

Comparative evaluation of indirect composite onlays versus stainless steel crowns for rehabilitation of grossly carious primary molars

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Background

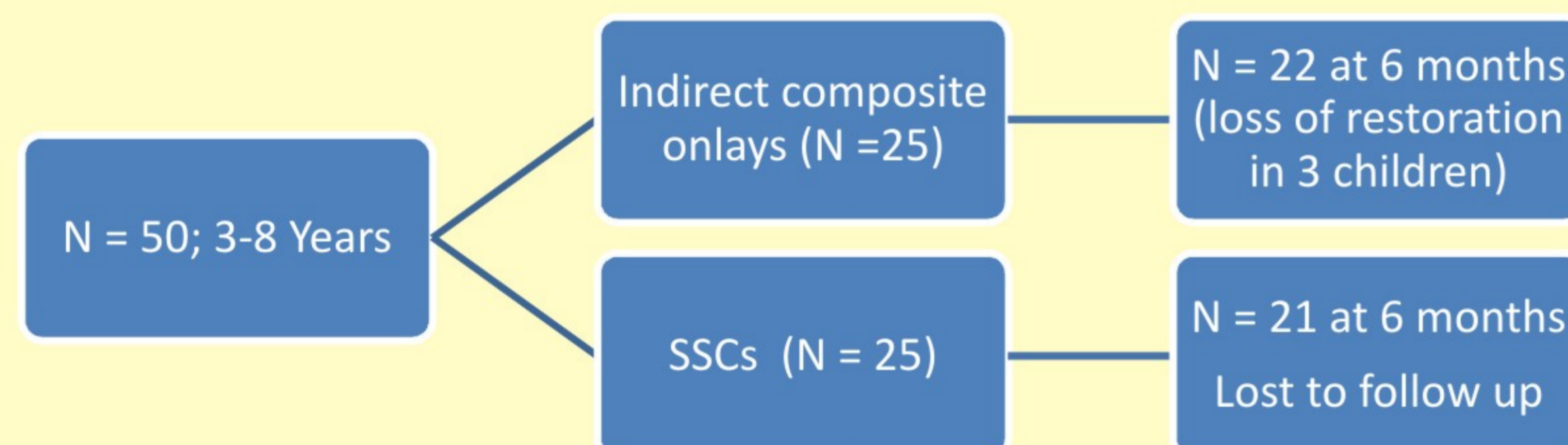
- Despite the prodigious development in the field of preventive dentistry, a good section of young population presents to pediatric dentist with grossly decayed dentition.
- This challenges the pediatric dentist with a task of not only restoring the function and esthetics but also the self esteem of the young children to prevent the present as well as future unpleasant psychological sequelae.
- Stainless steel crowns although restore the form & function satisfactorily, fail to fulfill the esthetic demands.
- Indirect composite onlays might serve both the function as well as esthetics.
- Further, this technique presents various advantages viz. conservative approach, control over polymerization shrinkage and anatomic form, precise marginal integrity & optimal esthetics.
- There is rarity of data to report on clinical outcomes of indirect onlays in primary molars apart from a few isolated case reports.

Aim

To determine whether indirect composite restorations/onlays fabricated from direct composites are equally effective as stainless steel crowns in severely decayed primary molars in terms of anatomical and functional rehabilitation.

Methods

SAMPLE



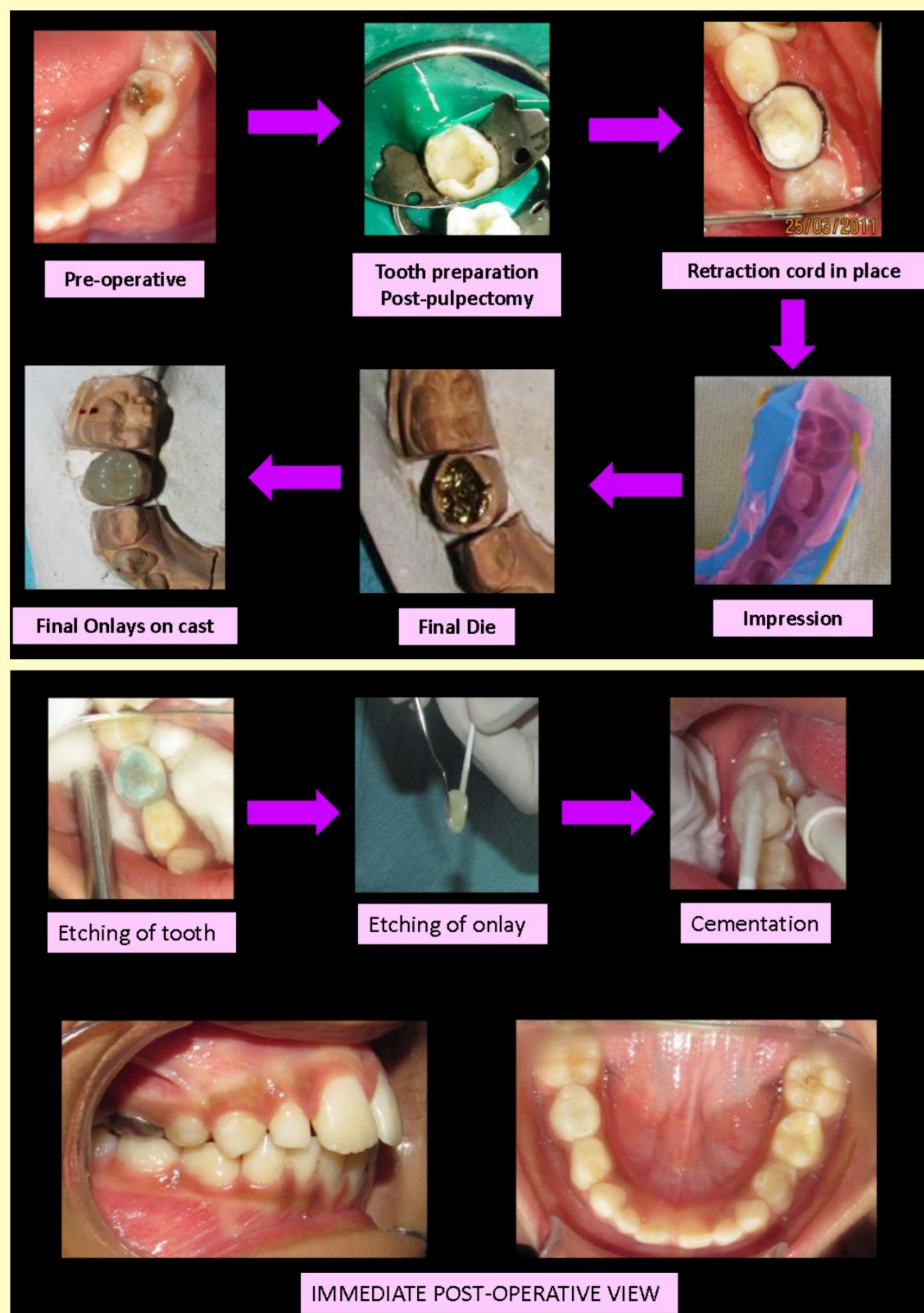
INCLUSION CRITERIA

Presence of atleast one grossly decayed primary mandibular second molar

INTERVENTIONS:

Indirect composite onlays/ SSCs in vital/ non-vital teeth, without/after pulpectomy respectively.

Operative procedure for indirect composite onlays

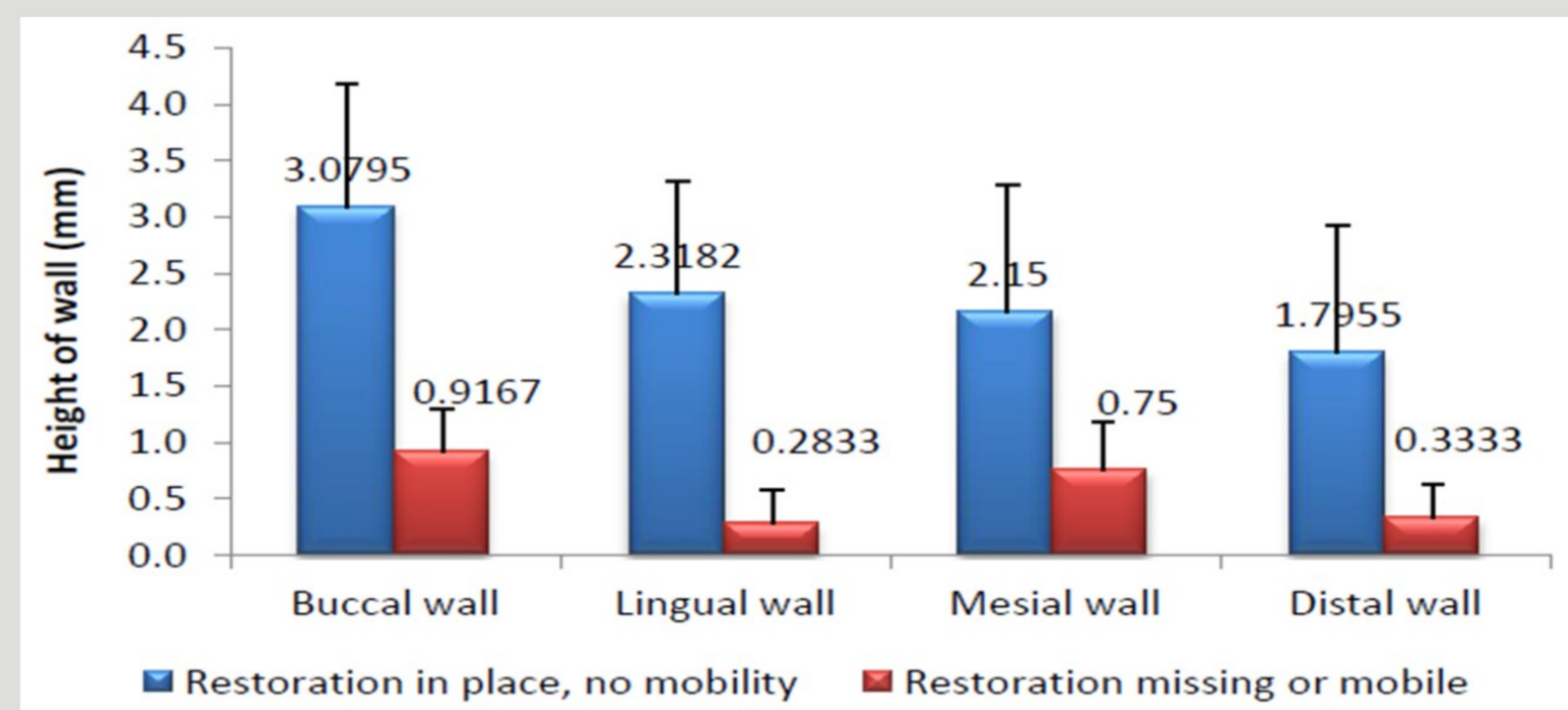
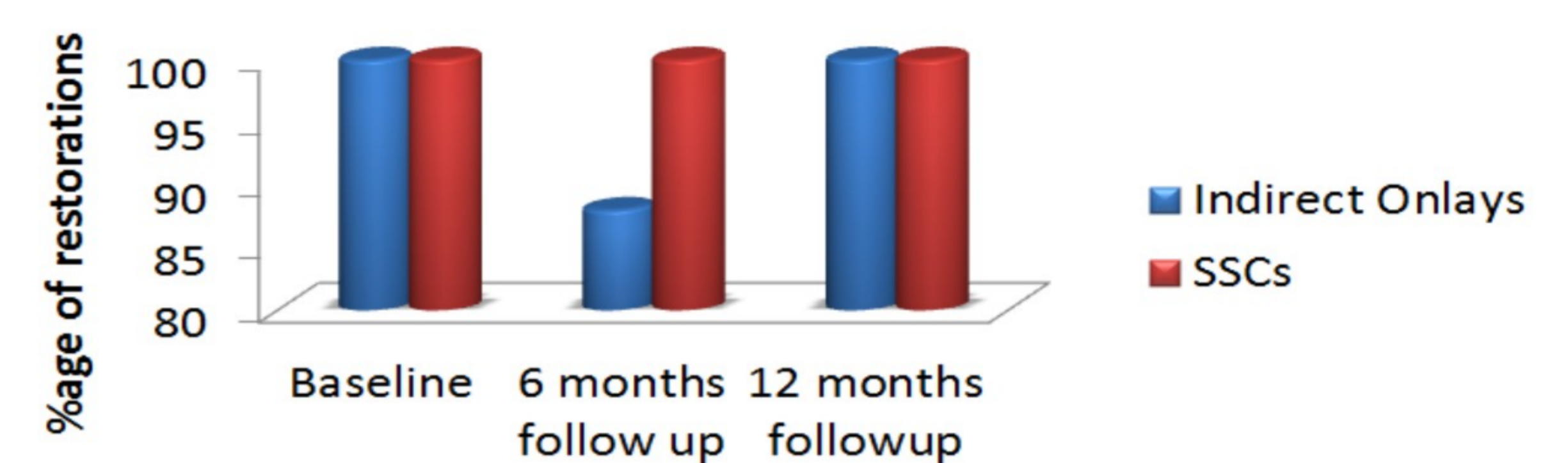


EVALUATION PARAMETERS

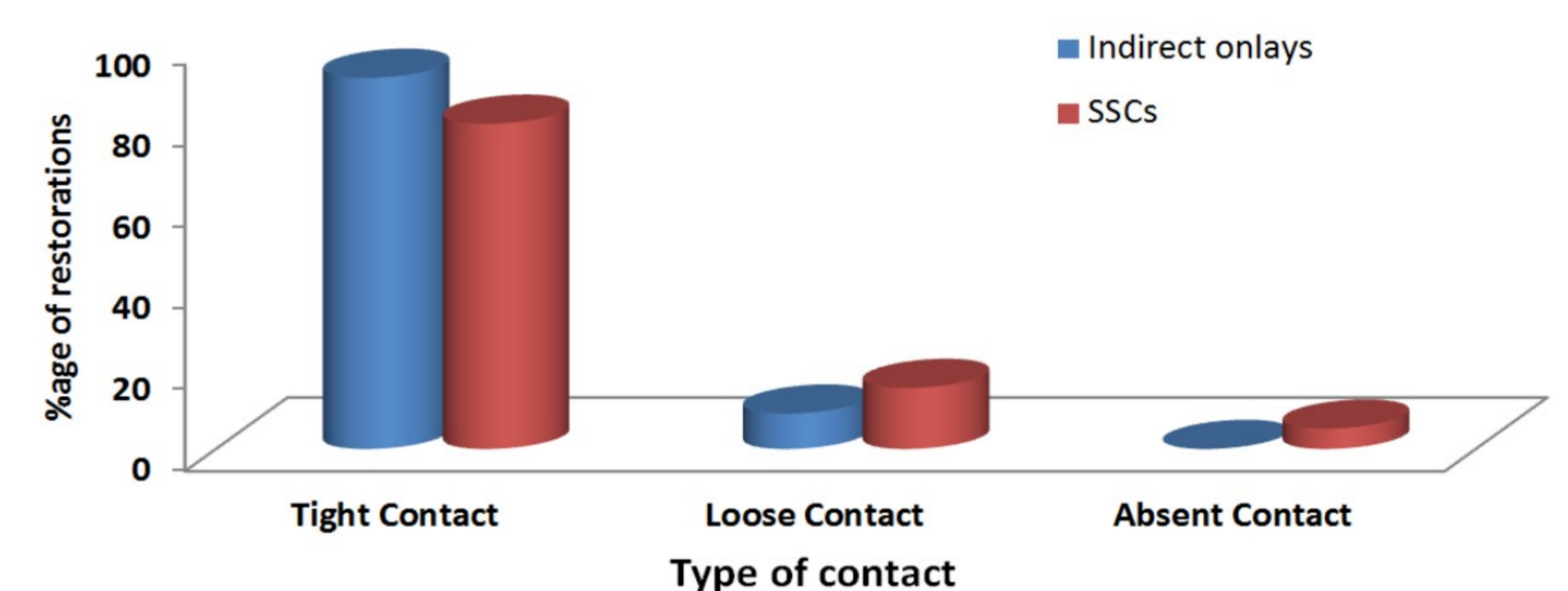
- Retention, marginal integrity, establishment of proximal contacts, and gingival health around the tooth restored with different techniques using modified USPHS criteria
- Two independent examiners at baseline, 6 months and 12 months

Results

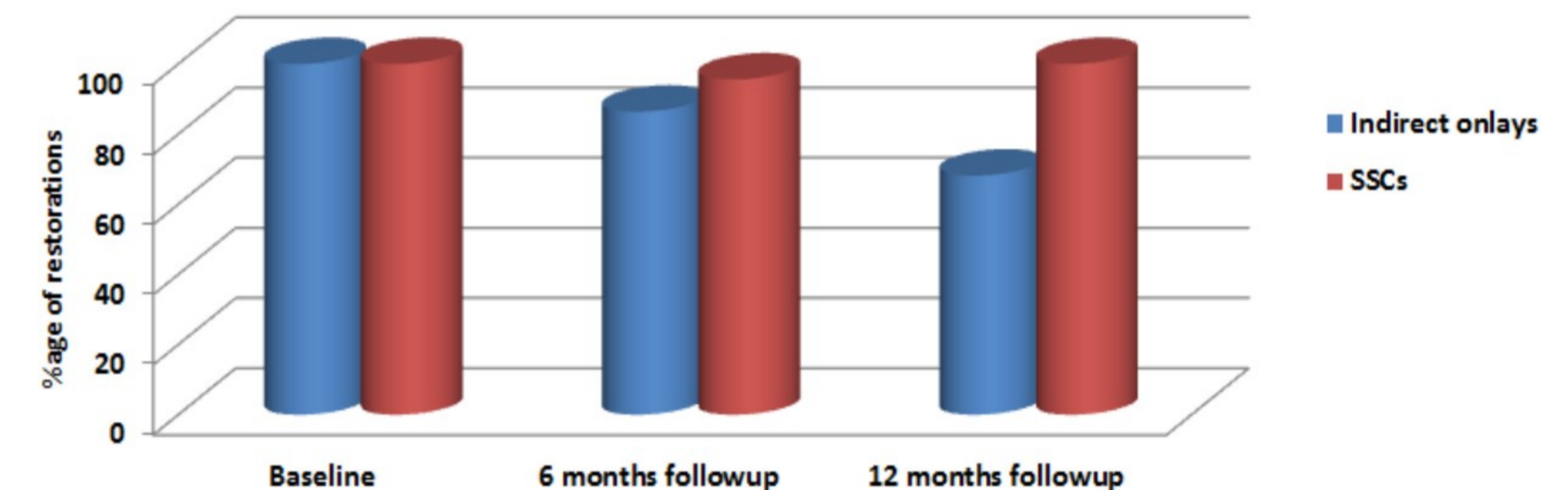
Restorations showing no loss of retention



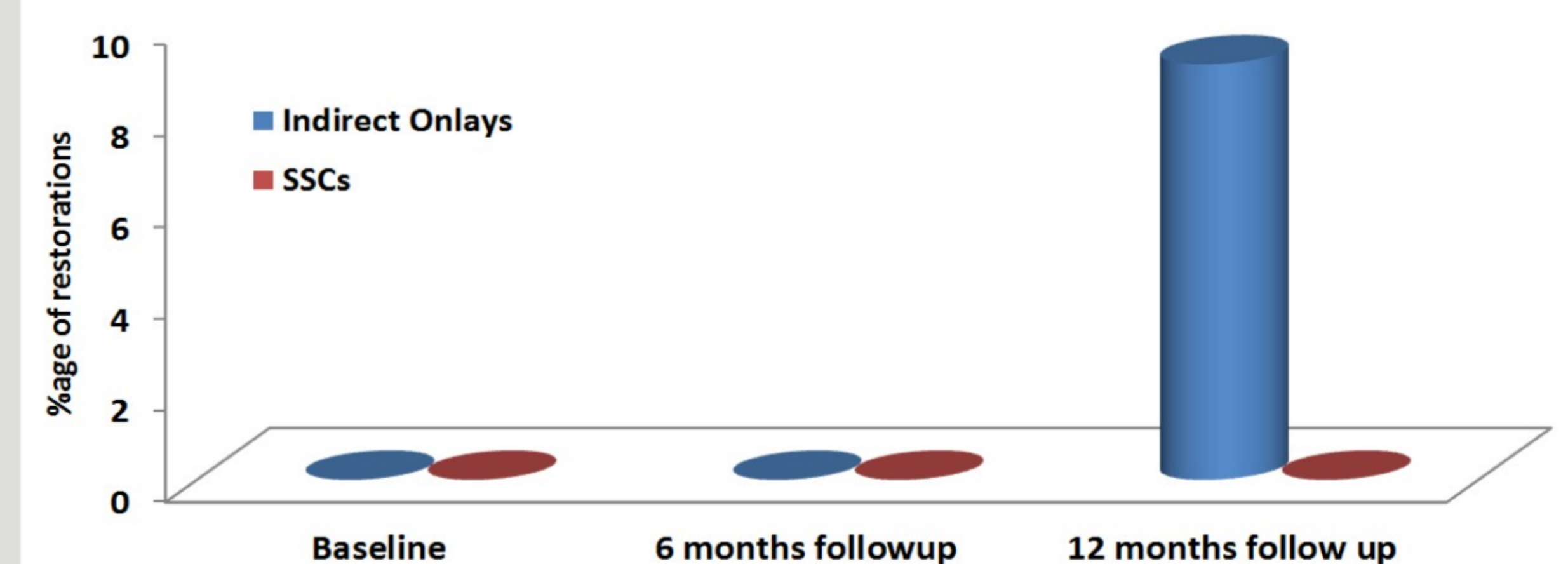
Success of establishment of proximal contact



Restorations showing excellent margins



Restorations with Abscess/Sinus/Fistula



Gingival health of test side vs control side in both the study groups

Time period	Test vs control for both the study groups	
	Indirect composite onlays	SSCs
Baseline	$P = 1.000^*$	$P = 0.718^*$
12 months follow-up	$P = 1.000^*$	$P = 1.000^*$

Conclusions

- Both the techniques i.e. indirect composite restorations/onlays and stainless-steel crowns are acceptable clinically for rehabilitation of grossly carious primary molars, as no significant difference was found between the two groups over a period of 12 months for clinical outcomes like pain, tenderness to percussion, swelling, retention, marginal integrity and proximal contacts.
- The gingival health is not affected with use of either indirect composite restorations/onlays or stainless-steel Crowns as there was no statistically significant difference between the test and control teeth in both the groups.
- Indirect composite restorations/onlays are an acceptable aesthetic alternative to stainless-steel crowns and may be considered for use in aesthetically conscious children/parents as per their preference.