

Dr. Ron Kaminer has worked with lasers for over two decades and was one of the first 200 dentists in the United States to use a hard tissue laser. He is the Co Founder of the Masters of Laser training course (Hewlett, NY), where he and his colleagues instruct both American and European new laser owners on how to use the laser. He maintains two offices, one in Hewlett, New York and the other in Oceanside, New York.



Treatment of Mucous Membrane Pemphigoid with a Combination of Nd:YAG and Er:YAG Lasers Ron Kaminer, DDS

In this clinical case we treated a patient diagnosed with mucous membrane pemphigoid, an autoimmune disease till now treated with steroid creams. This form of traditional treatment, however, does not bring desired results, patients complain of pain, bleeding and sloughing of tissue. With the hope of achieving better and faster results, we decided to use a combined laser technique, utilizing both Nd:YAG and Er:YAG laser sources using the Fotona dental laser system.

On first inspection we noted the patient had a lesion in mandible near the canine (Picture 1). Dental pockets were 3 to 6 mm deep and the tissue was bleeding on probing. After the first pass with the Nd:YAG laser, the bleeding was difficult to control. It was somewhat controlled, though, following the second pass with the Er:YAG laser. After scaling with a Piezo scaler to remove all calculus, the Nd:YAG laser was used for the second time to complete coagulation. Sloughing of tissue, common with pemphigoid, was noted from lateral to central incisor, but homeostasis was still observed (Picture 2). Coagulation was also achieved on the mandibular arch.

	1 st pass	2 nd pass	3 rd pass
Laser source:	Nd:YAG	Er:YAG	Nd:YAG
Wavelength:	1064 nm	2940 nm	1064 nm
Pulse duration:	100 ms	N/A	650 ms
Energy:	N/A	50 mJ	N/A
Frequency:	20 Hz	20 Hz	20 Hz
Power:	3.5 W	N/A	3.5 W
Mode:	VSP	LP	VLP

One week later speckling of the Er:YAG laser energy on the tissue was administered two times a week as a form of a »dermabrasion« treatment to remove dead epithelium and possibly bio-stimulate underlying cells (Picture 3).

	Parameters
Frequency interval:	2 times a week
Laser source:	Er:YAG
Wavelength:	2940 nm
Energy:	30 mJ
Frequency:	20 Hz
Mode:	VSP
Water:	0
Air:	4

Three-week post-operative results revealed that the tissue was better, but inflammation was still present (Picture 4). Additionally, the patient still reported slight bleeding. Additional bi-weekly Er:YAG treatments were performed for five weeks. On a six-week post-operative check-up the patient experienced no bleeding, sloughing or pain. The tissue was healthy and there were no pemphigoid lesions (Picture 5). Four-month post-operative results revealed the same (Picture 6). This proves that Fotona's Nd:YAG and Er:YAG laser combination can be used to successfully treat mucous membrane pemphigoid.



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1. Before



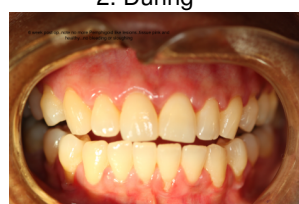
2. During



3. Dermabrasion



4. 3 weeks post-op



5. 6 weeks post-op



6. 4 months post-op