Dental photogrammetry and conventional implant impressions. A case report.

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Abstract

The information flow between the clinician and the dental technician can become specially challenging. Digital impression systems and CAD/CAM technology offer many solutions, but it does not mean necessarily excluding traditional methods. The objective is to report a clinical case using both techniques.

The mandible was rehabilitated with a full arch fixed dental prosthesis, whereas a conventional denture was placed on the maxilla. The final result satisfied patient expectations and adequate biomechanics were reached. The veneering material provided a highly esthetical outcome for teeth and artificial gingiva.

In the light of these findings, photogrammetry seems to be as a good alternative to register implant positions in full arch rehabilitations. Nevertheless, further research will be required to confirm these findings.

Background and Aim

Photogrammetry allows intraoral digital registration of the positions of multiple implants.

The aim is to report a clinical case combining conventional impressions and photogrammetry. The patient was a 71-year-old male, complete denture wearer. The mandible was rehabilitated with a full arch implant-retained prosthesis, whereas a conventional denture was placed on the maxilla.

Methods and Materials

Photogrammetric digital impression (PICdental, Madrid, Spain) was used for implants whilst soft tissues were registered with alginate. Then, conventional casts were digitalized by an extraoral scanner. The mandibular framework was digitally designed (CAD/CAM milled titanium). The veneering material was zirconia silicate.

Results

Some trouble was found in passive fitting. Digital pressure and radiographic verification showed its final accomplishment. The veneering material provided a highly esthetical outcome for teeth and artificial gingiva.

Conclusions

- Although CAD/CAM systems allow a great precision, sometimes complications can occur.
- Digital and conventional techniques can be combined for optimum results.
- Because of its flexible behavior, zirconium silicate is a highly esthetical material adequate with acrylic antagonists.

References

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