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POSTER IZLAGANJA

TERAPIJA INTRAKOŠTANOG DEFEKTA S HUMANIM TROMBOCITNIM ČIMBENIKOM RASTA I BETA TRIKALCIJEVIM FOSFATOM

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Kako bismo postigli regeneraciju tkiva oko zuba danas se koristimo raznim koštanim transplantatima, nadomjescima i proteinima koje ponekad prekrivamo membranom da bismo omogućili potrebno vrijeme za ponovno formiranje kosti. Uspjeh ovisi o opsežnosti, odnosno o morfologiji koštanog defekta, ali i o razini oralne higijene zbog čega je ponekad teško predvidjeti krajnji rezultat. Kod pacijentice upućene na Zavod za parodontologiju Stomatološkog fakulteta Sveučilišta u Zagrebu provedena je inicijalna terapija. Šest mjeseci nakon njezina završetka, uz redovitu potpurnu terapiju jedanput na mjesec, na 11. zubu izmjerili smo džep dubine 9 milimetara mezijalno i palatinalno koji nije aktivan. Odlučeno je da se obavi regenerativni kirurški zahvat uporabom humanog rekombinantnog trombocitnog čimbenika rasta (rhPDGF-BB) i beta trikalcijeva fosfata (β -TCP). Nakon što je odignut mukoperiostalni režanj vidjelo se da se radi o dvoizidnom do jednoizidnom intrakoštanom defektu mezijalno, a palatinalno se nalazio cirkumferentni defekt. Nakon uklanjanja svih granulacija i poliranja korijena, u Petrijevoj zdjelici pomiješan je regenerativni materijal GEM 21S® koji se sastojao od rhPDGF-BB i β -TCP. Tako saturirana osteokonduktivna matrica s bioaktivnim proteinom stajala je 10 minuta i nakon toga bila je spremna za upotrebu. S umjerenim pritiskom materijal se postavio u intrakoštani defekt do razine vrha kosti pažeći da sa ne prepuni. Na prvoj kontroli nakon dva tjedna uočeno je izrazito brzo cijeljenje mekih tkiva i primarno cijeljenje rane. Na kontroli nakon šest mjeseci izmjerena dubina džepa mezijalno iznosila je 4 milimetra. Radiološki je bila vidljiva novostvorena kost na mezijalnoj strani zuba 11. Uspješno provedena inicijalna terapija upotpunjena korektivnim regenerativnim zahvatom na zubu 11 rezultirala je dobrotom pričvrstka od 5 milimetara.

POSTER PRESENTATIONS

THERAPY OF INTRABONY DEFECT WITH HUMAN PLATELET GROWTH FACTOR AND BETA-TRICALCIUM PHOSPHATE

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A variety of bone grafts, grafting materials and proteins are used today in order to achieve the regeneration of tissues around the teeth. These materials can sometimes be covered with membrane to allow necessary time for bone to regenerate. The success is associated with the extent and morphology of bone defect, but also with the level of oral hygiene which is why it is sometimes difficult to predict the final result. The initial therapy was performed at patient referred to the Department of Periodontology, School of Dental Medicine, University of Zagreb. Six months after the initial therapy and regular supportive therapy once a month, we measured an inactive pocket on tooth 11 mesially and palatally that was 9 mm deep. We decided to perform regenerative surgery using recombinant human platelet growth factor (rhPDGF-BB) and beta tricalcium phosphate (β -TCP). After raising a full thickness flap we observed a two and one wall infrabony defect mesially and a circumferential defect palatally. After removing all the granulation tissue and root planing, a regenerative material GEM 21S®, which consists of rhPDGF-BB and β -TCP was mixed in a Petri dish. Saturated osteoconductive matrix with bioactive protein was ready for use after 10 min. With moderate pressure the material was placed in infrabony defect up to the level of bone crest taking care not to overfill. Very fast healing of soft tissue and primary wound healing was observed at the first checkup two weeks after. Probing pocket depth mesially was 4mm six months after. A newly formed bone on the mesial of tooth 11 was radiologically visible. The successful initial therapy supplemented with corrective regenerative procedure on a tooth 11 resulted in 5 mm of attachment gain.

OPSKRBA INTRAKOŠTANIH DEFEKATA PROTEINIMA CAKLINSKOG MATRIKSA I KOŠTANIM NADOMJESNIM MATERIJALOM.

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U terapiji intrakoštanih defekata koristimo se regenerativnim kirurškim postupcima koji uključuju operaciju režnja, postavljanje koštanih transplantata, membrana, proteina caklinskog matriksa te kombinacije nabrojanih tehnika. Emdogain – svinjski amelogenini frakcija su proteina matriksa cakline koji u pravom okruženju stimuliraju stvaranje cementa korijena zuba. Pacijentu M.P. (44. god.) bio je dijagnosticiran agresivni generalizirani parodontitis – u donjoj čeljusti (područje premolara i molara) te u gornjoj čeljusti (područje inciziva i kanina) uznapredovali oblik bolesti s intrakoštanim (vertikalnim) defektima. Provedena je bila inicijalna parodontalna i sistemska antibiotska terapija amoksicilinom i metronidazolom, a zatim je pacijent dolazio jedanput na mjesec na uklanjanje supragingivnih naslaga. Četiri mjeseca nakon završetka inicijalne terapije učinjena je reevalucija, a operativni zahvati nakon sedam i deset mjeseci. Pristupilo se regenerativnoj kirurškoj terapiji preostalih intrakoštanih defekata zuba 22 i 23 (operacija režnja kombinirana s derivatima caklinskog matriksa – Emdogain Gel, Straumann, AG, Basel, Švicarska) te intrakoštano defekta zuba 44 (operacija režnja i postavljanje koštano substituta Bio-Oss, Geistlich, Wolhusen, Švicarska i derivata caklinskog matriksa – Emdogain). Nakon operativnog zahvata pacijent je nastavio jedanput na mjesec dolaziti na supragingivno uklanjanje naslaga tijekom šest mjeseci. Nakon dvanaest mjeseci kontrolno rendgensko snimanje pokazalo je smanjenje koštane destrukcije, a dubine sondiranja smanjene su na vrijednosti do 4 milimetra. Nakon adekvatne parodontalne terapije i provedenih regenerativnih kirurških zahvata postignut je vidljiv oporavak parodonta.

PREKRIVANJE GINGIVNIH RECESIJA SLOBODNIM VEZIVNOTKIVNIM TRANSPLANTATIMA U ESTETSKOJ ZONI

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Nakon ekstruzije impaktiranog zuba može biti narušena crveno-bijela estetika. Tako je 25-godišnja pacijentica bila nezadovoljna crveno-bijelom estetikom zbog lokaliziranih gingivnih recesija od tri milimetra (Millerova klasa I) koje su se pojavile na zubi 11 i 23. Temeljito četka zube dva puta na dan tvrdom četkicom. U dobi od 13. do 15. godine pacijentica je nosila fiksnu ortodontsku *edgwise* napravu. Zub 11. bio je impaktiran zbog meziodensa koji je kirurški ekstrahirano, a zatim je ekstrudiran i smješten u zubni luk. Gingivne recesije prekrivene su izravnim postavljanjem slobodnoga vezivnotkivnog transplantata preko eksponirane površine korijena u kombinaciji s koronalno pomaknutim režnjem za jednostruke recesije (bilaminarna tehnika). Režanj je dizajniran prema koncepciji poludebljina – puna debljina – poludebljina (Zucchelli). U području inciziva, očnjaka i pretkutnjaka labijalna strana alveolarne kosti uglavnom je vrlo tanka. Labijalnu gingivnu recesiju uvijek prati dehiscencija alveolarne kosti. Uzak pojas pričvrstne gingive te tanka pričvrstna gingiva također pogoduju nastanku gingivne recesije. S biološkog stajališta moguće je kod recesija I. i II. razreda potpuno prekrivanje slobodnim vezivnotkivnim transplantatom, čime je onemogućeno daljnje napredovanje recesije. Nakon mukogingivalnog kirurškog zahvata gingivne su recesije potpuno prekrivene te je postignuta zadovoljavajuća estetika. Suradnjom specijalista parodontologa i ortodonta mogu se predvidjeti i izbjeći neočekivani i neželjeni popratni učinci ortodontske terapije kako bi se udovoljilo zahtjevima pacijenata za estetski optimalnim rezultatom.

FRENEKTOMIJA I KORTIKOTOMIJA GORNJIH SREDIŠNJIH SJEKUTIĆA KOD ORTODONSKOG PACIJENTA

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Dvanaestogodišnja pacijentica imala je retinirane središnje gornje incizive. Na prvom ortodontskom pregledu bila je u dobi od šest godina kada je ustanovljena hiperdoncija središnjih inciziva u gornjoj čeljusti i drugih premolara u donjoj čeljusti. Od tada je redovito dolazila na kontrole i praćenje ortodonta. U dobi od osam godina obavljena je alveotomija prekobrojnih zuba smještenih palatinalno od retiniranih mezijalnih sjekutića. Ortodontska terapija počela je aktivnom pločom s vijkom kako bi se sačuvalo prostor za erupciju inciziva. Kako zubi nisu spontano izrasli, planiran je kirurški zahvat koji bi omogućio forsiranu

SUPPLYING INFRABONY DEFECTS WITH ENAMEL MATRIX PROTEINS AND BONE SUBSTITUTE MATERIALS

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Regenerative surgical procedures such as flap surgery, bone grafts, membranes, enamel matrix proteins, and their combinations are therapy of choice in treating infrabony defects. Emdogain – porcine amelogenines are a fraction of enamel matrix proteins, which in a right environment stimulate creation of the root cement that can resemble creation of a natural tooth. Patient M.P. (44 y), had been diagnosed with generalized aggressive periodontitis - in premolar and molar area of the lower jaw and in the area of incisors and canines of the upper jaw. After completion of the initial therapy (scaling and root planing) systemic antibiotics, amoxicillin and metronidazole, were administered, following which the patient comes once a month during six months for a supragingival surface debridement. Four months after completing initial therapy re-evaluation was performed. Regenerative surgical treatment were undertaken after seven and ten months. We proceeded regenerative surgical treatment of remaining intrabony defects around teeth 22, 23 (flap surgery combined with enamel matrix derivatives – Emdogain Gel, Straumann, AG, Basel, Switzerland) and infrabony defect of 44 (flap surgery, a bone substitute Bio-Oss, Geistlich, Wolhusen, Switzerland and enamel matrix derivative Emdogain). Twelve months later control radiograph showed a decrease in bone destruction, and probing depths were reduced to 4 mm. After appropriate periodontal regenerative therapy, and surgical treatments there has been a notable recovery of the periodontium.

COVERAGE OF GINGIVAL RECESIONS WITH FREE CONNECTIVE TISSUE GRAFTS IN THE ESTHETIC ZONE

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Following the extrusion of impacted teeth, red-white esthetics may be disturbed. A 25-year old female patient is displeased with her red-white esthetics due to localized gingival recessions which appeared on teeth 11 and 23, measuring 3 mm (Miller Class I). She brushes her teeth meticulously twice daily using a hard toothbrush. In the age of 13 to 15 years patient had a fixed orthodontic *edgwise* appliance. Tooth 11 was impacted due to the presence of mesiodens which was surgically removed. Tooth 11 was subsequently extruded and positioned within the arch.

Gingival recessions were covered by placing a free connective tissue graft over the exposed root surface along with coronally advanced flap for single recessions. Flap design was based on the split-full-split concept (Zucchelli).

In the incisor, canine and premolar regions, facial bony plate is mostly thin. Facial gingival recession is always coupled with alveolar bone dehiscences. Narrow keratinized gingiva as well as thin attached gingiva favor development of gingival recession. From the biological point, complete coverage is achievable in Class I and II recessions using free connective tissue graft, which prevents further recession. Following the mucogingival surgical procedure gingival recessions were completely covered and satisfactory esthetics was achieved. With collaboration of a periodontologist and orthodontist, it is possible to foresee and avoid unexpected and unwanted side effects of orthodontic therapy, with the patients's desire for the esthetic optimal result is fulfilled.

PHRENECTOMY AND UPPER INCISOR CORTICOTOMY IN THE ORTHODONTIC PATIENT

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Twelve years old patient with retained maxillary first incisors was undergoing fixed orthodontic treatment. The X-ray revealed normal position and direction of the teeth. Upper labial frenum was hyperplastic and highly inserted on edentulous ridge. In the first stage of the therapy, phrenectomy was performed. Labial mucosa was primarily closed by single sutures while the wound on the edentulous ridge healed *per secundam*. Sutures were removed after 10 days. In the next stage, trapezoid mucoperiosteal flap in the in-

erupciju. Prije toga postavljen je fiksni ortodontski aparat u gornjoj i donjoj čeljusti te postinena opruga između zuba 12 i 22. Pacijentica je imala visoku inserciju gornjega labijalnog frenuluma na bezubom alveolarnom grebenu. U prvom zahvatu učinjena je frenektomija. Postavljeni su pojedinačni šavovi u labijalnoj mukozii, a cijeljenje na bezubom grebenu bilo je *per secundam*. Šavovi su uklonjeni nakon 10 dana. U sljedećem zahvatu odignut je mukoperiostealni režanj trapezoidnog izgleda u području zuba 11 i 12. Prikazana je vestibularna alveolarna kost. Učinjena je osteotomija kako bi se prikazale krune inciziva. Postavljene su ortodontske bravice na središtu kruna oba inciziva koje su zlatnim lančićima bile povezane s ortodontskim žičanim lukom u ustima. Režanj je prekrivio bravice i vraćen je u prvotni položaj. Postavljeni su pojedinačni šavovi duž cijeloga reza kako bi se omogućilo što bolje primarno zatvaranje rane. Šavovi su uklonjeni u nakon dva tjedna.

AUGMENTACIJA BEZUBOG GREBENA POMOĆU TROMBOCITNOG FAKTORA RASTA (RHPDGF-BB) I GOVEDE DEMINERALIZIRANE KOSTI

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Postavljanje implantata često zahtijeva rekonstrukciju bezubog grebena u horizontalnoj i vertikalnoj dimenziji. Dosadašnji način uključivao je obveznu uporabu koštanih nadomjesnih materijala i membrana, što je ponekad rezultiralo ekspozicijom membrane i neuspjehom u regeneraciji. U novije vrijeme za kliničku su primjenu odobreni čimbenici rasta kao što su koštani morfogenetski protein i trombocitni faktor rasta. Oni rasta znatno pomažu u cijeljenju kosti i mekih tkiva u slučajevima kada bi, ako bismo se koristili standardnim tehnikama, bilo potrebno nekoliko operativnih zahvata za postizanje istih rezultata. U dvama prikazima slučajeva za horizontalnu rekonstrukciju kosti odabrana je kombinacija trombocitnog faktora rasta (rhPDGF-BB) i demineralizirane govede kosti bez upotrebe membrane. Trombocitni faktor rasta rhPDGF-BB (0,3mg/ml) (Gem-21S[®]) pomiješan je u metalnoj posudi s govedom demineraliziranom kosti (Cerabone[®]). Nakon odizanja mukoperiostealnog režnja kost je u području prihvata transplantata perforirana te je preko bezubog grebena postavljena mala količina rhPDGF-a. Nakon toga je mješavina kosti i rhPDGF-BB-a postavljena na bezubi greben bez membrane preko transplantata. Rez u perioru omogućio je pasivno zatvaranje režnja horizontalnim madrac- i pojedinačnim šavovima. Uporaba kombinacije rhPDGF-a i demineralizirane govede kosti bez membrane, rezultira horizontalnom regeneracijom kosti bezubog grebena koja omogućuje postavljanje implantata. Ta dva prikaza slučaja pokazuju da kod primjene čimbenika rasta nije potrebna membrana za uspješnu horizontalnu regeneraciju kosti te se tako postupak GBR-a znatno pojednostavljuje i izbjegavaju se potencijalne komplikacije ekspozicije membrane te neuspjeh regeneracije.

ERADIKACIJA HELICOBACTER PYLORI IZ USNE ŠUPLJINE NAKON SISTEMSKE TERAPIJE

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Infekcija s *Helicobacter pylori* povezana je s mnogobrojnim gastroduodenalnim bolestima, poput ulkusne. Usna šupljina može biti potencijalni spremnik *H. pylori* te izvor reinfekcije želuca nakon eradikacijske terapije.

Svrha istraživanja bila je analizirati prevalenciju *Helicobacter pylori* u usnoj šupljini kod pacijenta koji je tu bakteriju imao u želucu te odrediti učinkovitost sistemske eradikacijske terapije na *H. pylori* u želucu i usnoj šupljini. Uzorak studije činilo je 56 pacijenata s kroničnim parodontitisom i želučanom helikobakterijskom infekcijom. Prisutnost *H. pylori* u želucu bila je određena 13C-urea izdisajnim testom prije eradikacijske terapije i tri mjeseca nakon što je završena. U usnoj šupljini je prisutnost bakterije bila određena PCR-om iz uzoraka slinje i parodontnih džepova, prije eradikacijske terapije i tri mjeseca nakon njezina završetka. Sistemska eradikacijska terapija trajala je tjedan dana i uključivala je amoksisicilin – 1 g, klaritromicin – 500 mg i inhibitore protonске pumpe – 20 mg, dva puta na dan. Rezultati: Od 56 ispitanika sa želučanom infekcijom, njih 23 (41,1 %) imalo je *H. pylori* u usnoj šupljini. Stupanj eradikacije u želucu iznosio je 78,3 %, a u usnoj šupljini nije nađen *H. pylori* ni u jednom uzorku nakon eradikacijske terapije. Zaključak: Gotovo polovica pacijenata s *H. pylori* u želucu ima bakteriju u usnoj šupljini. Nakon sistemske eradikacijske terapije *H. pylori* nije otkriven u ustima, što upućuje na visoku učinkovitost terapijskog protokola u usnoj šupljini, ili je helikobakterijska infekcija u usnoj šupljini prolazna.

isor region was elevated. Osteotomy was performed in order to expose crowns of both incisors. Orthodontic brackets were attached to the teeth and ligated to the orthodontic arch by golden chains. Flap was returned into original position covering the brackets. Incision lines were closed by single sutures to enable optimal healing. The sutures were removed after two weeks.

AUGMENTATION OF THE EDENTULOUS RIDGE USING PLATELET DERIVED GROWTH FACTOR (RHPDGF-BB) AND BOVINE DEMINERALIZED BONE

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Implant placement often requires reconstruction of the edentulous ridge in the horizontal and vertical dimension. The present method of reconstruction of the edentulous ridge included mandatory use of bone substitutes and membranes which sometimes led to membrane exposure and regeneration failures. In recent years, growth factors are allowed for clinical application, such as bone morphogenetic protein, and platelet derived growth factor. These growth factors significantly facilitate bone and soft tissue healing in cases where the standard techniques require several surgeries to achieve the same results. In two presented cases of horizontal bone reconstruction we used a combination of platelet derived growth factor (rhPDGF-BB) and demineralized bovine bone without the use of membranes. Platelet derived growth factor RhPDGF-BB (0.3mg/ml) (Gem-21S[®]) was mixed in a metal container with a bovine demineralized bone (Cerabone[®]). Bone was perforated at the defect region after raising a full thickness flap, and a small amount of rhPDGF was placed over the edentulous ridge. Then, the mixture of bone and rhPDGF-BB was placed on the edentulous ridge without placing the membrane over the graft. The periosteal incision allowed passive closure of the flap using horizontal mattress and interrupted sutures. Using a combination of rhPDGF and demineralized bovine bone without the use of membranes leads to a horizontal bone regeneration of edentulous ridge that allows implant placement. The two presented cases showed that the application of growth factors does not require a membrane for successful horizontal bone regeneration, which greatly simplifies a GBR procedure and avoids the potential complications of membrane exposure and regeneration failures.

THE EFFECTIVENESS OF SYSTEMIC ERADICATION THERAPY AGAINST ORAL HELICOBACTER PYLORI

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Aims: *Helicobacter pylori* infection is associated with numerous gastroduodenal diseases like peptic ulcer disease. The oral cavity could be a potential extragastric reservoir for *Helicobacter pylori*, and may be involved in gastric reinfection after the eradication therapy. The aim of the study was to evaluate the presence of *Helicobacter pylori* in oral cavity of patients with gastric *Helicobacter pylori* infection, and to examine the effectiveness of the eradication therapy against *Helicobacter pylori* in stomach and in the oral cavity. Methods: Fifty six patients with chronic periodontitis and gastric *Helicobacter pylori* were enrolled in the study. Gastric *Helicobacter pylori* infection was determined using ¹³C-urea breath test before and 3 months after eradication therapy. The presence of oral *Helicobacter pylori* was assessed using polymerase chain reaction before and 3 months after eradication therapy. The one-week eradication therapy consisted of amoxicillin 1 g, clarithromycin 500 mg, and proton pump inhibitor 20 mg twice a day. Results: Of 56 subjects with gastric infection, 23 (41.1%) harboured *Helicobacter pylori* in the oral cavity. Eradication rate in stomach was 78.3%, whereas in the oral cavity *Helicobacter pylori* wasn't detected from any sample after the eradication therapy. Conclusion: Almost half of the patients with gastric *Helicobacter pylori* harboured the bacterium in the oral cavity. After the eradication therapy, *Helicobacter pylori* wasn't detected in the oral cavity, what suggests high effectiveness of the therapy protocol in the oral cavity, or it is possible that oral *Helicobacter pylori* is of transient character.

PROTEZA RETINIRANA TELESKOPSKIM KRUNAMA – PARODONTOLOŠKI ASPEKT

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Danas, u doba moderne stomatologije, raste broj mogućih intervencija kad je riječ o pojedinim situacijama u ustima. Tako se totalna i parcijalna bezubost rutinski rješavaju implantatima i različitim protetičkim rješenjima. No, parcijalna proteza na teleskopskim krunama i dalje ostaje dragocjeno rješenje u određenim situacijama. Primarni teleskop i gingiva oko njega dostupni su čišćenju. Osim lakog održavanja higijene, aksijalni prijenos sila na zube-nosače opskrbljene teleskopskim krunama pridonosi optimalnoj profilaksi parodonta. Materijali i metode: Pacijentica (67 godina) došla je zbog zamjene mosta u gornjoj čeljusti. Most je bio izrađen prije dvije godine, sa zubima nosačima 15, 13, 11, 21, 23, 24, 25, 26. Anamneza je otkrila da pacijentica boluje od kronične mijeloidne leukemije te uzima adekvatnu terapiju. U donjoj čeljusti nalazio se most od zuba 34 do 44, te djelomična proteza distalno. Zbog leukemije obavljena je konzultacija sa specijalistom oralne medicine. Plan rekonstrukcije uključivao je vađenje zuba 15 i 23 te parcijalnu protezu na teleskopskim krunama (13, 11, 21, 24, 25, 26). Zaključak: Ovaj prikaz pokazao je vrijednost proteze retinirane teleskopskim krunama te protetičkog pristupa koji će i danas zadovoljiti pacijenta i u funkcijskom i u estetskom smislu.

KORELACIJA IZMEĐU LIPIDNOG STATUSA I PARODONTALNE BOLESTI

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Nedavna istraživanja dokazala su povezanost između hiperlipidemije i parodontne bolesti. Svrha ovog istraživanja bila je ispitati moguću povezanost između razine kolesterola i triglicerida u krvi te stupnja gingivne upale, odnosno težine parodontitisa u skupini zdravih odraslih osoba. Ispitanici su odabrani među pacijentima Klinike za dentalnu medicinu Kliničkog bolničkog centra Rijeka. Kriteriji su bili dobro psihofizičko stanje, status nepušača, odsutnost dijabetesa i ostalih težih sistemskih bolesti, zatim da u posljednjih šest mjeseci nisu uzimali antibiotsku terapiju, dob iznad 25 godina te pristanak za sudjelovanje. Ukupno su bila obrađena 292 pacijenta. Za svakoga je bio zabilježen postotak gingivne upale (bleeding on probing, BoP) i na svakom je zubu izmjeren gubitak kliničkoga pričvrstka (clinical attachment loss/level, CAL). Parodontitis je klasificiran kao početni (CAL < 4 mm), umjeren (CAL = 4-6 mm) i težak (CAL > 6 mm). Analiza venske krvi uključivala je određivanje razine triglicerida i ukupnog kolesterola. Dobiveni podaci obrađeni su u programu za statističku obradu podataka Statistica 8.1. i MedCalc 7.5. Rezultati su pokazali da postoji statistički značajna pozitivna korelacija između indeksa gingivne upale (O'Leary i sur. 1972.) i razine kolesterola (Spearman rank koeficijent korelacije $r=0,253$; $p<0,05$). No, nema statistički značajne korelacije između lipidnog statusa i težine parodontitisa. Na temelju obavljenog ispitivanja može se zaključiti da postoji povezanost između poremećenog lipidnog statusa i parodontne bolesti, no potrebna su daljnja istraživanja jer se trebaju uzeti u obzir i upalni medijatori za koje se pretpostavlja da su poveznica tih dviju bolesti.

ZBRINJAVANJE SUBGINGIVNE KOMPLICIRANE FRAKTURE KRUNE – PRIKAZ SLUČAJA

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Pacijent (26) došao je u Zavod za endodonciju i restaurativnu stomatologiju zbog bolnosti i pomičnosti zuba 21. Anamnestički je ustanovljeno da je dva dana ranije bio fizički napadnut i udaren u području lica. Inače je bio zdrav, no pušio je 10 cigareta na dan. Kliničkim pregledom pronađeni su višestruki hematomi i manje laceracije lica. Intraoralnim pregledom ustanovljena je nekomplikirana fraktura zuba 11, 31 i 41 te komplikirana fraktura zuba 21 s pomičnim koronarnim fragmentom. U dogovoru s pacijentom odlučeno je endodontski liječiti zub 21, opskrbiti ga intrakanalnim kolčićem od kompozita pojačanog vlaknima te tako pojačane fragmente spojiti kompozitnim cementom kako bi se postiglo privremeno estetsko i funkcionalno rješenje. Koronarni fragment uklonjen je i proširen, a korijenski kanal instrumentiran (#40) te napunjen (hladna lateralna kondenzacija). Kanal je prepariran za postavljanje intrakanalnog kolčića (Cytec blanco, Hahnkratt), a kolčić je silaniziran Monobond Plusom (Ivoclar Vivadent). Korijenski kanal i ko-

OVERDENTURE WITH TELESKOPIC CROWNS-PERIODONTAL ASPECT

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Introduction: In today's modern dentistry there is a growing number of possible interventions for specific situations in mouth. Total and partial edentulousness are routinely handled with implants and variety of prosthetic solutions. However, partial dentures on telescopic crowns remain a valuable solution in certain clinical situations. The primary telescope and the surrounding gingiva are accessible for cleaning. Beside the ease of oral hygiene, axial transfer of forces on abutments equipped with telescopic crowns contributes to optimal periodontal prophylaxis. Material and methods: The patient (67 years) came to clinic because of the need for replacement of a bridge in a maxilla. The bridge was fabricated before two years, with teeth carriers 15, 13, 11, 21, 23, 24, 25 and 26. Anamnesis revealed that patient suffers from chronic myeloid leukemia, and takes appropriate therapy. In the lower jaw is a bridge from 34-44, and partial denture distally. Because of the leukemia, we made consultations with a specialist in oral medicine. Reconstruction plan includes dental extractions of tooth 15 and 23, and creation of the partial denture on telescopic crowns (13, 11, 21, 24, 25, 26). Conclusion: This case report illustrates the value of denture with telescopic crowns as prosthetic approach to fulfilling patients esthetic and functional demands.

RELATIONSHIP BETWEEN LIPID STATUS AND PERIODONTAL DISEASE

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Recent research has suggested a relationship between hyperlipidemia and periodontal disease. The aim of this investigation was to test a possible correlation between blood triglyceride and cholesterol levels, and gingival inflammation and severity of periodontitis in healthy adults. Investigated subjects were recruited from the patients of the Clinic for Dental Medicine, Clinical Hospital Center in Rijeka. Inclusion criteria were good psychological and physical condition, non-smoking status, absence of diabetes and other severe systemic diseases, age above 25 years, absence of antibiotic therapy in the past 6 months, and willingness to participate in the research. For every patient, a percentage of gingival inflammation (bleeding on probing around all teeth) was recorded, as well as clinical attachment level/loss (CAL). Periodontitis was classified as mild (CAL < 4 mm), moderate (CAL 4-6 mm) or severe (CAL > 6 mm). Venous blood analysis included determination of triglyceride and total cholesterol levels. Results were analyzed using statistical programs Statistica 8.1. and MedCalc 7.5. Results of this investigation demonstrated that there was a statistically significant positive correlation between the gingival index by O'Leary et al. (1972) and total cholesterol level (Spearman rank coefficient of correlation $r=0,253$; $p<0,05$). However, no statistically significant correlation was observed between the lipid status and severity of periodontitis. It can be concluded that there is possibly a link between an unbalanced lipid status and periodontal disease. However, further research is necessary in order to assess the role of inflammatory mediators which are assumed to connect these two diseases.

TREATMENT OF SUBGINGIVAL COMPLICATED CROWN FRACTURE – A CASE REPORT

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Patient (26) arrived at the Department of Endodontics and Restorative Dentistry, School of Dental Medicine, Zagreb due to pain and mobility of tooth 21. Anamnesis revealed that patient was physically attacked and hit in the facial area 2 days before. Patient was healthy, smoking up to 10 cigarettes a day. During clinical examination multiple hematomas and lesser lacerations were observed. Intraoral examination revealed uncomplicated fractures of teeth 11, 31 and 41 and complicated fracture of tooth 21 with mobile coronary fragment. After informing patient about treatment options, it was decided to endodontically treat tooth 21 and connect the fragments using an intracanal fiber reinforced post and composite cement in order to achieve short-term aesthetic and functional solution. Coronary fragment was extracted and prepared and root canal was instrumented (#40) and filled (cold lateral condensation). Post space preparation was done, while the post (Cytec blanco, Hahnkratt) was treated with Monobond S (Ivoclar Vivadent). In

ronarni fragment tretirani su samojekajućim adhezivom AdheSe DC. Pri cementiranju kolčića i spajanju fragmenata upotrijebljen je kompozitni cement Multicore Flow (Ivoclar vivadent). Okluzija je provjerena. Na kontrolnom pregledu nakon šest mjeseci restauracija je zadovoljavala i estetski i funkcionalno. Parodont zuba bio je bez znakova upale. Nakon dvije i pol godine restauracija je i dalje zadovoljavala, a parodont je bio bez znakova upale. Zaključak: I u slučaju subgingivne frakture koronarni fragment zuba moguće je stabilizirati korištenjem adhezivne tehnike i estetskih intrakanalnih kolčića.

the next step, root canal and coronary fragment were treated with AdheSE DC adhesive. Multicore flow was used for cementing the post and re-attaching the fragments. Occlusion was checked. Recall after 6 months revealed adequate esthetic and functional aspects of the restoration. Periodontal tissue was without signs of inflammation. After 2.5 years restoration is still esthetically and functionally acceptable with healthy periodontium. Conclusion: Coronary tooth fragment can be reattached using adhesive technique and fiber reinforced intracanal posts even in case of subgingival fracture.

PRODULJENJE KLINIČKE KRUNE ZUBA – PRIKAZ DVA RAZLIČITA PRISTUPA

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Dvije najčešće indikacije za produljenje kliničke krune zuba jesu prekomjerna vidljivost gingive („gummy smile“) zbog nepotpune aktivne ili pasivne erupcije zuba, te u sklopu protetičke terapije (adekvatna retencija zuba, otiskivanje i estetsko usklađivanje ruba desni). Produljenje kliničke krune u sklopu protetičke terapije (pacijent 1) sastoji se od gingivektomije do željene dužine zuba te odizanja režnja i određivanja je li potrebno reducirati alveolarnu kost osteoplastikom i/ili osteotomijom. Udaljenost ruba gingive nakon gingivektomije i ruba kosti treba iznositi minimalno tri milimetra zbog biološke širine. Zahvati gingivektomije i osteoplastike i/ili osteotomije obavljaju se tijekom istog kirurškog zahvata. Kod prekomjerne vidljivosti gingive potrebno je precizno locirati caklinsko-cementno spojište (koliko ćemo zubne krune moći produljiti) i odrediti udaljenost spojišta od ruba alveolarne kosti. Ako ta udaljenost odgovara biološkoj širini, prekomjerna se gingiva uklanja gingivektomijom (kod nepotpune pasivne erupcije zuba). No, kod nepotpune aktivne erupcije zuba (pacijentica 2), ako nije uspostavljena biološka širina, rub alveolarne kosti može dosezati caklinsko-cementno spojište, gingivektomija će voditi prema recidivu, te je nužno osteotomijom i osteoplastikom uspostaviti biološku širinu. Kliničkim određivanjem navedenih parametara ne postižu se precizni rezultati, pa posljedice mogu biti neugodne – neestetsko ekspoziranje dentina i osjetljivi zubi. Bolje je primijeniti protokol produženja kliničke krune u dva koraka. U prvome se odizaje režanj, mjeri dužina krune zuba i reducira alveolarna kost osteotomijom i osteoplastikom, bez ikakvih zahvata na gingivi. Tijekom cijeljenja od nekoliko tjedana, nastaje recesija koja varira od zuba do zuba i tek tada slijedi drugi korak – jednostavna gingivektomija. Takav postupak je potpuno siguran i njime se postižu planirani rezultati.

CROWN-LENGTHENING PROCEDURE (CLP) – TWO DIFFERENT APPROACHES

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Two most common indications for CLP are excessive gingival display („gummy smile“) due to incomplete active or passive tooth eruption, and preprosthetic surgery (providing retention, proper impression procedure and adjusting gingival levels for esthetics). CLP in a preprosthetic surgery (patient 1) includes gingivectomy and flap opening to see if osteoplastic and/or osteotomy procedures (OOP) are needed at the alveolar bone margin. The distance from the gingival margin after gingivectomy and the bone margin should be at least 3 mm due to biological width (BW). Both procedures are performed in the same surgical intervention. In excessive gingival display, cemento-enamel junction must be located accurately, the same as the distance from junction to the bone margin. If the distance is compatible with BW, the excessive gingiva is removed by gingivectomy (in incomplete passive tooth eruption cases). But in incomplete active tooth eruption cases (patient 2), alveolar margin can reach up to cemento-enamel junction (there is no BW) – gingivectomy alone will lead to relapse, so OOP should be performed in order to establish BW. Clinical determination of the abovementioned parameters is not precise, so consequences could be unpleasant – non-esthetic dentin exposure and sensitive teeth. It would be wise to perform a two-stage protocol of CLP. In the first stage the flap is raised, the lengths of the crowns are measured and the OOP are performed, but no procedure involves the gingiva. Only after several weeks of healing period (when recession of the gingiva will have occurred – variations are noted from one tooth to another), the second stage (gingivectomy) is performed. Two-stage protocol of CLP provides safety and results as planned.