Policy on alternative restorative treatment (ART)

Originating Council
Council on Clinical Affairs

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Purpose

The American Academy of Pediatric Dentistry (AAPD) recognizes that unique clinical circumstances can result in challenges in restorative care for infants, children, adolescents, and persons with special health care needs. ~~Removal of dental caries and restoration of teeth can often present unique challenges to the practitioner. Not all dental disease can be treated by "traditional" restorative techniques. Young patients, uncooperative patients, patients with special needs, and situations where~~ When circumstances do not permit traditional cavity preparation and/or placement of traditional dental restorations ~~is not possible, may require the,~~ use of an alternative restorative treatment (ART) may be beneficial.

Methods

This policy is based upon a review of current dental literature. A MEDLINE search was performed using key words "dental caries", "atraumatic restorative treatment", and "glass ionomer cement".

Background/literature review

Alternative restorative treatment (ART), formerly known as atraumatic restorative treatment, is ~~a technique used to restore defective or carious teeth with minimal cavity preparation[1] followed by placement of a fluoride-releasing material such as glass ionomer.[2-6]~~ defined as "a dental caries treatment procedure involving the removal of soft, demineralized tooth tissue using hand instrument alone, followed by restoration of the tooth with an adhesive restorative material, routinely glass ionomer".[1] This technique may be modified by the use of rotary instruments. ~~This technique is promoted and~~ It has been endorsed by the World Health Organization ~~with the goals of preserving tooth structure, reducing infection, and avoiding discomfort.[7,8]~~ and ~~The~~ the International Association for Dental Research ~~held a symposium on ART in June 1998 recognizing the technique~~ as a means of restoring and preventing ~~dental~~ caries. ART may be used to restore and prevent caries in young patients, uncooperative patients, or patients with special health care needs or when traditional cavity preparation and/or placement of traditional dental restorations are not feasible. ~~The procedure does not require a traditional dental setting. Preventive measures to control the bacterial~~

~~infection and the causative agents of the disease should also be utilized for optimal results following treatment.~~

Success rates for ART restorations depend on the material used, training of the operator, and the extent of caries.[2-6,] Glass ionomer cement is the material of choice for ART because of its bonding to enamel and dentin, fluoride release, and ease of use.[7,8] Resin-modified glass ionomer material has been shown to have a higher success rate than low-viscosity glass ionomer cements due to increased strength and greater resistance to loss.[4,7,9] ART has the greatest success when applied to single surface or small 2 surface restorations. Inadequate cavity preparation with subsequent lack of retention and insufficient bulk can lead to failure.[4] Use of a slow-speed rotary instrument may be indicated to enhance cavity preparation and restorative retention. Followup care with topical fluorides and oral hygiene instruction improve the treatment outcome of high caries-risk dental populations.

Policy statement

The ~~American Academy of Pediatric Dentistry (~~AAPD~~)~~ recognizes ART as ~~a useful and beneficial technique in the~~ an acceptable treatment ~~and~~ for the management of ~~dental~~ caries ~~where~~ when traditional cavity preparation and/or placement of traditional dental restorations are not possible.

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