per 1000 compared to NI. The certainty of the evidence underlying these comparisons was graded as moderate to high.

DISCUSSION

Most dentists continue to manage early proximal lesions invasively even though less invasive treatments retain teeth for longer periods and reduce treatment costs for patients. The evidence of this review indicates that micro-invasive treatments should be selected rather than NI treatments. Clinical judgment for each individual situation should be used to determine whether to select sealing or infiltration as the treatment of choice.

Krois J, Göstemeyer G, Reda S, et al: Sealing or infiltrating proximal carious lesions. *J Dent* 74:15-22, 2018

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DENTAL TRAUMA

Tooth fragment reattachment

BACKGROUND

The reattachment of tooth fragments offers an excellent means to preserve the original shape, color, brightness, and surface texture of the enamel, making the esthetics especially acceptable in anterior teeth. In addition, the incisal edges of the reattached fragment usually wear at a rate similar to that of adjacent natural teeth. This technique tends to be less time-consuming and provides a more predictable long-term result than other approaches. However, there are many variations in the fragment bonding technique. No consensus has yet been reached regarding what approach delivers the best result in terms of the bond strength between the fragment and the dentin over time. A systematic review was done to determine the best tooth fragment reattachment techniques for the crown of a fractured anterior tooth.

METHODS

The search included the PubMed, LILACS, Web of Science, Cochrane, and Scopus databases, as well as the gray literature through Google Scholar and OpenGrey. Five articles were selected after screening.

RESULTS

Four of the 5 articles reported longer follow-up periods than had been reported previously. Tooth fragment reattachment was done with conventional composite resin, flowable composite resin, or resin cement. In 2 studies, no additional preparation was done in the tooth fragment or remaining tooth structure. In 1 study, composite resin was used to reinforce the fracture line. In 3 studies, a double chamfer was performed after the tooth fragment was reattached. In all studies, the tooth fragment was maintained in physiological solution until it was reattached. The studies exhibited little consistency with regard to the method used to reattach the tooth fragment or to the length of the follow-up period.

DISCUSSION

The preferred technique was simple tooth fragment reattachment. Bone strength was increased when an intermediate material was used between the fragment and the dentin. However, the inconsistency of results does not indicate that any of the approaches is superior to all the others.

Clinical Significance

Simple reattachment of a tooth fragment works and achieves good esthetics. It appears wise not to do much in the way of tooth surface adaptation other than using an intermediate material between the tooth fragment and the dentin surface. Further study is needed to determine if there is 1 best way to approach tooth fragment reattachment.

Garcia FCP, Poubel DLN, Almeida JCF, et al: Tooth fragment reattachment techniques—A systematic review. *Dent Trauma* 34:135-143, 2018

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