

Delta Dental of Virginia Clinical Policy # 408
Subject

Local Delivery of Antimicrobial Agents

Originating Department

Clinical Professional Services

Signature Authority

Dental Director

Type: New Replacement Revision Clarification

Date: 11/15/2009 **Revision Date:** 11/15/2011

Preamble:

The Clinical Policy Bulletin is an expression of Delta Dental of Virginia's (DDVA) determination regarding whether certain services or supplies are medically or dentally necessary. DDVA bases its conclusions on a review of currently available clinical literature. This includes, but is not limited to, clinical outcome studies published in the peer-reviewed medical and dental literature, regulatory status of the technology, evidence-based guidelines of public health and health research agencies, evidence-based guidelines and positions of leading national health professional organizations, views of physicians and dentists practicing in relevant clinical areas, and other relevant factors. DDVA reserves the right to revise these policies as new clinical information is available and we welcome submission of further relevant information.

A group may define covered dental services under their dental plan, as well as those services that may be subject to dollar caps or other limits. The plan documents outline covered benefits, exclusions and limitations. DDVA advises dentists and enrollees to consult the plan documents to determine if there are exclusions or other benefit limitations applicable to the service request. The conclusion that a particular service is medically or dentally necessary does not constitute an indication or warranty that the service requested is a covered benefit payable by DDVA. Some plans exclude coverage for services that DDVA considers either medically or dentally necessary. When there is a discrepancy between DDVA's clinical policy and the group's plan documents, DDVA is to defer to the group's plan documents as to whether the dental service is a covered benefit. In addition, if state or federal regulations mandate coverage then DDVA will adhere to the applicable regulatory requirement.

History:

The use of localized delivery of antimicrobial agents (LDCA) as part of the overall management for periodontal disease is appropriate when these agents are used as adjunctive therapy to treat refractory pockets following initial therapy with periodontal scaling and root planing.

Studies have shown that the localized delivery of chemotherapeutic agents into diseased periodontal pockets can result in improvements in the clinical indicators of periodontal disease(1,2,3,4,5,6), suppress the present pathogenic microbiota(1,2), and may modulate the host inflammatory process(1). To be effective, these agents must reach the site of disease, remain at an adequate concentration, and be retained at the site over an adequate period of time for the desired pharmacologic effect to occur(8,10). Treatment involves insertion of FDA approved delivery devices containing antimicrobial medications into the diseased periodontal pocket. These devices slowly release pharmacologic agents in therapeutic concentrations over specific periods of time.

Currently there are three commonly used antimicrobial delivery systems:

	<ol style="list-style-type: none"> 1. Arestin™ – Sulcularly placed 1mg minocycline HCl microspheres encapsulated in poly-glycolide-co-dl lactide (PGLA) bioresorbable polymer; FDA approved May 2001. 2. Atridox™ – Injectable 10% doxycycline hyclate in a bioresorbable polymer gel. FDA approved in September 1998. 3. PerioChip™ – 2.5mg of chlorhexidine gluconate in a bioresorbable hydrolyzed solid gelatin base; FDA approved May 1998. <p>Arestin and Atridox are considered locally applied antibiotics and the PerioChip a locally applied antiseptic. These products represent adjunctive periodontal therapy and are indicated for treatment of progressive refractory periodontal diseased sites in adults. Refractory disease sites include areas of periodontal pocketing equal to or greater than five millimeters with persistent clinical signs of inflammation, bleeding, suppuration and/or increasing loss of clinical attachment. Evaluation for the need of these treatment modalities is made following completion of plaque control measures, periodontal scaling and root planing and any indicated surgical procedures. Local delivery of chemotherapeutic agents may also be indicated when isolated refractory sites are diagnosed at periodontal maintenance appointments.</p> <p>It should be noted that, when compared to scaling and root planing alone, adjunctive use of local delivery of antimicrobial agents can result in statistically significant improvements in pocket depths and increases of clinical periodontal attachment. However, these improvements are small and may not be considered clinically significant. Increases in clinical attachment measurements are generally less than one millimeter(5,11,12,13,14,15,16).</p> <p>Systematic reviews of existing data do not reveal that localized delivery of chemotherapeutic agents reduces the need for surgery or improves the long-term prognosis of periodontally involved teeth, or that it is cost effective(16). Based on existing research, thorough scaling and root planing remains the treatment standard for non-surgical periodontal therapy(16). Consequently, the decision to treat patients with LCDA remains a matter of individual clinical judgment.</p> <p>If a pattern of generalized non-responsive periodontitis is diagnosed, localized delivery of antimicrobial agents may not be appropriate and a more comprehensive intervention with surgical therapies should be considered.</p>
Policy:	DDVA guidelines: <ol style="list-style-type: none"> 1. LDCA is indicated for patients of record with refractory periodontal pockets. 2. LDCA may be performed six weeks to six months post scaling and root planing or periodontal surgery. 3. Treated teeth must have pocket depths equal to or greater than 5mm and less than 10mm.
Code(17):	D4381 – Localized delivery of antimicrobial agents via a controlled release vehicle into diseased crevicular tissue, per tooth, by report
References:	<ol style="list-style-type: none"> 1. Drisko CH. The use of locally delivered doxycycline in the treatment of periodontitis. Clinical results. J Clin Perio 1998;25:947-952.

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