

PRIMENA NISKOENERGETSKOG LASERA U TERAPIJI HIPERSENZITIVNOG DENTINA

APPLICATION OF LOW LEVEL LASERS IN TREATMENT OF HYPERSENSITIVE DENTINE

Radmila Živković¹, Ljiljana Kesić¹, Nikola Burić², Goran Jovanović²

¹KLINIKA ZA STOMATOLOGIJU – ODELJENJE ZA PARADONTOLOGIJU I ORALNU MEDICINU,
²KLINIKA ZA STOMATOLOGIJU – ODELJENJE ZA ORALNU HIRURGIJU, MEDICINSKI FAKULTET, NIŠ,
SRBIJA, SRBIJA I CRNA GORA

¹CLINIC OF STOMATOLOGY – DEP. OF PERIODONTOLOGY AND ORAL DISEASE,
²CLINIC OF STOMATOLOGY – DEP. OF ORAL SURGERY, MEDICAL FACULTY,
NIŠ, SERBIA, SERBIA AND MONTENEGRO

Kratak sadržaj

Terapija laserom poseduje mnogobrojne pozitivne biološke efekte: stimuliše ćelijski rast, ima antiinflamatorni, antiedematozni i analgetski efekat. Zahvaljujući svom analgetskom efektu oni nalaze primenu u terapiji bolnih stanja, pa i u terapiji hipersenzitivnog dentina.

Cilj ove studije je da ispita efikasnost NELa u terapiji hipersenzitivnog dentina.

Materijal i metode: U ovom istraživanju učestvovalo je 50 pacijenata. 25 pacijenata (I grupa) je tretirano medikamentom za impregnaciju dentina, a preostalih 25 pacijenata (II grupa) je podvrgnuto dejstvu laseroterapije. Protokol laseroterapije je bio: HeNe laser (Scorpion 25mW, Sofija, Bugarska) snaga 6mW; frekvencija 700Hz; trajanje aplikacije 4 minuta/dnevno; 4 uzastopna dana. Dentin je impregniran pastom Emoform Actisens (Byk Gulden, Nemačka), svaki dan 4 uzastopna dana. Od početka terapije meren je intenzitet bola kod svakog pacijenta uz pomoć vizuelno analogne skale.

Rezultati: Efikasnost laseroterapije bila je veća u odnosu na terapiju impregnacijom dentina. U grupi I našli smo sledeće rezultate: nakon prve aplikacije izmerena je srednja vrednost bola 48,40 a nakon druge 38,80. Posle treće aplikacije 88% pacijenta je bilo zadovoljno postignutim rezultatima. Tri pacijenta nisu uočila smanjenje bola nakon 4 aplikacije. U grupi II našli smo sledeće rezultate: nakon prve aplikacije izmerena je srednja vrednost bola 36,40 a nakon druge 18,40. Jedan pacijent nije imao poboljšanje stanja ni nakon četvrte terapijske procedure. Pozitivni terapijski rezultati uočeni su kod 96% pacijenata podvrgnutih dejstvu NEL-a.

Zaključak: Na osnovu izloženih rezultata možemo zaključiti da se NEL pokazao efikasnim u terapiji hipersenzitivnog dentina. Prema tome, preporučujemo terapiju NEL-om kao efikasnu terapijsku proceduru u lečenju hipersenzitivnog dentina.

Ključne reči: hipersenzitivni dentin, NEL, HeNe laser, vizualno-analogni skala

Abstract

Laser therapy has numerous positive biological effects. It stimulates cell growth, has an antiinflammatory, antiedemous and analgesic effect. Because of analgesic effect, laser therapy is used in the treatment of painful conditions, and can be applied in the treatment of hypersensitive dentine.

The aim of this study is to establish the efficiency of LLLT in treatment of hypersensitive dentine.

Material and methods: 50 patients participated in this research. 25 patients (I group) were treated medicaments for dentine impregnation, and the rest of 25 patients (II group) were treated with beneficial effects of laser therapy. Protocol for laser therapy was: HeNe laser (Scorpion 25mW, Sofia, Bulgaria) power of 0.6mW; duration of each laser application 4 minutes/per day; frequency of 700 Hz; 4 applications. Dentine was impregnated by the application of the paste Emoform Actisens (Byk Gulden, Germany), every day during the period of 4 days. From the beginning of the treatment, the pain was measured in each patient's case by the use of Visual Analog Pain Scale (VAS) Test.

Results: The results showed greater efficiency of laser therapy than dentine-impregnation techniques. In the I group we have found the following results: after the first application of the paste average pain score showed the value 48,40 and after the second application it was 38,80. After the third application 88% patients were satisfied with achieved results. Three patients had no improvement of sensations not even after 4 treatments. In the II group we have found the following results: after the first laser treatment average pain score showed the value 36,40 and after the second application it was 18,40. One patient had no improvement nor after the fourth treatment. The positive therapeutic results were observed in 96% patients who were treated with LLLT.

Conclusion: On the base of present results we can conclude that LLLT has shown its efficiency in therapy of hypersensitive dentine. Therefore, we recommend soft laser therapy as an efficient therapy method in the treatment of hypersensitive dentine.

Key words: dentine hypersensitivity, LLLT, HeNe laser, Visual Analog Scale Test