Healthy Blue

Clinical UM Guideline

Subject:	Iontophoresis for Medical Indications		
Guideline #:	CG-MED-28	**Publish Date:**	12/16/2020
Status:	Reviewed	**Last Review Date:**	11/05/2020

Description

This document addresses the use of iontophoresis as a technique for drug delivery.

Note: Please see the following document for information regarding the use of iontophoresis for hyperhidrosis:

- CG-MED-63 Treatment of Hyperhidrosis

Clinical Indications

Medically Necessary:

Iontophoresis is considered **medically necessary** for the administration of local anesthesia prior to a venipuncture or dermatologic procedure.

Not Medically Necessary:

The use of iontophoresis is considered **not medically necessary** for all other indications including, but not limited to, the administration of nonsteroidal anti-inflammatory drugs (NSAIDs) or corticosteroids as treatment for inflammatory musculoskeletal disorders.

Coding

The following codes for treatments and procedures applicable to this document are included below for informational purposes. Inclusion or exclusion of a procedure, diagnosis or device code(s) does not constitute or imply member coverage or provider reimbursement policy. Please refer to the member's contract benefits in effect at the time of service to determine coverage or non-coverage of these services as it applies to an individual member.

When services may be Medically Necessary when criteria are met:

CPT

97033	Application of a modality to one or more areas; iontophoresis, each 15 minutes

ICD-10 Diagnosis

All diagnoses

When services are Not Medically Necessary:

For the procedure code listed above when criteria are not met or for situations designated in the Clinical Indications section as not medically necessary.

Discussion/General Information

Iontophoresis is a method of transdermal local drug delivery using electrical current. A charged ionic drug is placed on the skin with an electrode of the same charge, allowing direct current to drive the drug into the skin. Iontophoresis may take advantage of sweat ducts, sebaceous glands, hair follicles, and imperfections in the skin to achieve penetration. Alternatively, electrical potential across the skin could alter its permeability, possibly creating potential-dependent pores in lipid bilayer membranes.

Iontophoresis has been proposed for numerous uses including the delivery of local anesthetic before skin puncture or painful dermal procedures and for local drug delivery for agents including, but not limited to, NSAIDs, corticosteroids for musculoskeletal inflammatory disorders, or verapamil for the treatment of Peyronie's disease. Overall, the results published in the peer-reviewed medical literature include small randomized, placebo-controlled or comparative trials and non-randomized retrospective studies. The study results, reported as treatment outcome measurements, do not support the iontophoretic application of NSAIDs, corticosteroids, or other drugs for the treatment of carpal tunnel syndrome (Amirjani, 2009; Bakhtiary, 2013; Gurcay, 2012), chronic foot eczema (Tupker, 2013), epicondylitis (Nirschl, 2003), intractable central pain (Vranken, 2005), keratoconus (Lombardo, 2017; Lombardo, 2019; Vinciguerra, 2019), migraine headache (Pierce, 2010), onychomycosis (Amichai, 2010), patellar tendinopathy (Rigby, 2015), plantar fasciitis (Allison, 2006), recalcitrant scarring after open trigger finger release (Dardas, 2014), rotator cuff disease (Page, 2016), tendonitis (Leduc, 2003; Neeter, 2003), trapezial-metacarpal joint arthritis (Jain, 2010), or verapamil (with or without dexamethasone or in combination therapy) for the treatment of Peyronie's disease (Bennett, 2007; Greenfield, 2007; Mehrsai, 2013; Paulis, 2013).

In a Cochrane review, Kroeling and colleagues (2013) evaluated the short-, intermediate- and long-term effects of electrotherapy, including iontophoresis, on pain, function, disability, patient satisfaction, global perceived effect, and quality of life in adults with neck pain with and without radiculopathy or cervicogenic headache. The effects of iontophoresis versus no treatment were evaluated in a single study of very low quality evidence and a high risk of bias. No difference between the groups was reported in cervicogenic headache or neck pain relief after 5 weeks of treatment. When direct current iontophoresis combined with diclofenac gel was compared to interferential current and multimodal treatment (that is, traction, therapeutic exercise, and massage), no difference between the groups was reported in cervicogenic headache or neck pain after 5 weeks of treatment. The authors concluded that for individuals with acute whiplash, iontophoresis was no more effective than no treatment, interferential current, or a combination of traction, exercise and massage for relieving neck pain with headache.

Sayegh and Strauch (2014) performed a meta-analysis of randomized controlled trials (RCTs) comparing any form of nonsurgical treatment, including corticosteroid iontophoresis, with either observation only or placebo at 6 months or greater follow-up for the treatment of lateral epicondylitis. The primary objective was to establish the superiority of nonsurgical treatments over non-treatment in the following outcomes: "(1) better overall improvement, (2) less need for escape interventions, (3) better outcome scores, and (4) improved grip strength at intermediate- to long-term follow-up." A total of 22 studies with intermediate- to long-term follow-up met the inclusion criteria: however, only one small study (n=64) of "good methodologic quality" and short duration (6 months) compared the use of corticosteroid iontophoresis to placebo. Pooled data from all RCTs indicated a lack of intermediate- to long-term clinical benefit after nonsurgical treatment of lateral epicondylitis compared with observation only or placebo, including the use of corticosteroid iontophoresis.

The U.S. Food and Drug Administration (FDA) has granted 510(k) clearance for a number of iontophoresis devices to "introduce ions of soluble salts or other drugs into the body." The FDA prohibits labeling or promoting their use with specific drugs prior to the FDA having approved the drugs for iontophoretic administration (FDA, 2020).

References

Peer Reviewed Publications:

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Government Agency, Medical Society, and Other Authoritative Publications

1. Kroeling P, Gross A, Graham N, et al. Electrotherapy for neck pain. Cochrane Database Syst Rev. 2013;(8):CD004251.
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History

Status	Date	Action
Reviewed	11/05/2020	Medical Policy & Technology Assessment Committee (MPTAC) review. Updated References section. Reformatted Coding section.
Reviewed	11/07/2019	MPTAC review. Updated Discussion and References sections.
Reviewed	11/08/2018	MPTAC review. Updated Discussion and References sections.
Reviewed	02/27/2018	MPTAC review. The document header wording updated from "Current Effective Date" to "Publish Date." Updated Description, Discussion, and References sections.
Reviewed	02/02/2017	MPTAC review. Updated Discussion/General Information and References sections.

Reviewed	02/04/2016	MPTAC review. Updated Discussion/General Information and References sections. Removed ICD-9 codes from Coding section.
Reviewed	02/05/2015	MPTAC review. Updated Description, Discussion, and References sections.
Reviewed	02/13/2014	MPTAC review. Updated Discussion and References sections.
Reviewed	02/14/2013	MPTAC review. Updated Discussion and References. Removed Index.
Reviewed	02/16/2012	MPTAC review. Updated References.
Reviewed	02/17/2011	MPTAC review. Updated Discussion, Coding, and References.
Reviewed	02/25/2010	MPTAC review. Updated Discussion and References. Removed sections: Place of Service and Discharge Plans.
Reviewed	02/26/2009	MPTAC review. Updated References.
Reviewed	02/21/2008	MPTAC review. Updated Discussion and References.
Revised	03/08/2007	MPTAC review. Clinical Indications revised/clarified. Discussion, References and Coding updated.
New	03/23/2006	MPTAC initial document development.

Pre-Merger Organizations	**Last Review Date**	**Document Number**	**Title**
Anthem, Inc.		None	
Anthem Virginia	05/10/2004	Memo 1192	Iontophoresis for Medical Indications
WellPoint Health Networks, Inc.		None	