

Class I Direct Composite Resin Restoration on Secondary caries of Maxillary 1st Molar with Pulp Capping

Seung Ho Jeong*, Jeong-Bum Min

School of Dentistry, Chosun University, Gwangju, Korea

I. Introduction

Secondary caries is a disease that occurs on the tooth after the restoration has been used for a period of time. It is also the main reason for the replacement of old restorations. When secondary caries is removed from a tooth, all or most of the infected and softened dentin are removed. This can lead to the pulp of the tooth either being exposed or nearly exposed which causes pulpitis (inflammation). Pulpitis, in turn, can become irreversible, leading to pain and pulp necrosis, and necessitating either root canal treatment or extraction.

In this case, right maxillary 1st molar had been restored by glass ionomer few years ago. The tooth had no symptoms but was clinically found to have secondary caries. To protect pulp vitality and avoid the need for root canal therapy, the old GI restoration and secondary caries were removed carefully and exposed pulp was treated with direct pulp capping.

II. Case report

1. Sex/age : F/15
2. Chief Complaint : 'I want to check my tooth'
3. Past dental history :
 - Class I GI Restoration on #16 (few years ago)
4. Present illness : #16 GI F. and Secondary Caries
air (-) per (-) mob (-) EPT (+) pain (-)
5. Diagnosis : #16 Dentine caries
 - Radiograph : Secondary caries on #16
6. Treatment plan :
 - i. Removal of old restorations and secondary caries under local anesthesia
 - ii. Pulp protection with pulp capping agent and glass ionomer
 - iii. Direct composite resin restoration
 - iv. Polishing and follow-up check

III. Conclusion

In this case, pulp capping was considered because the secondary caries was deep enough to expose pulpal horn by the bitewing radiographic interpretation of right maxillary 1st molar. After removal of the secondary caries (softened dentin), inspection of the exposed pulp, making outline, direct pulp capping, application of GI base, flowable and packable resin were performed. At post-treatment check, patient had no sensitivity or discomfort. Furthermore, color match, marginal adaptation, anatomic form, surface roughness of resin restorations was evaluated to be better than old GI restorations. However, continuous follow-up is needed to check postoperative sensitivity and possibility of endodontic treatment.

Presenter: Seung Ho, Jeong

School of Dentistry, Chosun University
Pilmun-daero 309, Dong-gu, Gwangju, Korea
polaris0319@gmail.com