

A Case report- The Novel digital approach for fabrication of Full Fixed Maxillary Implant retained Prosthesis

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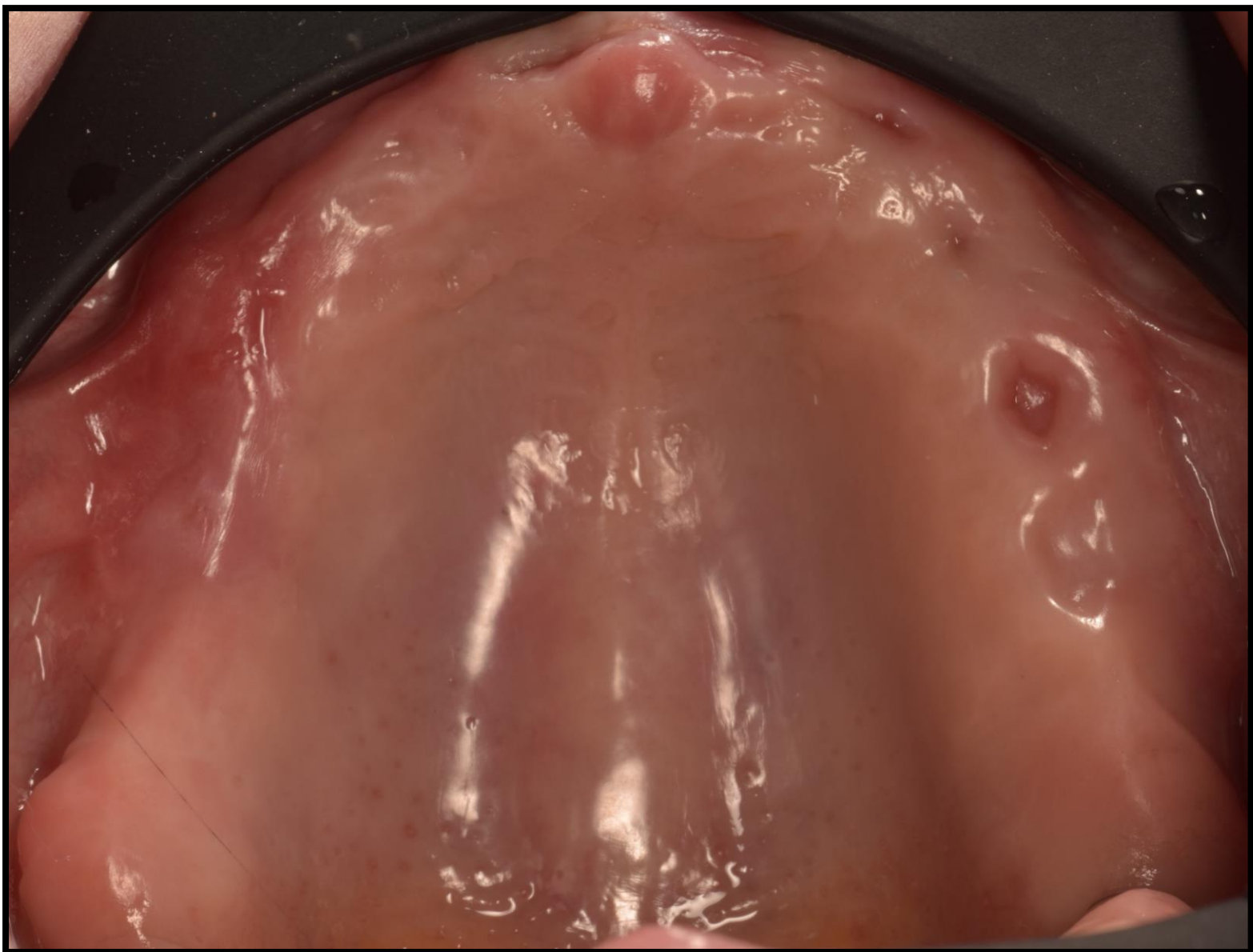
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Introduction

- Artificial intelligence the dentistry has the change the face of dentistry.
- This case report presents a novel protocol for a maxillary full arch implant rehabilitation.
- This approach reduce the treatment time and increase the predictivity of the prosthesis outcome .

Case Report

- In the first appointment a total of 7 intra oral scans of the patients and one extra oral scan of the existing prosthesis were recorded.



Pre-Operative

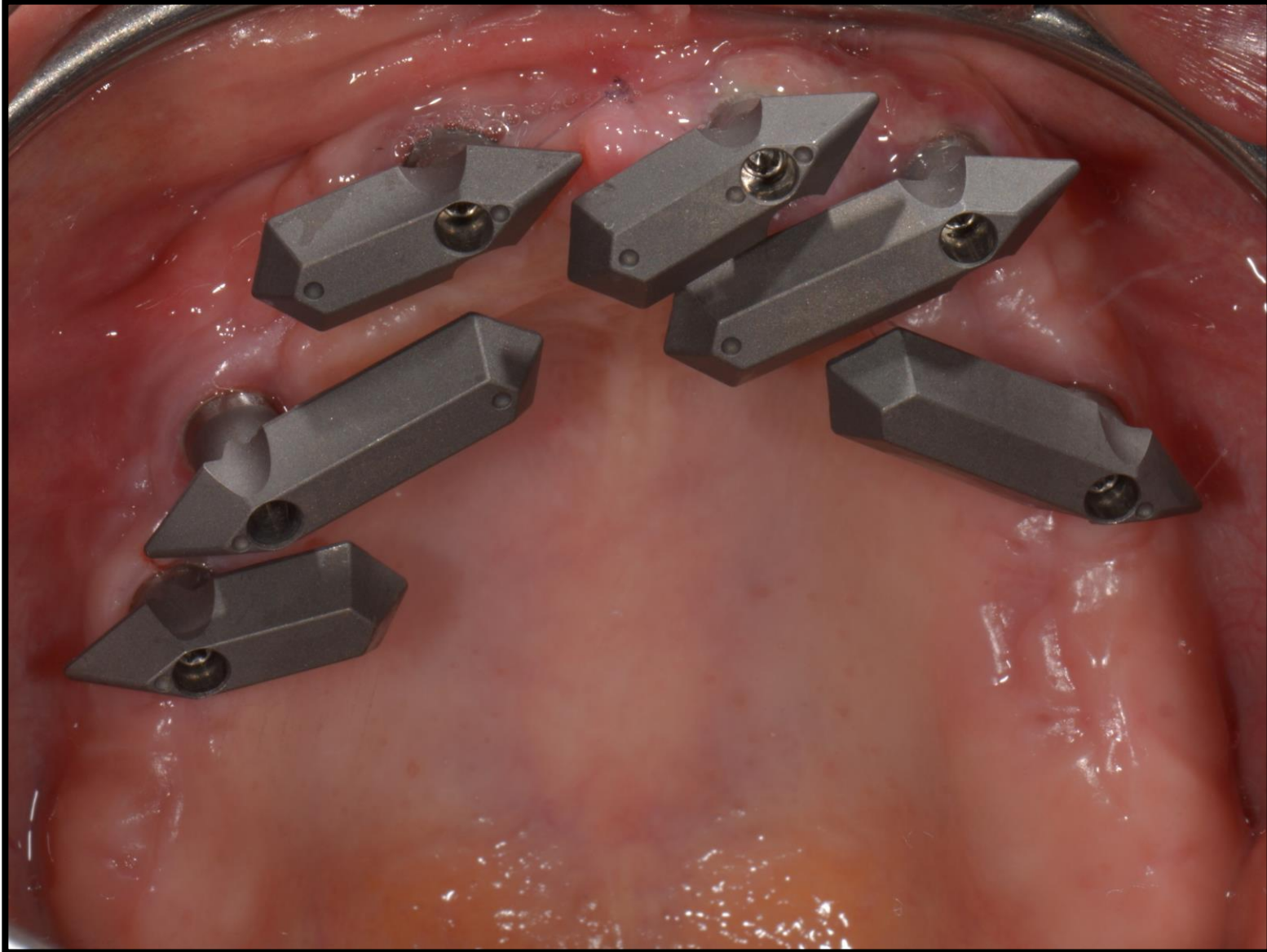


Multiunit abutment Placement

- First scan records the position of multiunit abutment..
- Second scan uses 3 narrow scan bodies spreading most A-P spread.
- Third and forth scans are of the scan gauge oriented with no contact or overlap and minimum soft tissue between the scan gauges. the orientation of gauges were scanned in a clockwise and counterclockwise direction in 2 separate scans.

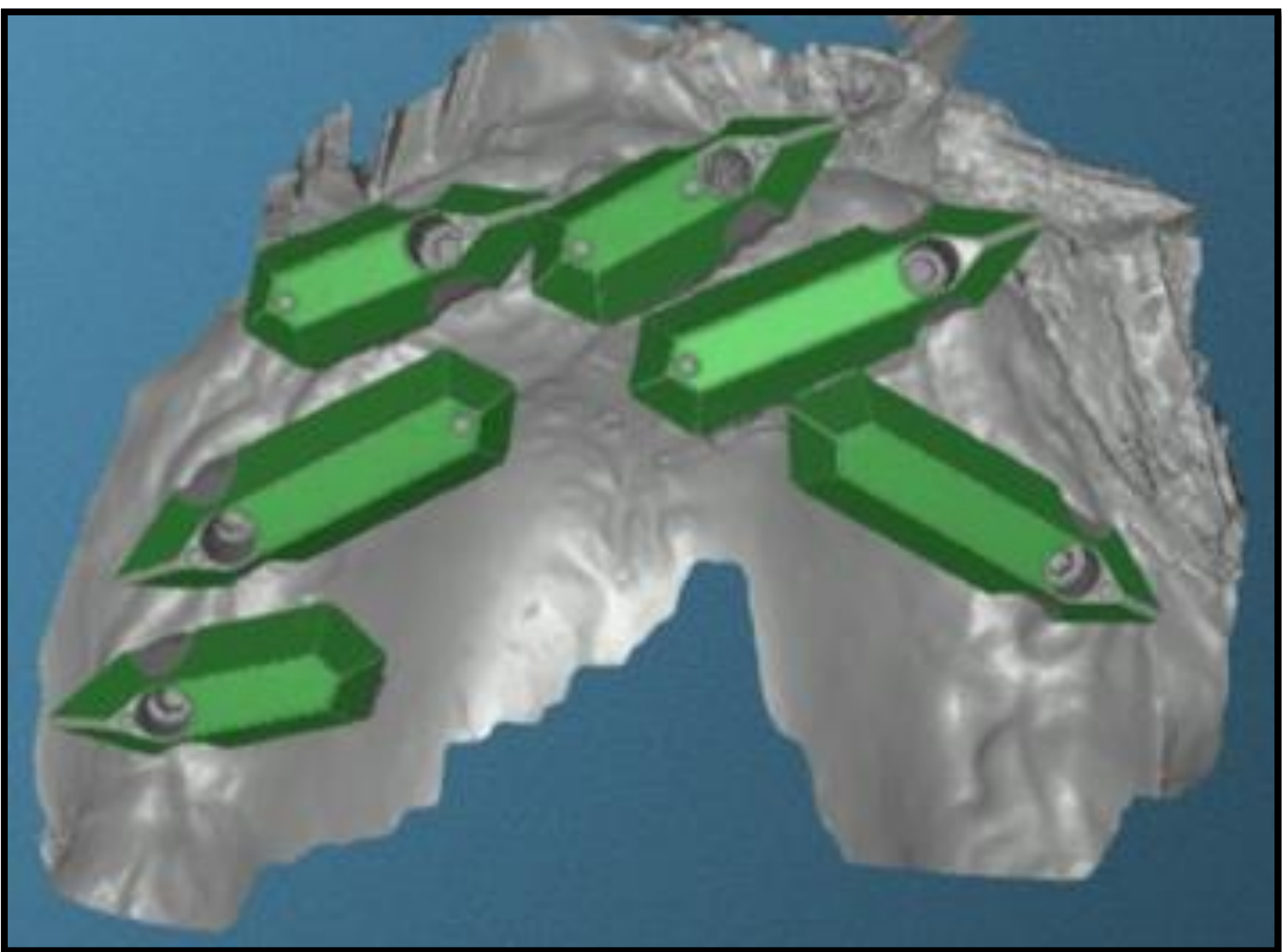


Narrow scan bodies

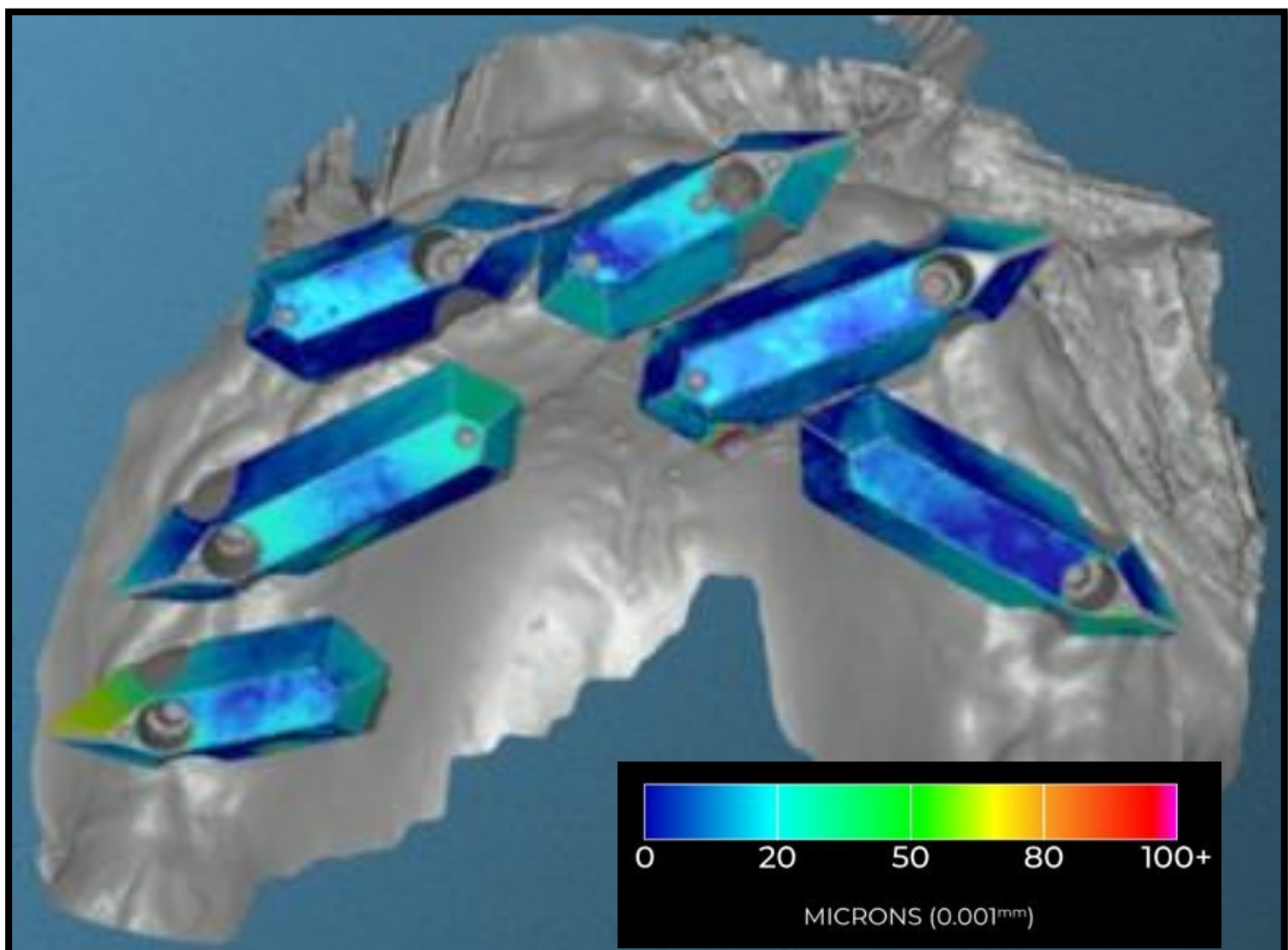


Scan Gauge orientation

- Fifth and six scans are of the existing denture in the mouth and the lower arch individually.
- Seven scan is of the prosthesis in the occlusal to record the jaw relation.
- The final scan is an extra oral scan of the existing prosthesis.
- The scan data and extra oral photos of the patient were sent to designing software.



Alignment of the Scan gauge



Virtual Verification



Virtual Designing



Designed Prosthesis



Existing Prosthesis



Prototype Prosthesis

- Once designed the STL files can be download to mill or print the prototype prosthesis.
- At the second visit the PMMA prototype was verified and delivered to the patient.



Existing Prosthesis(in CR)



Milled PMMA Prosthesis(in CR)

- Upon recall evaluation of the Prototype prosthesis was scanned.
- Reverse scan bodies were used to scan prosthesis extra orally.
- The data was sent to the lab for fabrication of the final zirconia prosthesis.

Conclusion

- Digital technologies have changed the way Prostheses can be fabricated.
- On of the pit fall in this protocol is designing the intaglio surface .
- We needed to modify the intaglio surface as patient develop significant pain and discomfort after prosthesis delivery.



Intaglio surface before adjustment



Intaglio surface after adjustment

References

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Acknowledgment
Keystone Dental Group