Cilj rada bio je istražiti moguću povezanost između pojavnosti brusnih faseta, kao znak bruksizma, i znakova temporomandibularne disfunkcije.

Temeljem nalaza brusnih faseta nakon izvršena kliničkog pregleda izdvojeno je 100 ispitanika, određenih za daljnje istraživanje. Opsežnost brusnih faseta procjenjivana je modificiranim indeksom Pullingera i Seligmana: stupanj 0 = nema vidljive atricije; 1 = minimalna atricija kvržica ili incizalnih bridova (u caklini); 2 = fasete usporedne s normalnim područjima kontura ploha (caklina); 3 = zamjetna zaravnjenja kvržica ili incizalnih bridova (caklina); 4 = potpuni gubitak kontura ploha/bridova i ekspozicija dentina do polovice visine nekadašnje krune zuba; 5 = potpuni gubitak kontura i ekspozicija dentina za više od polovice nekadašnje krune zuba. Svi ispitanici podvrgnuti su kliničkim ispitivanjima kako bi se utvrdilo postojanja znakova TMD-a.

Rezultati su pokazali da ne postoji statistički znatna povezanost između znakova TMD-a i pojavnosti brusnih faseta te ni između znakova TMD-a i opsežnosti brusnih faseta. Rezultati ovoga istraživanja slažu se s ostalim recentnim studijama da brusne fasete nisu pouzdan pokazatelj za procjenjvanje funkcijskog stanja stomatognatoga sustava.

Ovim istraživanjem nije utvrđeno postojanje povezanosti između pojavnosti brusnih faseta i znakova temporomandibularne disfunkcije.

Relationship Between Attrition Faces and Signs of TMD

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Attrition faces are usually seen on the occlusal or incisal surfaces of teeth worn by attrition. They are considered to be a sign of functional and parafunctional activities, and can differ by wideness and position on the teeth. Bruxizm, as a parafunctional activity, is considered to be a risk factor for dysfunction of the masticatory system.

The aim of the study was to investigate the possible relationship between attritional faces, as a sign of bruxizm, and signs of temporomandibular dysfunction.

By clinical examination, a group of 100 subjects was selected for trial, based on findings of attritional faces. The severity of attrition faces was quantified on a five-point scale (modified assessment for determination of incisal tooth wear according to Pullinger and Seligman: 0 = no visible tooth wear; 1 = minimal wear of cusps or incisal tips (enamel); 2 = faces parallel to normal planes of contour (enamel); 3 = noticeable flattening of cusp or incisal edges (enamel); 4 = total loss of contour and dental exposure when identifiable (dentin exposure up to half of former crown of tooth): 5 = total loss of contour and dental exposure over half of former crown of tooth). Selected subjects were then examined by standard procedure to investigate the presence of TMD signs.

Results showed that there was no statistical significance between signs of TMD and presence of attrition faces, and neither between signs of TMD and severity of attrition faces. Results of this study are compatible with other recent investigations, which show that attrition faces are not a reliable sign for assessing the functional status of the masticatory system.

According to this investigation there is no association between attrition faces and signs of temporomandibular dysfunction.

Rubno propuštanje pečata u fisurama nakon tretmana cakline samojetkajućim adhezivnim sustavom

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Samojetkajući adhezivni sustavi istodobno s jetkanjem omogućuju penetraciju adheziva u jetkanu površinu cakline. Važne prednosti uporabe smojetkajućih adhezivnih sustava u postupku pečaćenja kao zamjeni za klasično jetkanje fosfornom kiselinom jesu: nema nanošenja kiseline i nema ispiranja.

Svrha je istraživanja bila analizirati penetraciju i rubnu propustljivost pečata apliciranih nakon tretmana cakline samojetkajućim adhezivnim sustavom. 45 zuba podijelje-

nih u 3 skupine zapečaćeno je materijalom Concise White Sealant (3M Dental Products) nakon sljedećeg postupka pripreme površine cakline: Skupina 1: okluzalna površina jetkana je 37% fosfornom kiselinom 30 s, ispirana 15 s i sušena 15 s, nakon sušenja nanesen je materijal za pečaćenje i osvijetljen 20 s; skupina 2: Okluzalna površina tretirana je samojetkajućim adhezivnim sustavom Prompt-L-Pop (Espe Dental AG) 20 s i osvijetljen 10 s (Optilux, Demetron Research Company), materijal za pečaćenje zatim je nanesen i osvijetljen 20 s; skupina 3: Okluzalna površina tretirana ja samojetkajućim adhezivnim sustavom Prompt-L-Pop 20 s i odmah nakon tretmana nanesen je materijal za pečaćenje, oba materijala istodobno su osvijetljena 20 s. Svi su zubi termociklirani 1.800 ciklusa na temperaturi 5 - 55°C s 10 s imerzije u svakoj kupki. Rubna propustljivost ispitana je postupkom bojenja otopinom $AgNO_3$. Zubi su uloženi u akrilnu smolu, prerezani (3-5 rezova po uzorku) i fotografirani pod 10 x povećanjem stereo mikroskopa. Rubna propustljivost mjerena je postupkom po Överböu i Raadalu. Statistička je rašlamba učinjena neparametrijskim testovima Kruskal-Wallis i Mann-Whitney.

Penetracija materijala u dubinu fisura bila je između 87,8 - 92,1% bez statistički znatne razlike između skupina. Ustanovljena je statistički znatna razlika između klasičnoga postupka jetkanja i uporabe samojetkajućeg adhezivnog sustava ($p = 0,003$). Nije ustanovljena statistički znatna razlika u skupinama tretiranim samojetkajućim adhezivnim sustavom s polimerizacijom ili bez nje ($p = 0,1234$). Muguće je zaključiti da "all in one" samojetkajući adhezivni sustav Prompt-L-Pop nije tako djelotvoran kao kombinacija jetkanja fosfornom kiselinom i materijala za pečaćenje za dobivanje dobroga rubnog zatvaranja.

Mikroleakage of Sealants Placed After Enamel Treatment With Self Etching Adhesive

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Self-etching adhesives with enamel treatment at the same time as adhesive infiltration offers simplification of the classic technique of placing sealants. Main advantages in clinical work are: non need for applying acid, and no rinsing. Aim of the study was to evaluate both the penetration an sealing ability of a sealant applied after enamel treatment with a self-etching adhesive. The study was performed on forty-five teeth divided into three groups of fifteen teeth sealed with Concise White Sealant (3M Dental Products) after enamel surface was treated as fallows: Group 1: occlusal surface etched with 37% phosphoric acid for 30 s, rinsed for 15 s and air-dried for 15 s. After drying the sealant was applied and polymerized for 20 s. Group 2: The occlusal surface treated with self-etching adhesive Prompt-L-Pop (Espe Dental AG) for 20 s and lightened for 10 s (Optilux, Demetron Research Company). The sealant was then applied and lightened for 20 s. Group 3: The occlusal surface was treated with the self-etching adhesive Promt-L-Pop for 20 s and directly folloved by sealant application, the two materials were then simultaneously lightened 20 s. All teeth were thermocycled between 5 and 55°C for 1800 cycles with dwelling time of 10 s. $AgNO_3$ dye solution was used for microleakage testing. After dyeing the teeth were embedded in acrylic resin, sectioned (3-5 sections per sample) and photographed under a stereo-microscope (10 X). Microleakage scores were recorded using the method of Övrebö and Raadal. Non-parametric Kruskal-Wallis and Mann-Whitney tests were used for statistical analysis.

The sealant penetration rate was between 87.8 - 92.1% whatever the batch with no statistical significant difference between groups. Significant statistical difference was established between the classic H_3PO_4 pre-etch technique and the self-etching conditioning ($p = 0.003$). No significant difference was found between self-etching batches with or without polymerisation ($p = 0.1234$). Obtained data lead to the conclusion that the "all in one" self-etching adhesive Prompt-L-Pop is not as efficient as the classic H_3PO_4 etching + sealant in achieving a good enamel marginal sealing.