Using a Soft Tissue Dental Laser to Remove a Venous Lake

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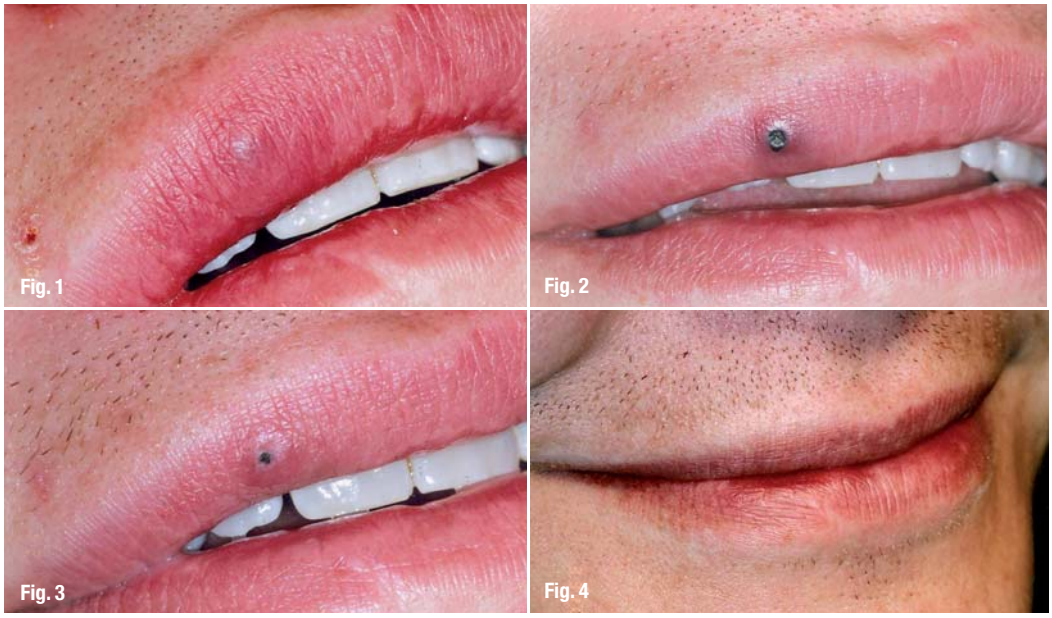
Fig. 1_Initial view of Venous Lake.
Fig. 2_View four days after lasering area, lesion "popped" open a few days after lasing and bled for a short time. Body is now able to heal itself.
Fig. 3_This view is four more days later, area continues to heal.
Fig. 4_Final view, notice that the lip is completely healed without any evidence of scarring.



_Venous lakes are common with many people and in dentistry we are always trying to help our patient's look and feel better about their appearances. Venous lakes manifest as dark blue-to-violaceous compressible papules caused by dilation of venules. They were first described in 1956 by Bean and Walsh, who noted how they can be easily compressed and their tendency to occur on sun-exposed skin, especially the ears of elderly patients. Although venous lakes may be considered clinically insignificant from a biological standpoint, they are important because of their mimicry of more ominous lesions, such as melanoma and pigmented basal cell carcinoma.

The development of venous lakes is believed to be exacerbated by solar exposure and damage. One theory is that chronic solar damage injures the vascular adventitia and the dermal elastic tissue, permitting dilatation of superficial venous structures. Vascular thrombosis also may play a role in the development of these lesions because it is commonly present in lesions of this type. Whether thrombosis is a primary or a secondary event in the development of these lesions is unclear. Although the exact incidence is unknown, venous lakes are common. Lesions typically are considered biologically harmless. Venous lakes are usually asymptomatic, although pain, tenderness, and excessive bleeding can occur once a lesion has been traumatized.

Bean and Walsh reported that 95% of venous lakes were observed in males. Another review of venous lakes confirmed the same gender distribution. It has been suggested that the disproportionately male distribution may be related to occupational sun exposure, hair length and hairstyles. Women

comprised the majority of treated patients in a large study of laser therapy for venous lakes; however, this may be related to increased concern among women regarding cosmetic appearance rather than with true incidence. There is no racial predilection that has been documented.

Venous lakes occur most commonly in adults older than 50 years with a history of chronic sun exposure. The typical presentation is as an asymptomatic lesion. The average age of presentation has been reported to be 65 years.

Physical examination usually reveals a soft, compressible, purple colored papule, up to 1 cm in greatest diameter. The lesions usually are well demarcated with a smooth surface, and compression often causes a transient depression. Lesions typically are distributed on the sun-exposed surfaces of the face, neck and the ear. Another common site of involvement is the vermilion border of the lower lip

Avoidance of excess sun exposure is important in prevention of many skin disorders. Treatment of lip venous lake includes surgical excision, laser therapy, infrared coagulation and cryotherapy.

In all of the case studies I viewed, I was unable to locate information regarding if the procedures were completed in "contact mode" or "non-contact mode". As a hygienist, I knew that I couldn't use the laser in contact mode on these lesions, but I decided to see what I could do to eliminate these with a non-contact mode technique. Before beginning this procedure, please check with your regulations regarding treatment options.

The laser that was used for this procedure was the Ivoclar, Odyssey 2.4 G soft tissue Diode 810 nm laser, Non Contact modes were used for procedure and no topical or local anesthetic was used, but can be if needed. The patient was instructed that heat would be felt during procedure, but if there was any discomfort they were to raise their hand. High Volume Evacuation used for entire procedure to remove the plume from the area. It also helps to cool off the site.

Pre-op photos were taken to show case progress for documentation. The laser settings that were used were as follows, the laser tip was placed in non-contact mode approximately 2 mm away from area. Beginning with 0.5 W Continuous Wave (CW), point the laser tip towards the lesion, start by working around the borders of the lesion, circling around it several times, then "fill in" the lesion with overlapping strokes all in one direction. Then: reposition the laser tip 90° and go over entire lesion again creating a "cross-hatching" pattern, for a total time of 45–60 seconds. Continue to increase settings, example: 0.6 W, 0.7 W, 0.8 W and 0.9 W following above procedure until complete. Vitamin E was placed on lesion after laser treatment, because it helps to rehydrate the area and also to protect the lasered area. Additional vitamin E can be sent home with the patient for them to reapply as needed, this creates comfort for the patient as the area heals.

Typically, the area will look the same after the laser procedure has been completed. Occasionally, the area may appear to be smaller or change in color.

_Conclusion

In conclusion, your patients will love your ability to make these unsightly lesions disappear and this non-contact mode procedure could be a procedure that Doctors and Dental Hygienists can incorporate this into their list of soft tissue laser procedures with great success._

_contact laser

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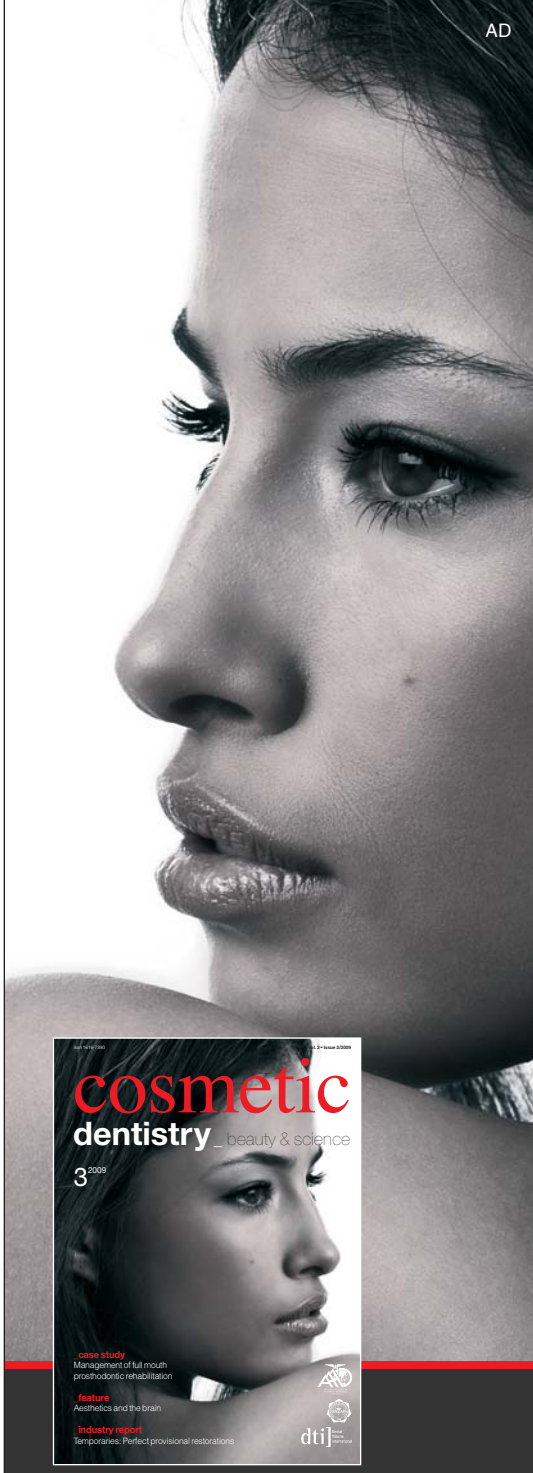

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