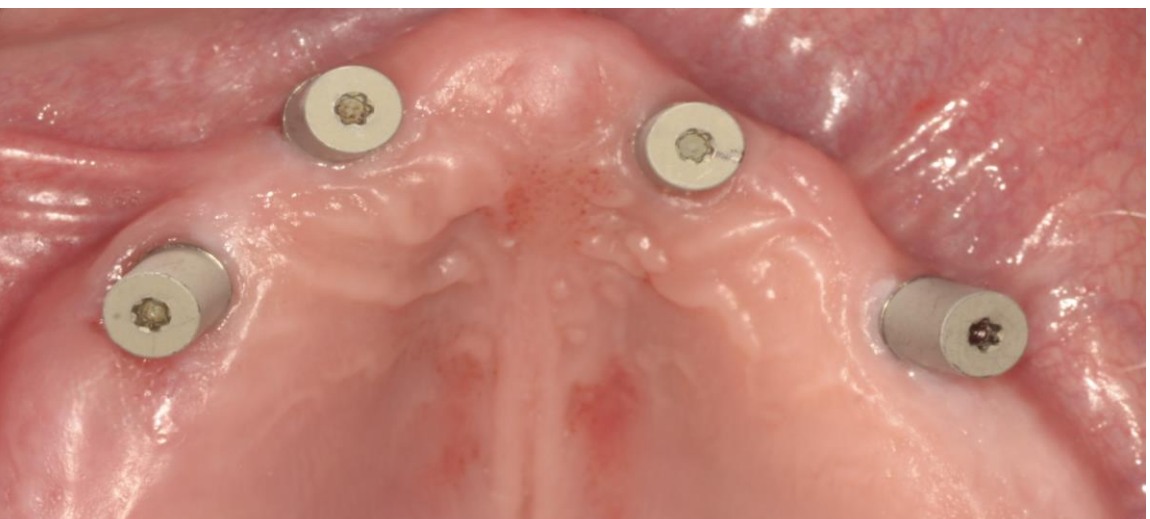


Converted Denture

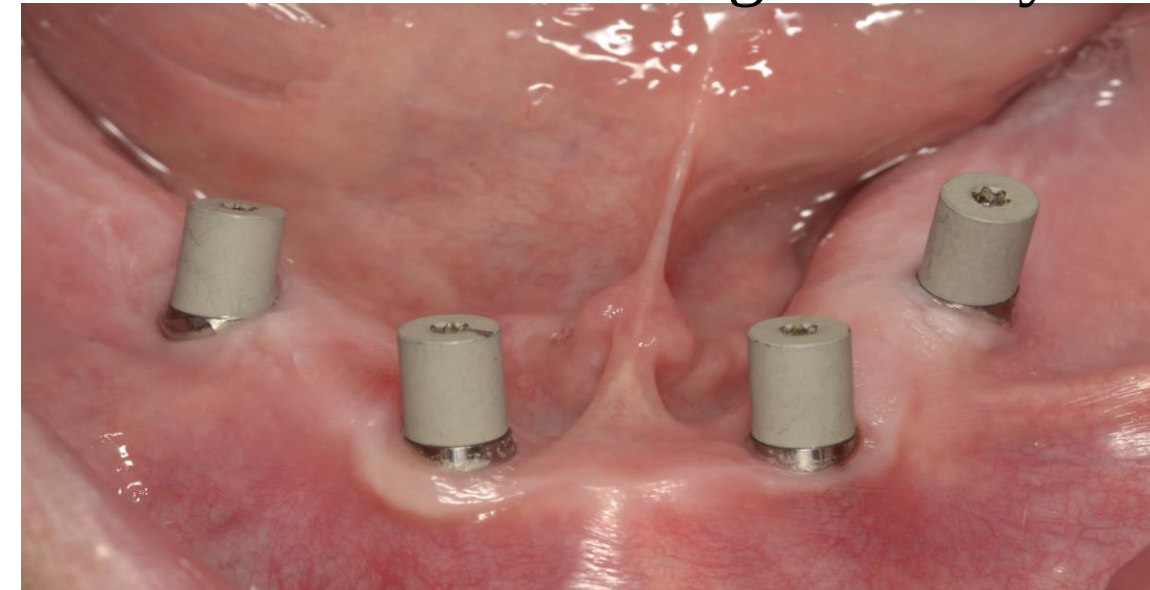


Intra oral Scan

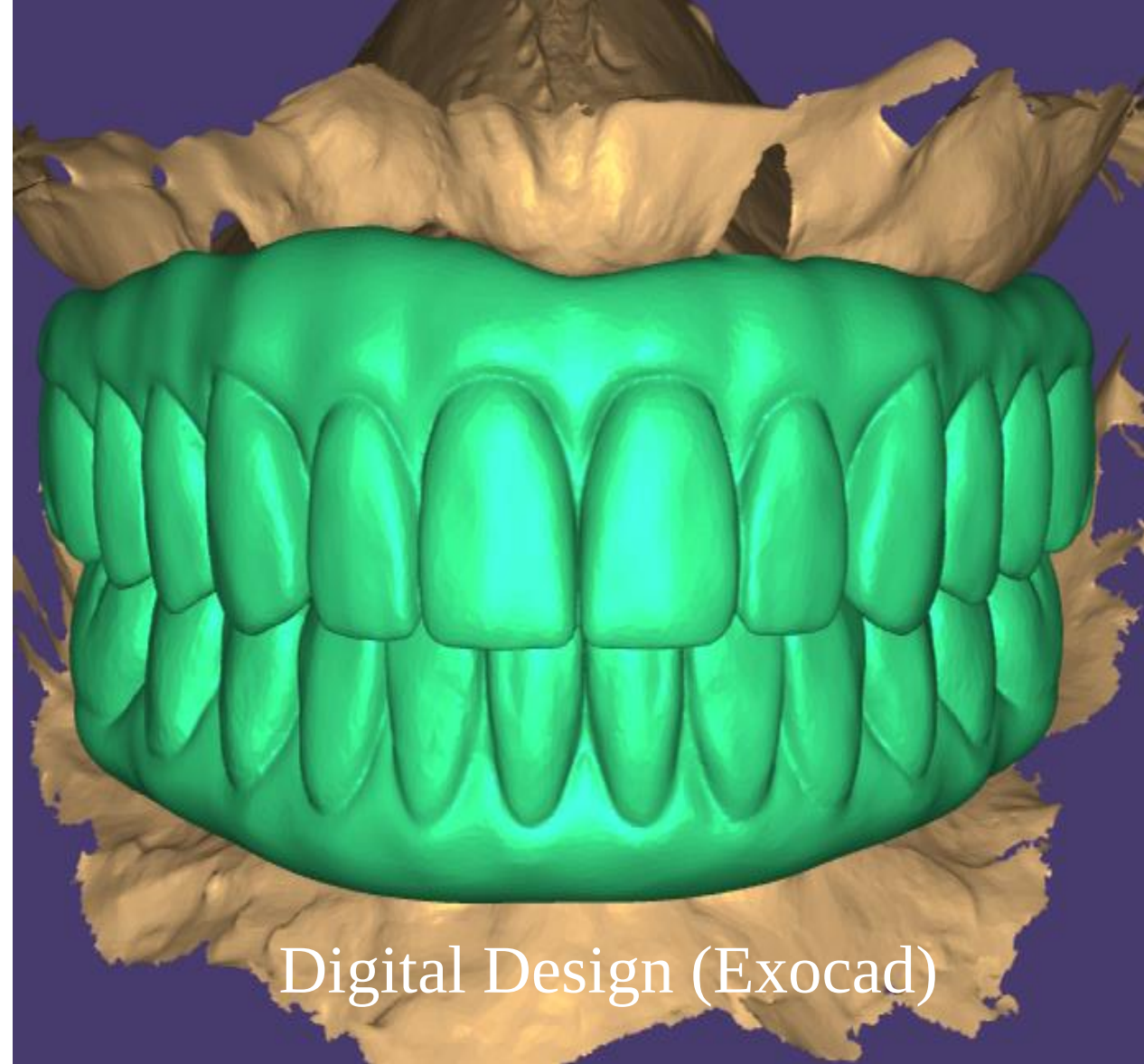
METHODS & RESULTS



Scan bodies for Photogrammetry



Photogrammetry



Digital Design (Exocad)



Milled PMMA Prototype



Anodized Ti bar with Zirconia



DISCUSSION

- The integration of the newer technique of denture conversion and photogrammetry successfully managed the patient's gag reflex, while the implant-supported prosthesis demonstrated excellent fit and comfort.
- These methodologies minimized the discomfort typically associated with traditional methods, streamlining the process, saving time, and providing quick, precise results.
- The new conversion method also eliminates the need for large holes in the denture by fastening the Ti-Base to a multi-unit abutment with a unique prosthetic screw, the Separable Fastener.
- A titanium bar with an overlying zirconia prosthesis is a viable alternative for fixed implant-supported prostheses in patients with compromised restorative space, offering exceptional strength and durability.
- Anodization of the titanium bar enhances esthetics; whilst Zirconia offers unparalleled esthetics and function.
- Direct-to-multi-unit abutment screws eliminate the need for a titanium abutment to connect the prosthesis to the multi-unit abutment. By exerting pressure on the lateral walls in an apical direction, the screw's tapered or rounded head improves retention and reduces the likelihood of loosening. Additionally, the risk of material fracture around the screw-access hole is reduced by allowing increased thickness in this vulnerable area.

SUMMARY

The combination of denture conversion and photogrammetry represent a promising approach for recording the implant position ,improve patient comfort, offering a valuable alternative to conventional prosthetic techniques.

REFERENCES

- Hussein M. O. (2023). Photogrammetry technology in implant dentistry: A systematic review. *The Journal of prosthetic dentistry*, 130(3), 318–326.
- Mijiritsky, E., Elad, A., Krausz, R., Ivanova, V., & Zlatev, S. (2023). Clinical performance of full-arch implant-supported fixed restorations made of monolithic zirconia luted to a titanium bar: A retrospective study with a mean follow-up of 16 months. *Journal of dentistry*, 137..