

Minimum intervention dentistry for the management of caries in older adults: a review of the literature

Précis

This literature review presents evidence supporting aspects of minimum intervention dentistry (MID) for older adult patients.

Abstract

Statement of the problem: The population is ageing and the proportion of older adults retaining their natural teeth is increasing. This means that there are increasing numbers of older adults at risk of and from dental caries for longer. This challenges traditional concepts of care delivery for older adults. With advances in the understanding of the pathogenesis of dental caries, there is increasing evidence to support a shift from traditional mechanical 'drill and fill' techniques to the management of dental caries biologically as a complex ecological process. Minimum intervention dentistry (MID) has become an increasingly mainstream model of caries management, which minimises the need for treatment that destroys dental tissues. In contrast to traditional management of caries, MID focuses on prevention and risk reduction, while surgical intervention is limited to cases where it is absolutely necessary. This paper reviews the evidence to support adoption of MID, particularly for older adults in Ireland.

Purpose of the study: To review the evidence regarding aspects of MID for caries management among older adults.

Materials and methods: A structured search strategy was undertaken using PubMed, Google Scholar and the Cochrane Library, with additional searching of reference lists. A total of 25 articles were deemed relevant to this literature review. The data was extracted and tabulated. The outcomes and quality of the studies were reported narratively. Weaknesses and clinical implications are discussed.

Conclusions: MID can be recommended for older adults. This review supports the use of topical fluorides in varnish, rinses and high-fluoride toothpaste to prevent dental caries in older adults, and the restoration of caries adopting the atraumatic restorative technique (ART). There was insufficient evidence regarding the effectiveness of oral health education. No studies were identified looking at the effectiveness of caries removal techniques, the resin infiltration technique, or the repair rather than replacement of restorations for older patients.

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