



Julija Zarkova Atanasova*, Katerina Zlatanovska, Sanja Nashkova, Natasha Longurova, Bruno Nikolovski, Budima Pejkovska Shahpaska, Almedin Berisha, Hristijan Tashkovski, Sandra Atanasova, Ljubica Proseva Pelivanova

Aim

Intraoral scanners have become increasingly popular due to their convenience, accuracy and time-saving capabilities. The aim of this study was to compare the clinical outcomes of zirconia crowns made with two different intraoral scanners.



Results

There was not significantly difference in all evaluated parameters between the two intraoral scanners, marginal fit for Heron vs. Shining was (3.5 ± 1.1 vs. 3.7 ± 0.62 , $P=0.46$); the internal fit (4.1 ± 1.1 vs. 4.2 ± 0.91 , $P=0.72$), occlusal contact (4.6 ± 0.98 vs. 4.5 ± 0.87 , $P=0.70$), approximal contacts (4.3 ± 1.3 vs. 4.1 ± 1.1 , $P=0.77$) and overall satisfaction (4.2 ± 0.67 vs. 4.1 ± 1.1 , $P=0.69$).

parameters	Heron 3Disc	Shining
Marginal fit	3.5 ± 1.1	3.7 ± 0.62
Internal fit	4.1 ± 1.1	4.2 ± 0.91
Occlusal contacts	4.6 ± 0.98	4.5 ± 0.87
Approximal contracts	4.3 ± 1.3	4.1 ± 1.1
Overall satisfaction	4.2 ± 0.67	4.1 ± 1.1

Methodology

A total number 12 patients were included in the study. 50 zirconia crowns were made for upper and lower molars and premolars with chamfer preparation. For every crown the digital impression was taken with two different intraoral scanners Heron IOS 3DIC and Aoralscan 3, by Shining. The zirconia crowns were milled from ZirCad prime zirconia blocks (Ivoclar Vivadent Liechtenstein) and sent to office for try-in. The evaluation was done by two prosthodontists with more than 10 years of experience. The specialist which made the comparison was blinded and didn't know which crown was produced from which scanner. For every crown 5-point Likert scale questionnaire was filled about marginal and internal fitting of the crowns, occlusal and approximal contacts, and overall satisfaction. The crown with the best score was cemented. The data analysis was performed using SPSS statistical software.

Conclusion

Within the limitation of the study, we can conclude that both intraoral scanners produce satisfactory clinical outcomes for single crown zirconia restorations.