

u pušača i nepušača je isti, i kada se promatra svaka skupina zasebno. Nisu pronađene statistički znatne razlike između prevalencije bakterija Aa, Pg i Ec između pušača i nepušača. Skupina s PTSP-om imala je najniži stupanj školovanja. Navika pušenja i niži društvenoekonomski status čimbenici su koji utječu na zdravlje parodonta i pridonose parodontnoj upali u oboljelih od PTSP-a.

Influence of Tobacco Use on Periodontal Health in PTSD Patients

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Numerous epidemiological and clinical studies have identified tobacco smoking as a risk factor for periodontal disease progression. Positive correlation between lower socioeconomic status and periodontal disease severity has also been found. We wanted to study the influence of smoking on clinical periodontal status and the subgingival microbial profile in post-traumatic stress disorder (PTSD) patients and patients with progressive periodontal disease. The investigation included 130 subjects divided in to three groups. The first group comprised 50 persons diagnosed with PTSD, who has actively participated in the Croatian liberation war. The second group were 50 patients treated for advanced periodontitis, and the control group were 30 periodontally healthy subjects. Subjects from the latter two groups were not directly subjected to war-related stress. Clinical periodontal examination included recording of plaque index (PI), sulcus bleeding index (SBI), probing depth (PD) and clinical attachment loss (CAL). Periodontal pathogens *Actinobacillus actinomycetemcomitans* (Aa), *Porphyromonas gingivalis* (Pg) and *Eikenella corrodens* (Ec) were identified using polymerase chain reaction (PCR) method. Smoking and socioeconomic status, evaluated by the level of education, were also assessed. The group of subjects with PTSD, compared to the other

groups, had most cigarette smokers. In the PTSD group, 78% were smokers, while only 33% of control subjects smoked. In the PTSD group, 34% smoked less than 20 cigarettes per day, and 30% smoked more than 40 cigarettes per day. In this respect PTSD group differs greatly from the other group. The results show that, of all participants, smokers had more periodontal inflammation and destruction than non-smokers, although only PI and SBI values were significantly higher. This relationship is similar for each of the studied groups. No statistically significant difference was observed between bacterial prevalence of Aa, Pg and Ec between smokers and non-smokers. PTSD group had the lowest education level. Smoking habits and lower socioeconomic status are contributing factors influencing the periodontal status of PTSD patients.

S.E.M. raščlamba međudjelovanja Green OR-a i dentina

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Svrha ovoga rada bila je ispitati međudodnos desenzibilizatora dentina Green Ora i restorativnih materijala uporabljenih kod adhezijskih preparacija te možebitni učinak na sposobnost adhezije tih materijala na caklinu i dentin. Green Or se rabi za smanjenje bolne preosjetljivosti zuba, tako da uzrokuje mehaničko zatvaranje dentinskih tubulusa ili inhibira repolarizaciju neurona. Mehaničko zatvaranje dentinskih tubulusa postiže se stvaranjem kompaktnoga kristaličnog precipitata, koji pokriva površinu izloženoga dentina, a depolarizacija neurona postiže se otpuštanjem kalijeva iona.

Ispitivanje je provedeno na 6 humanih trećih molara izvađenih zbog ortodontskih ili parodontoloških indikacija. Zubi su podijeljeni na tri skupine od dva zuba s obzirom na materijal uporabljen za ispun: tekući i mikro-hibridni kompozit ili srebrni amalgam. U svakoj smo skupini na zidove dentinskoga kaviteta aplicirali desenzibilizator Green Or te S.E.M. raščlambom, pri velikom stupnju povećanja, promatrali kakav je njegov utjecaj na spoj između dentina i restorativnoga materijala. Svi su se uzorci

proučavali na Skening Elektronskom Mikroskopu (S.E.M.) Zavoda za kontrolu kvalitete Pliva u Zagrebu.

Rezultati S.E.M. raščlambe pri velikom stupnju povećanja, u sve tri proučavane skupine zuba, pokazuju usku povezanost primijenjenih materijala s caklinom i dentinom. Mikroskopiranje spojišta dentina i materijala korištenih za ispun u Grupi A i B pokazalo je da upotreba green ora ne ometa adhezijsku sposobnost adhezivno-kompozitnih materijala za dentinsku plohu niti utječe na brtvljenje cakline i dentina. Sloj desenzibilizatora nerazlučivo je povezan sa slojem adheziva i kompozita što omogućuje čvrsto prijanjanje na dentinske zidove kaviteta. Rezultati dobiveni u skupini C, u kojoj je upotrijebljen srebrni amalgam kao materijal za punjenje, pokazuju da Green Or također nije utjecao na adheziju slitine za stjenke cakline i dentina.

Prema mnogim autorima upotreba Green Ora kao podloge kod kompozitnih ili amalgamskih ispuna nije smanjivala adhezijsku sposobnost spomenutih restorativnih materijala. Rezultati dobiveni u istraživanju pokazuju da Green Or stvara sloj koji jednolično prekriva i zatvara dentinske tubuluse i omogućuje dobru izolaciju dubokih dijelova dentina od restorativnih materijala. Time se postiže zadovoljavajuće brtvljenje dentinskih tubulusa i smanjuje dentinska preosjetljivost na intraoralne nociceptivne stimulanse, gotovo u njezinoj akutnoj fazi. Promatranje različitih dijelova dentina na skening elektronskom mikroskopu (S.E.M.) pokazuje da desenzibilizator dentina uspostavlja zadovoljavajuću i snažnu povezanost s različitim adhezivnim materijalima ili sa srebrnim amalgamom uporabljenima u istraživanju.

S.E.M. Analysis of the Interaction Between Green Or and the Dentine

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The aim of this study was to evaluate the interaction between Green Or, a dentinal desensitizer, and restorative materials used in adhesive preparation, and its possible influence on the adhesiveness of those materials to the

enamel and dentine. Green Or is used to reduce pain sensation in hypersensitive teeth by mechanical occlusion of the dentine tubules or the inhibition of neuronal repolarization. Mechanical occlusion is made by blocking the dentine tubules with a compact crystalline precipitate that covers the exposed dentine surface, while the neural depolarization is produced by released potassium ions.

The investigation included 6 human third molars extracted for orthodontic or periodontal reasons. The teeth were divided into three groups of 2 teeth each according to the type of material used for filling: fluid and microhybrid composites, and silver amalgam. In every group we applied the desensitizer green or onto the walls of the dental cavities and with S.E.M. observation at high degree of magnification investigated how it affects the conjunction of dentine and restorative materials. All specimens were observed with the Scansion Electron Microscope (S.E.M.) at the "Department of Quality Control" pliva in Zagreb.

The results of S.E.M. observation at very high magnification in all three investigated groups show the close connection of the applied materials to the enamel and dentine. Microscoping the conjunction between the dentine and materials we used for filling in Groups A and B, showed that the use of Green Or does not alter the adhesiveness of the restorative adhesive-composite materials to the dental wall, nor does it modify their sealing action on enamel and dentine. The desensitizer layer is indistinguishable with the adhesive-composite layers which enables strong adherence to the dentinal walls of cavities. The results obtained in group C specimens, in which silver amalgam was used as a filling material, show that Green Or did not interfere with the adhesion process of the alloy and the enamel and dentine.

As found by many authors, the desensitizer Green Or, when used as a liner in the tooth filled with resins or alloys, did not decrease the adhesion of the restorative materials. The results obtained in the study show that Green Or is able to form a uniform layer that covers and occludes dentine tubules and enables good isolation of deep dentine from the restorative materials. This should constitute an efficacious sealing of dentinal tubules and provoke a decrease in dentinal sensitivity to intraoral nociceptive stimuli, almost in the acute phase. Observation of different dental sections with a Scanning Electron Microscope (S.E.M.) shows that desensitizer established an efficient and powerful interconnection with the different adhesive materials or silver amalgam utilized in the study.