COMMENTARY

DIRECT COMPOSITE RESIN RESTORATIONS: A REVIEW OF SOME CLINICAL PROCEDURES TO ACHIEVE PREDICTABLE RESULTS IN POSTERIOR TEETH

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This article sets out to review the direct posterior composite resin technique. The authors use two clinical case studies to emphasize the technical requisites of the adhesive process and to underline the benefits of a conservative cavity design.

For the most part, the operative procedures are clinically pertinent and effectively demonstrated within the text of the pictorial essay. A notable exception is the technique of applying and curing small increments of composite resin to the occlusal surface as an aid to selecting the color. In this clinician's opinion, shade A1 satisfies the esthetic requirements of posterior teeth for even the most exacting of patients. Interestingly, the authors make a good case for selecting a light color for the first increment in deep preparations, which is contrary to previous publications that have stressed the use of dark colors to mimic the hue of the dentin substructure.

Readers will note that the attending discolored pits and fissures were left untreated and that the authors' justification is that the patient's oral hygiene was sufficient to warrant monitoring at recall appointments. Clearly readers are not in a position to form an opinion as to the perspicacity of this approach, given that the case presentation did not attempt to reveal the demographic risk factors and other determinants of the caries milieu. Nevertheless, the title of the article embraces predictability, so a discussion of the decision to leave the attending "lesions" seems to be relevant.

The subject of occlusal pit-and-fissure caries diagnosis elicits controversy and multiple opinions[1,2]; nevertheless, the literature points to the direction in which the profession should head.[3] The National Institutes of Health's Consensus Development Conference on Caries Prevention and Management, held in March 2001, emphasized the need for more diagnostically specific caries-management protocols.[4] Most clinicians can attest to being surprised by the extent and severity of the carious involvement of a tooth in which radiologic as well as clinical examination reveals little or no carious activity. Interpretation of carious activity is extremely subjective,[5] and it is this reviewer's opinion that more finite quantitative tools such as a laser fluorescence device (KaVo's DIAGNOdent) should be employed in the treatment decision-making process.[6–9] Visual inspection relying exclusively on fissure discoloration seems to allow proper identification of sound occlusal surfaces, whereas laser fluorescence devices help to avoid false-positive identification of dentinal caries.[10]

Readers should continue to scrutinize the literature for future developments as new technologies can clearly provide supplemental information to the established methods for the diagnosis of occlusal caries.[11,12] Clinical judgment based on the patient's case history, visual cues, review of radiographs, and probability of disease is, however, still the most important aspect of optimum patient care.

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