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He has been involved in the research and development of several oral laser surgical procedures including laser photo-coagulation of intra- and extraoral vascular lesions and laser ablation of intra-oral leukoplakia.



Discover AT Fidelis!



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Treatment of a Large Lymphangioma with the Nd:YAG Laser – A Case Study Assist. Aleš Vesnaver, M.D., M.S., Specialist Maxillofacial Surgeon

A 16-year old female patient was referred to our department with a large lymphangioma of the tongue dorsum, which caused functional and aesthetic complaints.

We decided to treat with the Fotona Nd:YAG laser because the procedure is fast and minimally invasive with good long-term results. Alternative therapies include chemical sclerotherapy which requires radiological control, excision which is time-consuming, cryotherapy which is hard to control and electro-cauterization that poses a significant risk of excessive bleeding and procedural complications if the lesion in penetrated into.

The complete treatment of the lesion required three Nd:YAG laser photo-coagulation sessions in total. Each procedure was conducted under local anesthesia with Ultracain. In each session we used a glass slide to compress the lesion to allow better penetration and access to the entire lesion. The lesion's borders were first outlined with the laser, with the fiber tip in near contact with the glass slide. Then the lesion was systematically covered with consecutive passes across their entire surface. Immediate shrinking and blanching of the mucosa was observed. Varying the distance between the fiber tip and the mucosa can to a certain degree alter and control the shrinking and blanching effect. When initiating the treatment the fiber tip is held slightly further from the target, once the clinical effects of the parameter settings have been confirmed visually, the target is closed in on with the fiber. Each treatment session was completed, without any complications, within 10 minutes. All the treatments were performed on an outpatient basis.

| Laser source: | Nd:YAG (1064 nm) |
|--------------------------|-----------------------|
| VSP Mode: | SP |
| Power: | 12 W |
| Frequency: | 50 Hz |
| Handpiece: | R21 with 300 µm fiber |
| Water/Air Spray Setting: | None |

The patient was placed on a soft diet and oral non-steroidal analgesics for 5 to 7 days after each procedure.. Healing proceeded normally after each session, with complete healing within 4 weeks after individual sessions. After three treatment session the lesion was completely removed. The patient was left with a residual scar on the tongue dorsum. The patient refused corrective excision as the scar does not hinder function and is not an aesthetic concern.



Before



Immediately after Tx1



8 days after Tx1



Complete healing after Tx1



Complete healing after Tx2



Immediately after Tx3



Complete healing after Tx3 Complete healing after Tx3



