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PURPOSE

Stainless steel crowns (SSC) have been widely used for multi-surface carious lesions due to their durability and ease of application, while zirconia crowns (ZC) offer superior esthetics. This study aimed to evaluate the clinical outcomes of SSCs and ZCs in primary molars.

MATERIALS & METHODS

Split-mouth study design

16 primary molars, 8 children aged 6-9 years (4 girls, 4 boys) with multi-surface carious lesions were included. After caries removal, molars were randomly assigned to receive either:

- **ZC group: Zirconia Crowns (EZCrowns, Sprig Oral Health Technologies, USA)**
- **SSC group: Stainless Steel Crowns (KidsCrown, Shinhung, South Korea)**

The following outcomes were evaluated: Clinical success was evaluated as successful, minor failure, or major failure, Gingival Index (GI), Plaque Index (PI), Probing pocket depth (PPD). Evaluations were performed at baseline and 6 months.

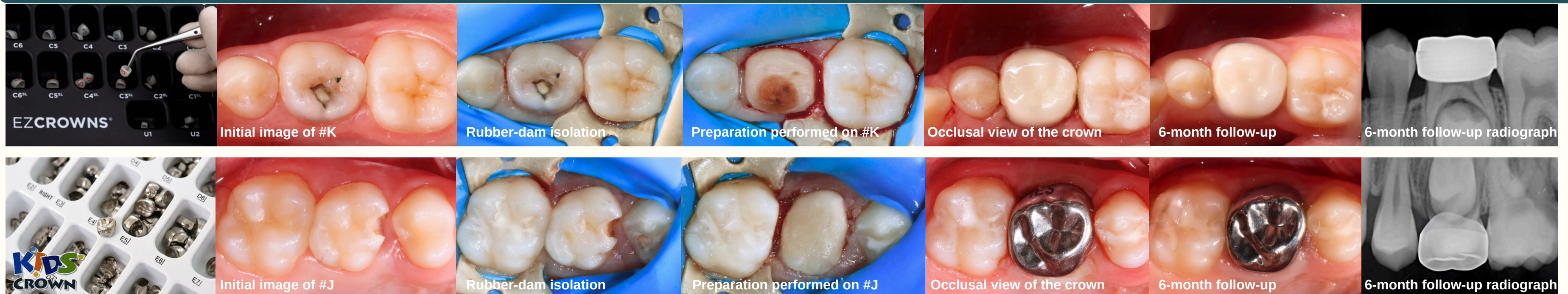
RESULTS

6-month comparison of GI, PI, and PPD values between ZCs and SSCs

| | ZC (Mean± SD) | SSC (Mean± SD) | p value |
|-----|------------------|-------------------|---------|
| GI | 0 | 1.1 ± 1.0 | 0.013 |
| PI | 0 | 1.5 ± 0.8 | <0.001 |
| PPD | 2.1 ± 0.4 | 2.6 ± 0.7 | 0.116 |

► In both groups, 100% clinical success was observed for all crowns during the follow-up sessions (P=0.001).

CLINICAL IMAGES



CONCLUSION

Both crowns exhibited excellent short-term clinical success. ZCs demonstrated better PI and GI outcomes than SSCs in the restoration of primary molars with multi-surface carious lesions, with no failures observed. No difference was observed between the groups regarding PPD. Long-term follow-up is recommended to further assess outcomes.