

## **Single crown restorations supported by one-piece zirconia dental implants: case series at a mean follow-up of 58 months**

**Abstract: OBJECTIVE:** The main aim of this case series was to report the clinical and radiographic outcomes of 22 one-piece zirconia dental implants positioned in 19 patients to restore single edentulisms and followed-up for at least 2 years.

**MATERIALS AND METHODS:** Operative procedures were performed between July 2015 and January 2021. All of the 19 subjects participating in this study were affected by partial edentulism at one or more sites. Clinical evaluation was carried out following Buser's criteria. Marginal bone levels (MBL) were assessed through standardized dental radiographs and a dedicated software. The mean distance between the implant head and the first detectable bone to implant contact was calculated at the mesial and distal aspect of each implant.

**RESULTS:** The mean observation period was 58.18 months. At the last follow-up visit no issues were reported by the patients such as foreign body sensation, discomfort or pain. No implant showed signs of infection with suppuration or implant mobility.. The mean MBL at baseline was 1,82 +/- 0,63 mm while the mean MBL at the last follow-up visit was 2,57 +/- 0,72 mm.

**CONCLUSIONS:** The results obtained in the present case series over a mean follow-up period of 58.18 months (range 27-96) showed that one-piece zirconia dental implants could be an alternative option to support single crowns in patients requiring metal-free restorations. Nevertheless, further research featured by adequate study design, longer follow-up and better controlled is needed in order to clarify advantages and limitations that are related to this treatment modality.

**Keywords:** ceramic, clinical study, dental implant, fixed dental prosthesis, zirconia implant