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Dr. Vesnaver is a specialist in maxillofacial surgery. He currently practices at the Department of Maxillofacial & Oral Surgery of the University Medical Center Ljubljana, where he is also an assistant professor.

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

Nd:YAG Treatment of a Large Venous Malformation – A Case Study

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A 48-year old female patient was referred to our department presenting a large venous malformation on the left side of the hard palate and another venous malformation on the upper lip. The patient's complaints were aesthetic and functional. There was also a risk present of accidentally biting the lesion on the upper lip, leading to excessive bleeding.

Because the patient was motivated to have both lesions treated in one session, we decided to treat with the Fotona Nd:YAG laser. The procedure is fast and minimally invasive with good long-term results. The laser's 1064nm wavelength allows it to penetrate deep into the tissue and the lesion, where its energy is absorbed by hemoglobin, creating virtually immediate coagulation and shrinking of the lesion. 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.

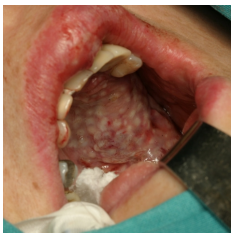
The procedure was completed under general anesthesia with nasotracheal intubation. Each individual lesion was treated using the same procedural steps in which the lesions' borders were first outlined with the laser, with the fiber tip in near contact with the tissue surface. Then lesions were systematically 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. This procedure was completed, without any complications, within 60 minutes. After the procedure the patient did not require further intubation as the risk of airway compromise was assessed as minimal.

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 7 days after the procedure. The patient eventually spent 4 weeks in hospital care due to a nasal hemorrhage unrelated to the Nd:YAG treatment. Healing proceeded normally with re-epithelization starting from the wound margins. Complete wound healing and return to normal function was achieved within 6 weeks after the procedure.

Before

Before



Immediately after

7 days after

4 weeks after

4 weeks after

Full recovery

Full recovery

Laser&Health ACADEMY