

Pulsed Dye Laser (PDL) Treatment

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What is a vascular lesion?

Vascular lesions are changes in the skin composed of numerous small blood vessels. Port wine stains (capillary malformations) are composed of blood vessels in the upper layer of the skin that are dilated or permanently wider than normal. The skin always appears to be flushing or blushing. Spider telangiectases often appear on the face as a red dot with tiny lines radiating from it. Telangiectases from hereditary hemorrhagic telangiectasia (HHT) are globular red spots or bumps that can bleed with trauma.

How does the pulsed dye laser work and what are its uses?

The pulsed dye laser (PDL) produces a high-energy, yellow light, the energy of which is absorbed primarily by red blood cells within blood vessels. This selectively damages abnormal blood vessels and spares normal skin tissues from damage.

The PDL is used to treat port wine stains, telangiectases, rosacea, thin hemangiomas, and red scars. Port wine stains require multiple treatments. Most red lesions usually require more than one treatment, spaced from 2-8 weeks apart.

What are the side effects?

Immediately following laser exposure, the treated area turns *black and blue*. This can last 5-14 days. Water-based cosmetics can be applied to the area after 3 days. Occasionally, the area may *blister, scab or crust*. You may apply antibiotic ointment over the area if this occurs. *Hyperpigmentation*, brownish darkening of the skin, which can be worsened by sun exposure, occurs in 1-5% of patients and is the most common side effect. This is temporary and fades after several weeks to months. *Hypopigmentation*, or a decrease in the brown color of the skin, occurs less often, but can persist. *Scars* can result from areas that have become crusted and/or infected. Scarring is exceedingly rare after treatment with PDL.

What will it feel like?

The pulsed dye laser feels like the “snap” of an elastic band. Immediately following this there may be a warm or hot sensation similar to that of sunburn. Pretreatment with EMLA™, LMX™ (anesthetic creams applied ½ to 1 hour before treatment) is used to numb the area and minimize any discomfort. After treatment, ice and or acetaminophen (Tylenol™) may be used to relieve any discomfort.

Are there any things that I should not do before PDL?

Aspirin, aspirin-containing products, and ibuprofen, (e.g. Motrin™) should be avoided 1-2 weeks prior to treatment. These medications can thin the blood and affect the healing process. Sun tanning will impede treatment so this should be avoided also. Less pigment in the upper layer of the skin (less tan) will allow more of the laser light to penetrate into the skin where the abnormal vessels reside.

What care is needed after treatment?

Avoidance of sun exposure is important immediately after treatment and reasonable protection against the sun for the following few months is helpful. Use of a sunscreen with

an SPF 30 or greater, hat or clothing, and sun avoidance between 10 a.m. and 3 p.m. is recommended. The skin will be somewhat "fragile", so it will need to be "patted" dry, not rubbed. Antibiotic ointment can be applied to the treatment area if it should dry out, scab, or blister. Water-based cosmetics may be applied after three days.

How do I make an appointment?

Call Yale Dermatology Associates, PC at 203.789.1249 and ask for the Vascular Anomalies Clinic (Thursday afternoons). HHT patients can call the Yale HHT Center at 203.737.1427.

Treatment for telangiectasia (i.e. spider telangiectasia, spider angioma) is not covered by insurance plans and is considered a cosmetic treatment and costs \$350 plus tax. This is a one-time charge; any subsequent treatments for that lesion are free until the lesion has resolved. Most insurance carriers cover the treatment of HHT telangiectasia associated with bleeding.