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Biomodulation for Pain Relief

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Parameters:

Laser source:	Nd:YAG 1064 nm
Pulse duration:	MSP (100 μ s)
Power:	0.5 W
Frequency:	10 Hz
Handpiece:	GENOVA (1 cm ²)
Time:	1 min/spot

Treatment procedure:

History: a patient with a recently bonded all-ceramic crown on his lower right first molar came to our office with severe pain that arose a week after the procedure. It was painful to bite on and at times radiated to the right ear and was very sensitive to hot and cold. The right side of his face was aching – the pain was in the background and exacerbated when stimulated by chewing or temperature. The patient had bruxism, gag reflex, and his facial profile and intra oral tissues suggested obstructive sleep apnea. The signs and symptoms of his pain could simulate early irreversible pulpitis.

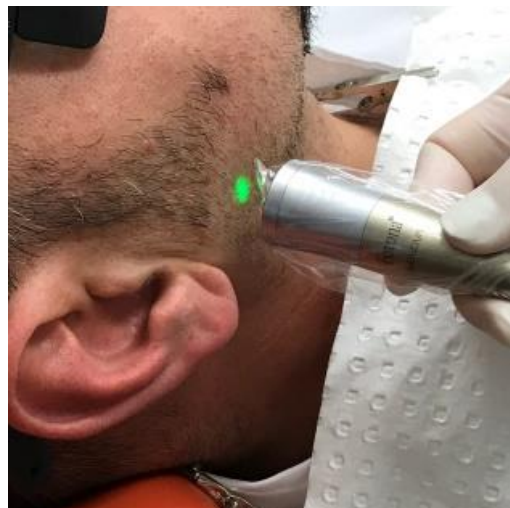
Treatment: high spots created by the crown were removed. The patient felt much better, but his temperature sensitivity remained. The GENOVA handpiece was used (settings: MSP, 0.5 W, 10 Hz.) with an irradiation pattern of 1 minute per spot on the affected lower right molar (buccal 1 minute, lingual 1 minute). Approximately 60% of the pain immediately subsided after the buccal application, and after the lingual application all the pain from hypersensitivity had gone. Pain in his right ear and masseter then surfaced. I followed his painful spots, started with the most painful spots in the masseter and then TMJ.

There was still some discomfort deep inside the patient's cheek. Intra oral palpation suggested it was from the hamular notch area and the insertions of the temporalis and pterygoids. The LA adaptor is perfect for these hard to reach tight spots. The black dot on the handpiece is a very handy marking. It shows the direction where the beam exits the tip. The patient left with no pain at all. Occasional pain returned briefly for 10-15 minutes a few hours later and disappeared after that. Severe, chronic cases may call for repeated treatments every second day for a week.

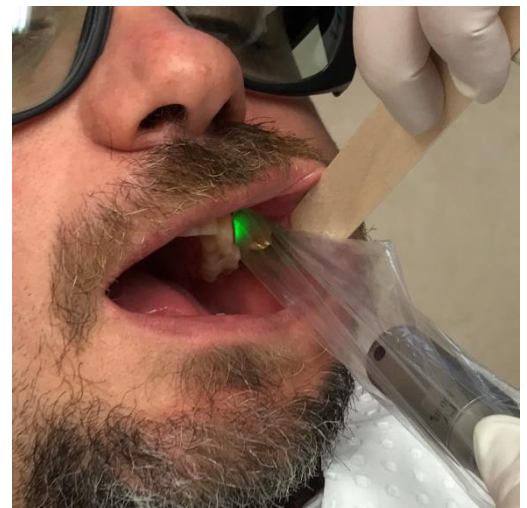


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Before scar-revision treatment



After 5 treatments