Zirconia Implant Supported Fixed Complete Dental Prostheses: an observational retrospective study

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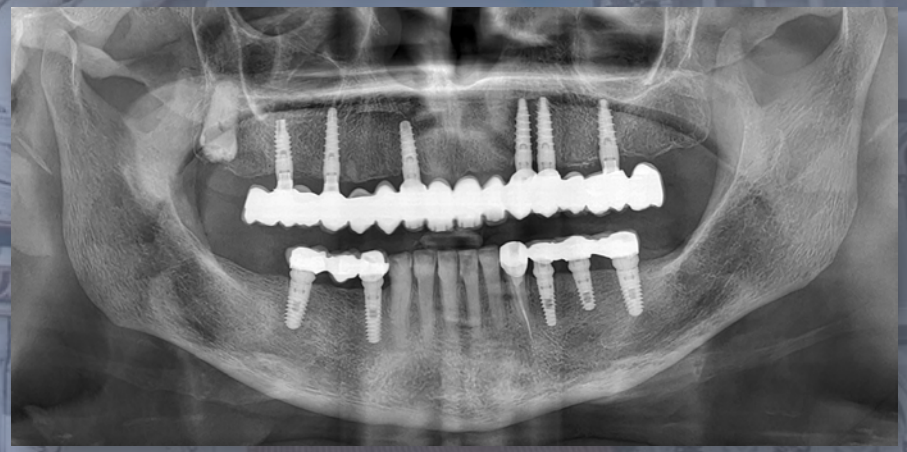
INTRODUCTION

In contemporary dentistry, the success rates of dental implants have greatly improved, rendering implant-supported fixed complete dental prostheses (ISFCDPs) or implant-retained removable dentures viable alternatives to traditional removable dentures. The advantages of ISFCDPs are many, ranging from enhanced patient comfort to the preservation of alveolar bone integrity by mitigating the mechanical stress exerted by removable dentures.

Zirconia can be used as a prosthesis glued to an inner frame or as a single-piece prosthesis obtained from a disk of progressive zirconia, with a stronger inner layer and more aesthetic external layers.

5.3 YEARS (64 MONTHS) FOLLOW UP



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OBJECTIVES

The objective of the present retrospective study is to evaluate and compare the success, survival and complications over time of ISFCDPs made with a single piece of progressive zirconia or with aesthetic Zirconia glued to a stronger zirconia frame.

MATERIALS AND METHODS

11 Patients who received a total of 14 superior or inferior ISFCDPs were included in the study: 3 Progressive Zirconia ISFCDPs and 11 Zirc-On-Zirc (Aesthetic zirconia glued to a stronger zirconia frame) ISFCDPs. Panoramic radiographies were performed for each patient, along with prosthetic and implant evaluations and a satisfaction questionnaire.

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RESULTS

86 implants and 14 ISFCDPs have been evaluated; the average **follow up** time was **35.7±19.8 months**.

Out of 86 implants, **5 had at least one site with PPD** of 5mm or higher, and **none failed.**

The average **esthetic satisfaction** was 9.6±0.6 out of 10, and the average **functional satisfaction** was 9.7±0.6 out of 10.

Zirc-On-Zirc ISFCDPs: one case of minor chipping of the pink zirconia was reported out of 11 cases. The same case had a prosthetic failure (fracture of the framework) and needed a prosthetic replacement at 1 year.

Progressive Zirconia ISFCDPs: no complications were reported.

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Conclusions

By analyzing the data obtained, it can be stated that the two different uses of zirconia (Progressive or Zirc-On-Zirc) for the ISFCDPs **don't seem to have any difference in terms of performance and patient satisfaction**. This is probably due to the pre-surgical planning of the prosthetic rehabilitation and its standardization in design and production.