MEDICAL POLICY

Port-wine Stain Laser Treatment

Effective Date: 9/1/2019

9/1/19

Medical Officer

See Policy CPT/HCPCS CODE section below for any prior authorization requirements

SCOPE:

Providence Health Plan, Providence Health Assurance, Providence Plan Partners, and Ayin Health Solutions as applicable (referred to individually as “Company” and collectively as “Companies”).

APPLIES TO:

All lines of business

BENEFIT APPLICATION

Medicaid Members

Oregon: Services requested for Oregon Health Plan (OHP) members follow the OHP Prioritized List and Oregon Administrative Rules (OARs) as the primary resource for coverage determinations. Medical policy criteria below may be applied when there are no criteria available in the OARs and the OHP Prioritized List.

POLICY CRITERIA

I. Laser therapy for port-wine stain may be considered medically necessary and covered when one or more of the following (A-C) criteria are met:

A. Have a likelihood of involution leading to future problems. These are usually large and disfiguring; or
B. Are growing or having cellular changes; or
C. Have characteristics of potentially causing neoplasms.

II. Laser therapy is considered cosmetic and is not covered as a treatment of port-wine stain when the above criteria I. are not met.
CPT CODES

<table>
<thead>
<tr>
<th>All Lines of Business</th>
<th>Prior Authorization Required</th>
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<tbody>
<tr>
<td>17106</td>
<td>Destruction of cutaneous vascular proliferative lesions (eg, laser technique); less than 10 sq cm</td>
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<tr>
<td>17107</td>
<td>Destruction of cutaneous vascular proliferative lesions (eg, laser technique); 10.0 to 50.0 sq cm</td>
</tr>
<tr>
<td>17108</td>
<td>Destruction of cutaneous vascular proliferative lesions (eg, laser technique); over 50.0 sq cm</td>
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DESCRIPTION

Port-wine Stains

According to a Hayes review of evidence regarding laser treatment of cutaneous vascular lesions:¹

“Port-wine stains (PWS) are congenital vascular malformations of the skin that affect approximately 0.3% to 0.5% of newborns; the exact cause is unknown. PWS are chronic lesions characterized by enlarged and dilated venules and capillaries in the superficial dermis; the lesions can extend into deeper vessels of the dermis and subcutaneous tissues. At birth, the lesions typically appear as flat, faint, pink macules. With increasing age, they darken and become raised, red-to-purple nodules and papules in adults. Found most often on the face, neck, arms, or legs; PWS can arise anywhere on the body and vary in size.”

Laser Treatment of Port-wine Stains

Treatment of PWS in its macular stage (childhood) may prevent the development of the hypertrophic component of the lesion. Laser treatment of a PWS diminishes the existing blood vessels making them smaller and fewer in number, reducing the progression of these lesions.

According to the Hayes review regarding port-wine stains, laser treatment has become standard of care, noting the following regarding pulsed dye laser treatment:¹

“The flashlamp-pumped pulsed dye laser (PDL), introduced in 1985, was developed specifically for the treatment of cutaneous vascular lesions. PDL emits one specific color, or wavelength, of light that can be varied in its intensity and pulse duration. The hemoglobin within dilated or enlarged blood vessels comprising cutaneous vascular lesions preferentially absorbs the energy from the PDL and generates heat, leading to the thermal destruction of the lesion, while sparing normal surrounding tissues. PDL therapy is administered in multiple sessions in an outpatient setting, with or without topical, local, or general anesthesia. Cryogen spray cooled PDL (CPDL) involves the application of a cryogen spurt to the skin surface milliseconds prior to laser irradiation. This cools the epidermis without affecting the deeper PWS blood vessels, and reduces the thermal injury sustained by the skin during laser treatment.”
REVIEW OF EVIDENCE

A review of the ECRI, Hayes, Cochrane, and PubMed databases was conducted regarding the use of laser treatment for port-wine stains. Below is a summary of the available evidence identified through December of 2016.

Systematic Reviews

- A 2012 Hayes evidence review regarding pulsed dye laser (PDL) therapy of cutaneous vascular lesions included 8 randomized and 14 nonrandomized comparative studies regarding treatments of port-wine stains.\(^1\) A total of 1035 patient results were considered in the review and follow-up was up to 1 year. Hayes concluded, “(t)he results from several comparative studies showed that repeated sessions of 585-nanometer (nm) cryogen spray cooled pulsed dye laser (CPDL) therapy at 6- to 8-week intervals is a relatively safe and efficacious treatment for port-wine stain (PWS) lesions, compared with the earlier laser dye technologies, i.e., copper vapor laser or the argon-pumped continuous-wave dye laser, with many patients achieving satisfactory, if not complete, lesion clearing. However, CPDL may be less well tolerated than the 532-nm neodymium:yttrium-aluminum-garnet (Nd:YAG) laser, with similar efficacy. The efficacy of long-pulse pulsed dye laser (PDL) and the long-pulse alexandrite laser was also comparable, as was that of CPDL and indocyanine green-augmented diode laser (ICG-DL).” Hayes assigned a B rating for PDL or CPDL treatment of PWS in children and adults, when definitive treatment is required to alleviate or prevent medical or psychological complications.\(^1\)

- A 2011 systematic review by Cochrane included 5 randomized controlled trials (RCTs) involving 103 subjects to evaluate PDL against other light sources.\(^2\) PDL resulted in more than 25% reduction in redness in 50-100% of the participants. This result was after 1 to 3 treatments for up to 4-6 months post operatively. The authors concluded the PDL leads to clinically relevant clearance of PWS.

Additional, small, nonrandomized studies were identified which support the use of laser treatment of port wine stains.\(^3\)\(^5\)

CLINICAL PRACTICE GUIDELINES

No evidence-based clinical practice guidelines were identified regarding the use of laser treatments for port-wine stains.

CENTERS FOR MEDICARE & MEDICAID

As of February 2018, no Centers for Medicare & Medicaid (CMS) coverage guidance was identified which addresses laser treatment of port wine stains.

INSTRUCTIONS FOR USE

Company Medical Policies serve as guidance for the administration of plan benefits. Medical policies do not constitute medical advice nor a guarantee of coverage. Company Medical Policies are reviewed...
MEDICAL POLICY

Port Wine Stain Laser Treatment

annually and are based upon published, peer-reviewed scientific evidence and evidence-based clinical practice guidelines that are available as of the last policy update. The Companies reserve the right to determine the application of Medical Policies and make revisions to Medical Policies at any time. Providers will be given at least 60-days’ notice of policy changes that are restrictive in nature.

The scope and availability of all plan benefits are determined in accordance with the applicable coverage agreement. Any conflict or variance between the terms of the coverage agreement and Company Medical Policy will be resolved in favor of the coverage agreement.

REGULATORY STATUS

Mental Health Parity Statement

Coverage decisions are made on the basis of individualized determinations of medical necessity and the experimental or investigational character of the treatment in the individual case.

REFERENCES

1. Hayes; Pulsed Dye Laser Therapy for Cutaneous Vascular Lesions, Medical Technology Directory; Published 12/31/2012; Updated 12/1/2016; Last accessed on 12/28/2016; https://www.hayesinc.com/subscribers/displaySubscriberArticle.do?articleId=2111&&sectionSelector=ExecutiveSummary#ExecutiveSummary