

ABSTRACTS OF POSTER PRESENTATIONS

**PRIMJENA LASERA SIROLASER BLUE U TERAPIJI
PREOSJETLJIVOSTI VRATOVA ZUBA**

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SAŽETAK

Uvod: Dentalna preosjetljivost je česta pojava kod pacijenata nakon uklanjanja zubnog kamenca. Bolne senzacije koje pacijent osjeća odmah nakon tretmana i koje traju i duže predstavljaju smetnju koja zahtijeva terapiju. U terapiji koriste se različita sredstva za impregnaciju u vidu solucija ili gelova, te u novije vrijeme i laser.

Cilj rada je ispitati efekat terapije laserom na preosjetljive vratove zuba u kombinaciji sa sredstvom za desenzibilizaciju ili samostalno.

Materijali i metode: U istraživanju je učestvovalo ukupno 50 pacijenata oba pola koji su se javili na Katedru za oralnu medicinu i parodontologiju Stomatološkog fakulteta u Sarajevu zbog bolnih senzacija u području vrata zuba. Svim pacijentima određen je parodontološki status, verificirani parodontološki indeksi prije početka terapije laserom, te nakon sedam i mjesec dana. Bolna senzacija određena je pomoću VAS (vizuelne analogna skale) stimulirana dodirivanjem vrhom sonde po vratu zuba, te neposredno poslije terapije, nakon sedam dan i jedan mjesec nakon završene terapije.

Rezultati: Rezultati istraživanja pokazali su da je kombinovana terapija pokazala najbolje rezultate liječenja nakon prvog pregleda, kao i nakon mjesec dana od provedenog liječenja.

Zaključak: Tretman diodnim laserom SiroLaser Blue (660nm) u kombinaciji sa sredstvom za desenzibilizaciju (Vivasens) pokazao se efikasnijim u liječenju preosjetljivosti dentina od samostalne primjene istih, a učinak je bio dugotrajniji.

Ključne riječi: Dentinska preosjetljivost, diodni laser, vivosens

**APPLICATION OF SIROLASER BLUE LASER
IN THERAPY OF DENTIN HYPERSENSITIVITY**

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ABSTRACT

Introduction: Dental hypersensitivity is a common occurrence in patients after the removal of tartar. Painful sensations the patient feels not only immediately after the treatment but longer, represent a disturbance that requires therapy. In the therapy, various impregnation agents are used in the form of solutions or gels, and more recently, lasers.

The aim of the research is to verify the effect of the treatment with diode laser SiroLaser Blue (660nm) of DH alone or in combination with different impregnating agents.

Materials and methods: A total of 50 patients of both sexes who came to the Department of Oral Medicine and Periodontology of the Faculty of Dentistry in Sarajevo because of painful sensations in the area of the neck of the teeth participated in the research. Periodontal status was determined for all patients, and periodontal indices were verified before starting laser therapy and seven days and one month after. The pain sensation was determined using the VAS (visual analogue scale) stimulated by touching the tip of the probe on the neck of the tooth immediately after the therapy, seven days after and one month after the end of the therapy.

Results: The research results showed that the combined therapy gave the best treatment results after the first examination, as well as after one month of the treatment.

Conclusion: SiroLaser Blue (660nm) diode laser treatment in combination with a desensitizing agent (Vivasens) proved to be more effective in the treatment of dentine hypersensitivity than the same alone with long lasting effect.

Keywords: Dental hypersensitivity, diode laser, vivosens

UPOTREBA DIODONG LASERA U TRETMANU ORALNIH ULCERACIJA

PRIKAZ SLUČAJA

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SAŽETAK

Uvod: Ulcerozne promjene na oralnim sluznicama nastaju kao posljedica brojnih etioloških faktora, među kojima izdvajamo infekcije, autoimune poremećaje, traume i neoplazme. Ulceracije nastale kao posljedica akutne traume su bolne za pacijenta i predstavljaju nelagodu, ali za razliku od hroničnih ulceracija obično brzo prolaze. Pored standardnog terapijskog protokola za oralne ulceracije, brojna istraživanja su dokazala učinkovitost diodnih lasera u tretmanu istih, sa akcentom na dokazano analgetsko, antiedematozno i biostimulirajuće dejstvo diodnih lasera.

Cilj rada je da se na kliničkom primjeru pokaže učinkovitost diodnog lasera u tretmanu oralnih ulceracija.

Materijali i metode: Pacientica S.H. (2008.) upućena sa ortodontije zbog promjena na nepcu poslije skidanja aparata za širenje nepca. Kliničkim pregledom uočena ulcerozna promjena, nejasno ograničena od okolne eritematozne sluznice tvrdog nepca, sa desne strane. Promjena jako bolna spontano i na provokaciju.

Rezultati: Urađen tretman diodni laserom Sirolaser blue, program za aftozne ulceracije (970nm,120s) i program biostimulacije (660nm 120s). Nakon 2 dana značajno poboljšanje kliničke slike, a subjektivno pacijentica odmah nakon tretmana bez tegoba.

Zaključak: Postojanje diodnih lasera i dokazana učinkovitost istih u tretmanu oralnih ulceracija, daje nam obavezu da našim pacijentima u tretmanima pružamo i tu mogućnost liječenja. Kao i u brojim istraživanjima, i mi smo na ovom kliničkom primjeru dolazali učinkovitost diodnog lasera u tretmanu oralnih ulceracija, skratili period cijeljenja i time olakšali tegobe pacijentu.

Ključne riječi: ortodontski tretman, traumatski ulcus, diodni laser

THE USE OF THE DIODONG LASER IN THE TREATMENT OF ORAL ULCERATIONS

CLINICAL CASE

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ABSTRACT

Introduction: Ulcerated lesions of the oral cavity have many underlying etiologic factors, most commonly infection, immune - related, traumatic or neoplastic. Ulcerations resulting from acute trauma are painful for the patient and represent discomfort. In addition to the standard therapeutic protocol for oral ulcerations, numerous studies have proven the effectiveness of diode lasers in their treatment, with an emphasis to the proven analgesic, anti-edematous and stimulating effects of diode lasers.

The aim of the work is to demonstrate the effectiveness of the diode laser in the treatment of oral ulcerations in a clinical example.

Materials and methods: Patient S.H. (2008) was referred to orthodontics due to changes in the palate after removal of the appliance for expanding the palate. Clinical examination revealed an ulcerative change on the right side, vaguely limited by the surrounding erythematous mucosa of the hard palate. The change is excruciating spontaneously and upon provocation.

Results: Sirolaser blue diode laser treatment, program for aphthous ulceration and biostimulation program. After 2 days, there was a significant improvement in the clinical picture, and the patient had no complaints subjectively.

Conclusion: The existence of diode lasers and their proven effectiveness in the treatment of oral ulcerations obligates us to provide our patients with this treatment option. As in numerous types of research, we also found the effectiveness of the diode laser in the treatment of oral ulcerations on this clinical example, shortened the healing period and thereby eased the patient's discomfort.

Keywords: orthodontic treatment, traumatic ulcer, diode laser

TERAPIJSKI PROTOKOL MONOSIMPTOMATSKOG MELKERSSON ROSENTHAL SINDROMA ILI CHEILITIS GRANULOMATOSA

PRIKAZ SLUČAJA

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SAŽETAK

Uvod: Melkersson Rosenthal-ov sindrom je oboljenje koje se svrstava u granulomatozne upale, a karakteriše ga trijas simptoma: macrocheilia ili otok gornje, donje, ili obje usne, lingua plicata ili izbrazdan jezik i pareza nervusa facialisa. Bolest je nepoznate etiologije. Nekada se ovaj sindrom može javiti u nepotpunim formama, a neki od navedenih simptoma se javi tek kasnije. U literaturi se često navode podaci o monosimptomatskom sindromu ili granulomatoznom cheilitisu. Laboratorijski nalazi su nespecifični, diferencijalno-dijagnostički i terapijski postupak je kompleksan. Liječenje oboljelih je kompleksno i često zahtijeva upotrebu različitih terapijskih modaliteta.

Materijali i metode: Prikazat ćemo slučaj pacijenta E. Š. rođenog 1987. godine koji se javio na Katedru i Kliniku za Oralnu medicinu i parodontologiju zbog naglog oticanja i bolova u gornjoj usni, bez svrbeža, otežanog gutanja i disanja. Anamneza, klinička slika i Ph analiza ukazuju na postojanje hronične granulomatozne upale gornje usne, monosimptomatske forme Melkersson Rosenthalovog sindroma ili Cheilitis granulomatosa. Pacijent je tretiran Kenalog intralabijalnom injekcionom terapijom u periodu od šest sedmica.

Rezultati: Nakon mjesec dana kliničkim pregledom uočeno je evidentno poboljšanje, smanjenje otoka i osjećaja napetosti gornje usne kao i povećana pokretljivost usne.

Zaključak: Neophodno je praćenje ovih bolesnika i efekta primjenjene terapije zbog sklonosti recidivu kao i mogućnosti razvoja sistemskih granulomatoznih bolesti.

Ključne riječi : Melkersson Rosenthal, Cheilitis, granulomatoza, Kenalog

THERAPY PROTOCOL OF MONOSYMPTOMATIC MELKERSSON ROSENTHAL SYNDROME OR CHEILITIS GRANULOMATOUS

CASE REPORT

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ABSTRACT

Introduction: Melkersson Rosenthal syndrome is a disease classified as granulomatous inflammation and is characterized by a trias of symptoms: macrocheilia or swelling of the upper, lower, or both lips, lingua plicata or fissured tongue and paresis of the facial nerve. The disease is of unknown etiology. Sometimes this syndrome can occur in incomplete forms and some of the above written symptoms can appear later. Data on monosymptomatic syndrome or granulomatous cheilitis are often reported in the literature. Laboratory findings are unspecific, differential diagnostic and therapeutic procedures are complex. The treatment of patients is complex and often requires the use of different therapeutic modalities.

Material and methods: We will present the case of patient E. Š. born in 1987, who reported to the Department at Clinic for Oral Medicine and Periodontology due to swelling and pain in the upper lip, without itching and without difficulty in swallowing and breathing. History, clinical examination and Ph analysis indicate the existence of chronic granulomatous inflammation of the upper lip, monosymptomatic form of Melkersson Rosenthal syndrome or Cheilitis granulomatosa. The patient was treated with Kenalog intralabial injection therapy for a period of six weeks.

Result: After one month, a clinical examination confirmed the improvement of the findings on the lip, reduction of swelling and the feeling of tension and more mobile lip.

Conclusion: Regular follow up is necessary for these patients and the effects of the applied therapy due to the tendency to relapse as well as the possibility of developing systemic granulomatous diseases.

Keywords : Melkersson Rosenthal, Cheilitis, granulomatous, Kenalog

OSIFICIRAJUĆI FIBROM GINGIVE

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SAŽETAK

Uvod: Fibrom je rijetki, benigni reaktivni tumor vezivnog tkiva i može nastati kao posljedica lokalne iritacije. Najčešća lokalizacija je bukalna sluznica, bočne strane jezika, usne i gingiva. Definitivna dijagnoza se postavlja histološki. Liječenje je hirurško.

Materijal i metode: Pacijent O.B., 34 godine, nepušač, javio se u pripadajući Dom zdravlja zbog promjene na gingivi veličine zrna graška u regiji donjih prednjih zuba, a nakon pregleda upućen je na Kliniku za oralnu medicinu i parodontologiju Stomatološkog fakulteta.

U anamnezi navodi da je promjena bez bolova, perzistira oko dva mjeseca i ima tendencu rasta. Kliničkim pregledom uoči se labijalno nodularno uvećanje gingive interdentalne papile u regiji donjeg lijevog lateralnog sjekutića i očajnika, širokom bazom vezano za podlogu. Promjena trouglastog oblika prekriva vestibularnu površinu navedenih zuba, bez krvarenja na sondiranje. Svi zubi u zahvaćenoj regiji su klinički i radiološki intaktni. U stomatološkoj i medicinskoj anamnezi nije bilo osobitosti.

Rezultati: U terapiji se uradi hirurško uklanjanje fibroma, te patohistološka verifikacija promjene. H.E. bojenjem je potvrđena definitivna dijagnoza: Fibroma ossificans perifericum gingivae regionis 32/33.

Na kontrolnom pregedu nakon tri mjeseca, recidiv nije uočen.

Zaključak: Promjena gingive sa tendencijom sporog, ali kontinuiranog rasta kod mladih osoba može biti reaktivna lezija. Patohistološka verifikacija je neophodna za definitivnu dijagnozu. Periferni osificirajući fibrom treba liječiti potpunom ekscizijom kako bi se spriječio recidiv.

Ključne riječi: Fibrom, gingiva, hirurška terapija, patohistološka verifikacija

OSSIFYING FIBROMA OF THE GINGIVA

A CASE REPORT

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ABSTRACT

Introduction: The ossifying fibroma is a rare, benign reactive tumor of connective tissue as a result of local irritation. The lesions are most often found in the buccal mucosa, on the sides of the tongue, lips and gingiva. Definitive diagnosis is based on histological examination. Surgical excision is the treatment of choice.

Material and methods: A 34-years-old male patient O.B., non-smoker, reported to the associated Health Center due to a pea-sized gingival mass located in the region of the lower front teeth. He was referred to the Oral Medicine and Periodontology Clinic of the Faculty of Dentistry. He states that the change was painless, persisted for about two months having a tendency to grow. A clinical examination revealed a labial nodular enlargement of the interdental papilla in relation to the mandibular left lateral incisor and canine, with a wide base attached to the substrate. The change in triangular shape covers the vestibular surface of the mentioned teeth, without bleeding on probing. All teeth in the affected region were clinically and radiologically intact. The patient's past dental and medical histories were non-contributory.

Results: Surgical removal of fibroids was performed and pathohistological verification of the lesion. H&E staining confirmed the definitive diagnosis: Fibroma ossificans perifericum gingivae regionis 32/33. At recall after three months, no recurrence was observed.

Conclusion: A gingival change with a tendency to slow but continuous growth in young people can be a reactive lesion. Pathohistological verification is necessary for a definitive diagnosis. Peripheral ossifying fibroma should be treated with complete excision to prevent a recurrence.

Keywords: Fibroma, gingiva, surgical therapy, pathohistological verification

FRAKTURA TIJELA DONJE ČELJUSTI**Bubalo Valentina***¹, **Zovko Ružica**¹, **Pehar Ana**¹, **Šarac Inge**², **Šarac Zdenko**¹¹Dom zdravlja Mostar²Medicinski fakultet Mostar, Studij dentalne medicine**SAŽETAK**

Uvod: U ordinaciju za Oralnu kirurgiju Doma zdravlja Mostar javio se dvadesetogodišnjak nakon zadobivenog udarca u područje donje čeljusti tijekom treninga kickboxa. Od trenutka incidenta do dolaska u ordinaciju Oralne kirurgije prošlo je oko sat i pol vremena. Pacijent nije gubio svijest, niti povraćao. Kliničkim pregledom vidljiv je prekid kontinuiteta alveolarne kosti ispod zuba 31,41 i 42. Frakturirani fragment sa ostatkom corpusa mandibule povezan je ortodontskim fiksnim aparatom. Ortodontski aparat postavljen je 3 mjeseca prije incidenta. Lokalnom anestezijom postignuta je analgezija područja, učinjena je repozicija frakturiranog fragmenta mandibule, vodeći računa o okluziji zuba gornje i donje čeljusti. Monomandibularna fiksacija je postignuta repozicijom žice ortodontskog aparata koju je učinio specijalist za ortodonciju. Ozljede mekih tkiva su suturirane. Savjetovana je antibiotska terapija, kašasta prehrana, četkanje zubi mekom četicom i prvi tjedan ispiranje usta klorheksidinom 2x dnevno. Kontrola za 7 dana radi skidanja šavova i ispitivanja vitaliteta. RTG kontrola se radi nakon 6-8 tjedana, 4 mjeseca, 6 mjeseci i godinu dana. Narednih 5 godina raditi RTG jedanput godišnje.

Materijali i metode: Korišteni su materijali i metode sukladni kliničkom protokolu kod frakture donje čeljusti.

Zaključak: Multidisciplinarni pristup liječenju prilagođen ortodontskom pacijentu donio je benefite u splintiranju. Dobra imobilizacija garancija je uspješnog liječenja. Funkcija i estetika segmenta čeljusti sa zubima 31, 41, 42 i okolnih mekih tkiva bila je vraćena.

Ključne riječi: fraktura, donja čeljust, imobilizacija

LOWER ALVEOLAR JAW FRACTURE**Bubalo Valentina**¹, **Zovko Ružica**¹, **Pehar Ana**¹, **Sarac Inge**², **Sarac Zdenko**¹¹Health Center Mostar²Faculty of Medicine Mostar, Study of Dental Medicine**ABSTRACT**

Introduction: A twenty-three year old man came to the Oral Surgery ambulance of the Mostar Health Center after receiving a blow to the lower jaw area during kickboxing training. From the moment of the incident to the arrival at the Oral Surgery ambulance, about an hour and a half passed. The patient did not lose consciousness or vomit. A clinical examination shows a break in the continuity of the alveolar bone under teeth 31, 41 and 42. The fractured fragment is connected to the rest of the corpus of the mandible with a fixed orthodontic appliance. The orthodontic appliance was installed 3 months before the incident. Analgesia of the area was achieved with local anesthesia, the fractured fragment of the lower jaw was repositioned, taking into account the occlusion of the teeth of the upper and lower jaw. Monomandibular fixation was achieved by repositioning the wire of the orthodontic appliance by an orthodontic specialist. Soft tissue injuries are sutured. Antibiotic therapy, mushy diet, brushing teeth with a soft brush and rinsing the mouth with chlorhexidine twice a day for the first week were advised. Control in 7 days to remove stitches and test vitality. X-ray control is done after 6-8 weeks, 4 months, 6 months and one year. For the next 5 years, do an X-ray once a year.

Materials and methods: Materials and methods were used in accordance to the clinical protocol for fractures of the lower jaw.

Conclusion: A multidisciplinary treatment approach adapted to the orthodontic patient brought benefits in splinting. Good immobilization is a guarantee of successful treatment. The function and aesthetics of the jaw segment with teeth 31, 41, 42 and the surrounding soft tissues were restored.

Keywords: fracture, lower jaw, immobilization

HIRURŠKO ZBRINJAVANJE KOMPLIKACIJE NASTALE NAKON EKSTRAKCIJE ZUBA KOD ONKOLOŠKOG PACIJENTA NA BISFOSFONATNOJ TERAPIJI PRIKAZ SLUČAJA

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SAŽETAK

Uvod: Onkološki pacijenti liječeni bisfosfonatima predstavljaju rizik za nastanak osteonekroze vilica, nakon invazivnih oralno-hirurških zahvata u koje ubrajamo i ekstrakciju zuba. Osteonekroza vilica je definisana odumiranjem koštanog matriksa, teško se liječi, sa nepredvidivim ishodom. Klinički, manifestira se ekspanzijom kosti koja ne cijeli duži vremenski period. Komplikacija se češće javlja kod intravenozne primjene bisfosfonata.

Materijali i metode: U radu smo predstavili slučaj onkološke pacijentice liječene od karcinoma dojke sa osteonekrotičnom promjenom na mandibuli koja je nastala kao posljedica ekstrakcije zuba. Pacijentica je liječena sa bisfosfonatnim lijekom, zolendronatna kiselina, koji je primala intravenozno. Ekstrakciona rana nije zarasla 6 mjeseci od izvršene ekstrakcije zuba. Procijeni se da vidljiva osteonekrotična promjena na mandibuli se nalazi u II stadiju. U okviru hirurškog protokola urađen je površinski debridman rane i uklanjanje nekrotičnog dijela kosti. Rana je primarno sašivena.

Rezultat: Autori su kroz slučaj iz vlastite kazuistike prikazali detaljan dijagnostički i terapijski protokol kao i pripremu onkološkog pacijenta na intravenoznoj bisfosfonatnoj terapiji za oralno-hirurški zahvat, te ukazali na sve češću pojavu ove teške komplikacije u svakodnevnoj stomatološkoj praksi.

Opisani slučaj je za rezultat imao pozitivan ishod što je potvrđeno kroz redovne kliničke i radiološke kontrolne preglede.

Zaključak: Kliničari moraju biti upoznati i kontinuirano se edukovati o vrsti lijekova koji mogu izazvati osteonekrozu viličnih kostiju nakon ekstrakcije zuba, jer je to od iznimne važnosti za prevenciju komplikacija. Komplikacije su rijetke, ali to ne umanjuje činjenicu da one postoje.

Ključne riječi: onkološki pacijenti, ekstrakcija zuba, bisfosfonati, osteonekroza vilica, hirurški tretman

SURGICAL MANAGEMENT OF A COMPLICATION ARISING AFTER TOOTH EXTRACTION IN ONCOLOGY PATIENTS ON BISPHOSPHONATE THERAPY CASE REPORT

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ABSTRACT

Introduction: Oncology patients treated with bisphosphonates present a risk for the formation of osteonecrosis of the jaw, after invasive oral surgical procedures. Clinically, it is manifested by exposed bone which does not heal for a long period, it is difficult to treat, with an unpredictable outcome. Complication occurs more often with intravenous bisphosphonate administration.

Materials and methods: In this paper we presented the case of an oncology patient treated for breast cancer with an osteonecrotic change on the mandible which arose as a result of tooth extraction. The patient was treated with intravenous bisphosphonate medication, zoledronic acid. The extraction wound has not healed after 6 months. The osteonecrotic change in the mandible is in stage II. As part of the surgical protocol, surface debridement of the wound and removal of the necrotic part of the bone was performed. The wound is primarily sutured.

Result: The authors presented a detailed diagnostic and therapeutic protocol and the preparation of an oncology patient on intravenous bisphosphonate therapy for an oral surgical procedure. They pointed out the increasingly frequent occurrence of this severe complication in everyday dental practice.

The described case resulted in a positive outcome which was confirmed through regular clinical and radiological control examinations.

Conclusion: Clinicians must be aware and continuously educate themselves on the type of medications that can cause osteonecrosis of the jawbones, as this is extremely important for preventing complications. Complications are rare, but that does not diminish the fact that they exist.

Keywords: osteonecrosis of the jaw, bisphosphonates, oncology patients, tooth extraction, surgical treatment

ANATOMSKO MORFOLOŠKE VARIJABILNOSTI DONJEG PRVOG MOLARA

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SAŽETAK

Uvod: Prvi donji molari imaju obično po jedan mezijalni i distalni korijen ali u u nekim slučajevima postoje anatomsko morfološke varijacije u broju korijena sa dodatnim lingvalnim korjenom tzv. Radix Entomolaris (RE). Prevalencija ove varijabilnosti je manja od 3% u afričkoj populaciji, oko 4,2% je prisutna kod bijelaca, a manja od 5% u evroazijskim i azijskim populacijama. Etiologija nastanka ovih varijacija je još uvijek nepoznata ali se pretpostavlja da ekspresija određenih gena rezultira fenotipskim manifestacijama ovih varijabilnosti.

Prikaz slučaja: Pacijent inicijala M.M. 2006 godište javlja se na Oralnu hirurgiju u dom zdravlja Novi Grad zbog ekstrakcije zuba 46. Pacijentu se uzima detaljna medicinska, porodična i socijalna anamneza. Pacijent negira sistemsku oboljenja i alergijske reakcije na lijekove. Intraoralnim pregledom uočava se velika kariozna destrukcija krune zuba 46. Analizom ortopantomograma uočava se treći korijen na zubu 46 i sumnja na RE. U toku oralno hirurškog zahvata se potvrđuje prisutnost Radix Entomolarisa.

Zaključak: Poznavanje anatomsko morfoloških varijacija donjih molara, te radiografska i klinička dijagnoza stomatologu mogu pružiti bolje razumijevanje njegove složenosti kako bi dobili uspješne rezultate liječenja.

Ključne riječi: donji molar, radix etnomolaris, prevalenca

ANATOMICAL MORPHOLOGICAL VARIABILITY OF THE LOWER FIRST MOLAR

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ABSTRACT

Introduction: First lower molars usually have one mesial and distal root, but in some cases, there are anatomical morphological variations in the number of roots with an additional lingual root, so called Radix Entomolaris (RE). The prevalence of this variability is less than 3% in African populations, about 4.2% is present in Caucasians and less than 5% in Eurasian and Asian populations. The etiology of these variations is still unknown, but it is assumed that the expression of certain genes results in the phenotypic manifestations of these variations.

Case report: Patient with initials M.M. In 2006, he presented himself for oral surgery at the Novi Grad health center for the extraction of tooth 46. The patient's detailed medical, family and social anamnesis is taken. The patient denies systemic diseases and allergic reactions to drugs. An intraoral examination reveals a large destruction of tooth 46. An analysis of the orthopantomogram reveals a third root on tooth 46 and RE is suspected. During oral surgery, the presence of Radix Entomolaris is confirmed.

Conclusion: Knowledge of anatomical morphological variations of lower molars, as well as radiographic and clinical diagnosis can provide the dentist with a better understanding of its complexity in order to obtain successful treatment results.

Keywords: lower molar, radix etnomolaris, prevalence

FUZIJA KRUNE

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SAŽETAK

Uvod: Pacijentica (22) dolazi na pregled. Anamnezom navodi povijest ponavljanih bolova i smetnji sa lijeve strane donje čeljusti. Pacijentica je prethodno liječena antibiotskom terapijom i analgeticima. Ekstraoralni pregled bez posebnosti. Intraoralnim pregledom se uočava poluimpaktiran zub 38. Urađen je OPG snimak na kojem se ustanovi fuzija krunica zuba 38 i prekobrojnog zuba 39. Urađen je i ciljani alveolarni snimak gdje se jasno vide fuzirane krune zuba. Indicirana je kirurška ekstrakcija navedenih zuba u lokalnoj anesteziji. Pacijentica navodi dobro opće zdravlje i negira preosjetljivosti na anesteziju. Nakon blok anestezije za n.alveolaris inferior podigne se mukoperiostalni režanj sa incizijom mezijalno koja omogućava dobar intraoperativni uvid. Nasadnikom sa vodenim hlađenjem se ukloni koštani pokrov da budu vidljive krune zuba 38 i 39. Fuzirane krunice zuba separiraju se od korijenova. Ekstrahiraju se fuzirane krunice, potom korijenje zuba 38, 39. Repozicionira se režanj i sašije neresorptivnim koncem. Ordiniraju se antibiotici Panklav 1g 2x1 i Metronidazol 500 mg 3x1 i daju postoperativne upute.

Materijali i metode: Korišteni su materijali i metode sukladni kliničkom protokolu alveolotomije retiniranog i prekobrojnog zuba sa fuzijom krunica.

Zaključak: Fuzija krune zuba je razvojna anomalija koja se rijetko javlja kod molara. U slučaju gdje su fuzirane krune trećeg i prekobrojnog molara koji je impaktiran i uzrokuje smetnje, indicirana je ekstrakcija.

Ključne riječi: Fuzija krune, prekobrojni zub, prekobrojni molar

CROWN FUSION

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ABSTRACT

Introduction: The 22-year-old patient showed up for an examination. The anamnesis states a history of repeated pain and disturbances on the left side of the lower jaw. Patient was previously treated with antibiotic therapy and analgetics.

Extraoral examination without peculiarities. Intraoral examination showed semi-impacted tooth 38. OPG scan was made and fusion of crowns of tooth 38 and supernumerary tooth 39 was established. A targeted alveolar image was also performed and the fused crowns of the teeth were clearly visible. Surgical extraction of these teeth under local anesthesia was indicated. The patient cites good general health and denies hypersensitivity to anesthesia. After block anesthesia for n.alveolaris inferior, a mucoperiostal lobe is raised with incision mesially that allows good intraoperative insight. A water-cooled handpiece removed the bone cover to show the crowns of teeth 38 and 39. Fused crowns of teeth were separated from the roots. Fused crowns were extracted so as teeth roots 38 39. The lobe was repositioned and sewed with unresorptive suture. Antibiotics Panklav 1g 2x1 and Metronidazole 500 mg 3x1 were administered and postoperative instructions were given.

Materials and methods: Materials and methods consistent to the clinical protocol of alveolotomy of retained and supernumerary teeth with crown fusion were used.

Conclusion: Tooth crown fusion is a developmental anomaly that rarely occurs in molars. In the case where crowns of the third and supernumerary molar are fused, impacted and causing disturbances, extraction is indicated.

Keywords: Crown fusion, supernumerary tooth, supernumerary molar

EPULIS ORALNE SLUZNICE, HIRURŠKA TERAPIJA I ZNAČAJ

PRIKAZ SLUČAJA

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SAŽETAK

Uvod: Epulis je benigna tvorevina na gingivi, koja može biti veličine i do nekoliko cm. Može nastati kao upalna reakcija na mehaničku iritaciju. Češće se razvija na maksili u predjelu jednog zuba ili manje grupe zuba, a u ekstremnim slučajevima može zahvatiti kompletnu gingivu i gornje i donje vilice. Epulis se klinički može klasificirati u nekoliko oblika, ali definitivna dijagnoza se potvrđuje patohistološkom analizom. Terapija zavisi od težine kliničke slike. U terapiji epulisa primarno je otkloniti iritaciju koja je dovela do njegovog nastanka i tako spriječiti mogućnost pojave recidiva. Hirurškom intervencijom se nastoji u potpunosti eliminirati patološko uvećanje gingive.

Materijali i metode: U radu smo predstavili slučaj pacijenta upućenog na Kliniku za Oralnu hirurgiju, zbog izrazito velike izrasline u području maksile. Promjena je perzistirala duži vremenski period i znatno uticala na kvalitet života pacijenta, narušavajući mu mastikaciju, estetiku i adekvatnu ishranu. Kliničkim pregledom evidentirali smo uvećanje gingive na maksili sa lijeve strane u regiji zuba 22, 23 i 24. Veličina promjene je 1,5-2 cm, crveno-ružičaste boje, uskom bazom vezana za podlogu i naslonjena na alveolarni greben. Opisana promjena se ekscidira u cijelosti i pošalje na PH analizu. Rana se primarno ušije.

Rezultat: Autori su nastojali da kroz slučaj iz vlastite kazuistike prikažu hirurški pristup u liječenju ovakvih promjena, te učinkovitost i značaj hirurške terapije. Histopatološka analiza uklonjene promjene utvrdi da se radi o Inflamatornoj papilarnoj hiperplaziji.

Zaključak: Epulis je česta patologija u usnoj šupljini. Svako abnormalno uvećanje gingive treba hirurški odstraniti i što je moguće prije poslati uzorak tkiva na patohistološku analizu.

Ključne riječi: epulis, inflamatorna papilarna hiperplazija, hirurška terapija, ekscizija, ph analiza

EPULIS OF THE ORAL MUCOSA, SURGICAL THERAPY, AND IMPORTANC

CASE REPORT

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ABSTRACT

Introduction: Epulis is a benign formation on the gingiva, several centimeters in size. It may be a codequence of an inflammatory reaction to mechanical irritation. It develops more often on the maxilla; in extreme cases, it can affect the upper and lower jaw. It can be classified in several forms, but the definitive diagnosis is confirmed by pathological-histological analysis. Therapy depends on the severity of the clinical picture. The primary thing is to remove the irritation leading to its occurrence. The surgical intervention aims to completely eliminate gingival enlargement.

Materials and Methods: We presented a case of a patient referred to the Clinic for Oral Surgery due to an extremely large growth in the maxilla area. The change persisted for a longer period and significantly affected the patient's quality of life, impairing his mastication, aesthetics and adequate nutrition. We recorded an enormous enlargement of the gingiva on the maxilla on the left side in the region of teeth 22, 23, and 24. The size of the change was 1.5-2 cm, red-pink in color, narrow base attached to the substrate and resting on the alveolar ridge. The described change was completely excised and sent for pathohistological analysis. The wound was primarily sutured.

Result: The authors attempted to demonstrate the surgical approach to treating such changes, as well as the effectiveness and the importance of surgical therapy through a case from their own casuistry. Pathological-histological analysis of the excised lesion determined that it was an inflammatory papillary hyperplasia.

Conclusion: Any enormous enlargement of the gingiva should be surgically removed and the tissue sample sent for pathohistological analysis as soon as possible.

Keywords: epulis, inflammatory papillary hyperplasia, surgical therapy, excision, pathohistological analysis

KLINIČKA PRIMJENA MEDIKAMENTOZNE TERAPIJE ,RAZLIKA IZMEĐU AMOKSICILINA I AMOKSICILINA SA KLAVULONSKOM KISELINOM , NAKON HIRURŠKE EKSTRAKCIJE MANDIBULARNIH UMNJAKA

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SAŽETAK

Uvod: Hirurška ekstrakcija mandibularnih umnjaka je jedan od najčešćih zahvata u oralno-hirurškoj praksi. Standard u oralnoj hirurgiji je da se nakon operativnog zahvata ordiniraju i antibiotici. Upotreba antibiotika u prevenciji je dvojbena, no efikasnost u spriječavanju alveolarnog ostitisa je dokumentovana za antibiotike penicilinskog spektra i metronidazol. Navika prepisivanja amoksicilin-klavulanat onda kad on i nije potreban može dovesti do razvoja bakterijske rezistencije. Parametri koji ukazuju na prisutnost upale su bol, purulentni iscjedak, trizmus, otok, temperatura, povišeni CRP, te povećani broj neutrofila u slini. Najčešće izolirane bakterije u odontogenim infekcijama su *Streptococcus iridans*, *Peptostreptococcus*, *Prevotella intermedia*, *Fusobacterium nucleatum*, *Porphyromonas gingivalis*, *Enterococcus faecalis*.

Materijali i metode: Studija predstavlja kliničku, prospektivnu, komparativnu, randomiziranu i slijepu studiju terapijsko-analitičkog i kliničko-aplikativnog karaktera, dizajniranu kao split-mouth opservacionu studiju.

Rezultati: Studija je pokazala jednaku statistički signifikantnu redukciju postoperativnih sekvela (infekcija, boli, edema, trizmus) u obje eksperimentalne skupine tj. skupini pacijenata kod kojih je primjenjen amoksicilin sa klavulonskom kiselinom, u odnosu na kontrolnu skupinu pacijenata kod kojih je primjenjen amoksicilin bez klavulonske kiseline.

Zaključak: Studija ukazuje na izvanredne i jednake rezultate amoksicilina i amoksicilina sa klavulonskom kiselinom u tretmanu postoperativnih infekcije. Lijek koji je prvi izbor je amoksicilin sam, bez klavulonske kiseline, a u slučaju alergije klindamicin. Pri prepisivanju antibiotika trebamo obratiti pozornost na ozbiljnost bolesti, pacijenti sa umjerenom kliničkom slikom ne trebaju odmah dobiti antibiotik širokog spektra djelovanja. Ako ne dode do poboljšanja simptoma unutar 48 sati ili dode do njihovog pogoršanja, terapeut može re/evaluirati postojecu terapiju.

CLINICAL APPLICATION OF DRUG THERAPY, THE DIFFERENCE BETWEEN AMOXICILLIN AND AMOXICILLIN WITH CLAVULONIC ACID, AFTER SURGICAL EXTRACTION OF MANDIBULAR WISDOM TEETH

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ABSTRACT

Introduction: Surgical extraction of mandibular wisdom teeth is one of the most common procedures in oral surgical practice. The standard in oral surgery is that of antibiotics. The use of antibiotics in prevention is doubtful, but the effectiveness in preventing alveolar osteitis has been documented for antibiotics of the penicillin spectrum and metronidazole. The habit of prescribing amoxicillin-clavulanate when it is not needed can lead to the development of bacterial resistance. Parameters indicating the presence of inflammation are pain, purulent discharge, trismus, swelling, temperature, increased CRP and an increased number of neutrophils in saliva. The most frequently isolated bacteria in odontogenic infections are *Streptococcus iridans*, *Peptostreptococcus*, *Prevotella intermedia*, *Fusobacterium nucleatum*, *Porphyromonas gingivalis*, *Enterococcus faecalis*.

Methods: The study represents a clinical, prospective, comparative, randomized and blind study of a therapeutic-analytical and clinical-applicative character, designed as a split-mouth observational study.

Results: The study showed the same statistically significant reduction of postoperative sequelae (infection, pain, edema, trismus) in both experimental groups, i.e. the group of patients who were administered amoxicillin with clavulonic acid, compared to the control group of patients who were administered amoxicillin without clavulonic acid.

Conclusion: The study indicates the outstanding and equal results of amoxicillin and amoxicillin with clavulonic acid in the treatment of postoperative infections. The drug of first choice is amoxicillin, without clavulonic acid, and in case of allergy, clindamycin. When prescribing antibiotics, we should pay attention to the severity of the disease, patients with a moderate clinical picture do not need to immediately receive a broad-spectrum antibiotic. If the symptoms do not improve within 48 hours or if they worsen, the therapist can re/evaluate the existing therapy.

REHABILITACIJA JEDNOG ZUBA ALIGNEROM/RETAINEROM

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SAŽETAK

Uvod: Pacijenti s malokluzijama, nedostatkom bočnih sjekutića ili traumama prednjih zuba, traže brzo i jeftino rješenje estetske rekonstrukcije narušenog im osmijeha. Dijagnoza se postavlja kliničkim pregledom i radiografskim snimkama, a u složeni rehabilitacijski proces se pristupa multidisciplinarno, s ortodontom, oralnim kirurgom, restaurativnim stomatologom i protetičarem. Učinkovitom terapijom poboljšavamo psihosocijalni problem, narušenu estetiku i funkciju govora i žvakanja.

Materijali i metode: U ovom radu prikazan je slučaj rehabilitacije hipodoncije gornjeg lijevog lateralnog sjekutića.

Rezultati: Muškarac u ranim dvadesetim godinama koji želi osmijeh, pravilno poravnanje i aksijalni nagib zuba, ali bez invazivne intervencije ili narušavanja sklada, susjednih intaktnih zuba. Individualnim pristupom u terapiji izradili smo aligner/retainer.

Zaključak: Ovakav modalitet terapije ima klinički učinak, estetski jako prihvatljiv, a za pacijenta jednostavan i pogodan za nošenje i održavanje.

Ključne riječi: hipodoncija gornjeg sjekutića, aligner/retainer

TOOTH REHABILITATION WITH AN ALIGNER/RETAINER

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ABSTRACT

Uvod: Patients with malocclusions, missing lateral incisors or trauma to the front teeth need quick and cheap solution for the aesthetic reconstruction of their damaged smile. The diagnosis is established by clinical examination and radiographic images and the complex rehabilitation process is approached multidisciplinary, with an orthodontist, oral surgeon, restorative dentist and prosthetist. Effective therapy improves the psychosocial problem, as well as the aesthetics and function of speech and chewing.

Material and methods: This case presents the rehabilitation of hypodontia of maxilla left lateral incisor.

Results: A man in early twenties who wants a beautiful smile, proper position and axial inclination of the teeth, but without invasive interventions and disruption of the harmony of intact teeth. With an individual approach to therapy, the solution was an aligner/retainer.

Conclusion: This type of therapy has a clinical effect, aesthetically is very acceptable and it is simple and practical for the patient to wear and maintain.

Keywords: hypodontia maxillar incisor, aligner/retainer

DETEKCIJA KAROTIDNIH KALCIFIKACIJA KOD PACIJENTICE SA DIJABETESOM TIP 2 NA PANORAMSKOM RENDGEN SNIMKU

PRIKAZ SLUČAJA

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SAŽETAK

Uvod: Karotidne kalcifikacije su poznati faktor rizika za cerebrovaskularne poremećaje, uključujući moždani udar. Panoramski rendgen snimci se često koriste u stomatološkoj praksi za dijagnostiku oralnih bolesti i procjenu stanja zuba, ali mogu se također koristiti za detekciju kalcifikacija u karotidnim arterijama. Ovaj prikaz slučaja prikazuje detekciju kalcifikacija karotidnih arterija na panoramskom rendgen snimku kod pacijentice s dijabetesom tipa 2, kao i put pacijenta nakon detekcije do samog hirurškog zahvata.

Materijal i metode: 74-godišnja žena s dijabetesom tipa 2 se javlja u ordinaciju radi sanacije zuba u gornjoj vilici, tokom pregleda je napravljen panoramski rendgen snimak. Snimak je pokazao kalcifikaciju na desnoj karotidnoj arteriji. Dvije godine kasnije, tokom kontrolnog pregleda, napravljen je drugi panoramski snimak, koji je pokazao kalcifikaciju i na lijevoj karotidnoj arteriji. Pacijentica je upućena na color dopler karotidnih arterija. Nalaz je pokazao da obje karotidne arterije imaju stenozu 80%. Pacijentica je upućena vaskularnom hirurgu, a operacija je izvedena odmah zbog rizika od moždanog udara.

Rezultati: Otkrivanje karotidnih kalcifikacija na panoramskom rendgen snimku omogućilo je ranu dijagnozu potencijalno životno ugrožavajućeg stanja kod ove pacijentice s dijabetesom tipa 2. Pravovremeno upućivanje vaskularnom hirurgu i brza hirurška intervencija spriječile su pojavu cerebrovaskularnih poremećaja, poput moždanog udara.

Zaključak: Panoramski rendgenski snimci mogu poslužiti kao vrijedan nalaz u ranoj detekciji kalcifikacije karotide, posebno kod pacijenata s faktorima rizika poput dijabetesa tipa 2. Stomatolozi bi trebali biti svjesni potencijalnih benefita panoramskih rendgen snimaka u dijagnostici sistemskih oboljenja.

Ključne riječi: Kalcifikacija karotide, opg, dijabetes tipa 2, stenozna, vaskularna hirurgija

DETECTION OF CAROTID CALCIFICATION IN A PATIENT WITH TYPE 2 DIABETES ON PANORAMIC X-RAY

CASE REPORT

Arman Smajić*

Private dental office "Širbegović stomatologija"

ABSTRACT

Introduction: Carotid calcification is a well-known risk factor for cerebrovascular events, including stroke. Panoramic radiographs are commonly used in dental practice to diagnose oral diseases and evaluate teeth, but they can also reveal calcifications in the carotid arteries. This case report presents the detection of carotid calcification on panoramic radiograph in a patient with type 2 diabetes.

Material and Methods: A 74-year-old woman with type 2 diabetes underwent her first dental examination in 2020, during which a panoramic radiograph was taken. The radiograph revealed carotid calcification on the right carotid artery. Two years later, during a follow-up examination, another panoramic radiograph was taken showing calcification on the left carotid artery. A color Doppler ultrasound was performed revealing that both carotid arteries had 80% stenosis. The patient was referred to a vascular surgeon and the operation was performed immediately because of the risk of stroke.

Results: The detection of carotid calcification on panoramic radiograph allowed for early diagnosis of a potentially life-threatening condition in this patient with type 2 diabetes. Timely referral to a vascular surgeon and prompt surgical intervention prevented the occurrence of cerebrovascular events, such as stroke.

Conclusion: Panoramic radiographs can serve as a valuable tool in the early detection of carotid calcification, especially in patients with risk factors such as type 2 diabetes. Dental professionals should be aware of the potential benefits of panoramic radiographs in the diagnosis and management of systemic diseases.

Keywords: Carotid calcification, opt, type 2 diabetes, stenosis, vascular surgery

PROCJENA STAVA O ORALNOM ZDRAVLJU U KORELACIJI SA STRUČNOM SPREMOM RODITELJA/STARATELJA DJECE SA DOWN SINDROMOM

Selma Porović*

Javna ustanova Dom zdravlja Kantona Sarajevo

SAŽETAK

Uvod: Bosna i Hercegovina je siromašna epidemiološkim studijama o oralnom zdravlju stanovništva, naročito osoba sa Down sindromom. Da bi se razumjela distribucija oralnih bolesti, važna su istraživanja znanja, stava i prakse o oralnom zdravlju. U sklopu ove prezentacije će biti objavljeni stavovi o oralnom zdravlju roditelja/staratelja osoba sa D.s u korelaciji sa stepenom obrazovanja.

Materijal i metode: Istraživanje je provedeno u Sarajevskom i Tuzlanskom kantonu. U Sarajevskom kantonu je pregledano 50 osoba sa Down sindromom, a u Tuzlanskom 40 osoba sa D.s., a anketirano je isto toliko roditelja/staratelja u oba kantona.

Rezultati: Analizom stavova o stomatološkim intervencijama i posjetama stomatologu ustanovljeno je podjeljeno mišljenje o tome da li se djeca anketiranih roditelja boje stomatoloških intervencija. Dok su roditelji sa VSS odgovorili uglavnom da se njihova djeca ne boje stomatoloških intervencija, roditelji ostalih stručnih sprema su odgovorili da se njihova djeca boje. U konačnici, neovisno do stručne spreme roditelja, 55,6% anketiranih roditelja je odgovorilo da se njihova djeca boje stomatološke intervencije, dok je 44,4% njih odgovorilo da se ne boje stomatološke intervencije. Anova test je pokazao da strah od stomatoloških intervencija nema statistički značajni uticaj na vrijednosti KEP-a, plaka indeksa i CPI kod ispitanika sa Down sindromom.

Zaključak: Anketirani roditelji su pokazali dobro znanje i pozitivne stavove o oralnom zdravlju, međutim, odgovori na pitanja o praksi su loši. Ovo istraživanje pruža korisne informacije koje mogu poslužiti kod kreiranja budućih ciljanih preventivnih i promotivnih projekata.

Ključne riječi: Oralno zdravlje, stav, roditelji, Down s.

ASSESSMENT OF ORAL HEALTH ATTITUDE IN CORELLATION WITH EDUCATIONAL LEVEL OF PARENTS/GUARDIANS OF CHILDREN WITH DOWN SYNDROME

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ABSTRACT

Introduction: Bosnia and Herzegovina is poor in epidemiological studies on the oral health of the population, especially people with Down syndrome. In order to understand the distribution of oral diseases, surveys of oral health knowledge, attitudes and practices are important. As part of this presentation, attitudes on the oral health of parents/guardians of people with D.s. will be published depending on education level.

Material and methods: The research was conducted in the Sarajevo and Tuzla cantons. 50 people with D.s. were examined in the Sarajevo Canton and 40 people with D.S. in the Tuzla Canton, and the same number of parents/guardians were surveyed in both cantons.

Results: An analysis of attitudes about dental interventions and visits to the dentist revealed a divided opinion. While parents with University degree answered mostly that their children are not afraid of dental interventions, parents of other professional programs responded that their children are afraid. Regardless of the professional education of the parents, 55.6% of the surveyed parents are answered that their children are afraid of dental intervention, while 44.4% of them answered they are not. Anova test showed that the fear of dental intervention has no statistically significant effect on the values of DMFT, plaque index and CPI index.

Conclusion: The surveyed parents showed good knowledge and positive attitudes about oral health, however, answers to practice questions are poor. This research provides useful information that can be used in the creation of future targeted prevention

Keywords: Oral health, attitude, parents, Down syndrome.

TRAUMATSKA KOŠTANA CISTA - INTERDISCIPLINARNI PRISTUP

PRIKAZ SLUČAJA

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SAŽETAK

Uvod: Traumatska koštana cista je solitarna, atipična koštana šupljina bez prisustva cističnog epitela u formi cistične ovojnice. Najčešće je slučaj radiološki nalaz, bez izraženih kliničkih simptoma, u području postranog dijela baze mandibule, ispod korijenova bočnih zuba. U anamnezi se izdvaja trauma kao etiološki faktor, ali često uzrok nije moguće utvrditi te se njeno nastajanje pripisuje poremećaju metaboliza kalcijuma, lokalnim poremećajima rasta kosti, venoznoj opstrukciji, ishemiji kosti uzrokovanoj primarnim vaskularnim ili neurogenim poremećajem.

Materijali i metode: Na Kliniku za dječiju i preventivnu stomatologiju javlja se pacijent M.K. u dobi od 16 godina a radi pregleda i sanacije zuba. Kao slučajni nalaz, na OPG snimku uočava se jednostrana, nepravilna, samostalna, jasno ograničena šupljina ispod korjenova zuba 34,35,36 koja doseže i komunicira sa mandibularnim kanalom. Ne uočava se resorpcija korjenova zuba 34,35,36. Klinički, meka tkiva nepromjenjena, zahvaćeni zubi bez promjene boje, patološke pokretljivosti ili osjetljivosti na mehaničke i hemijske podražaje, vitalitet zuba djelimično očuvan ili ne postoji. Pacijent negira traumu u anamnezi.

U konsultaciji sa oralnim hirurgom, u lokalnoj anesteziji i jednoj seansi uradi se endodontski tretman sa definitivnim obturacijom zuba 34,35,36, a nakon toga i cistektomija uz preparaciju zahvaćenog mandibularnog nerva na Klinici za oralnu hirurgiju.

PH nalaz pokaže prisustvo tragova krvnog koagulumu bez elemenata ćelija cistične ovojnice.

Radiološkom evaluacijom pacijenta nakon 3 i 6 mjeseci uočava se regeneracija koštanog tkiva te popunjavanje defekta kosti.

Zaključak: Prisustvo traumatske koštane ciste, zahtijeva usku saradnju i sinhronizovani interdisciplinarni pristup pedodonta i oralnog hirurga kako bi se postigao optimalan tretman u smislu preoperativne pripreme i hirurškog zbrinjavanja pacijenata

Ključne riječi: traumatska cista, slučajni radiološki nalaz, interdisciplinarni pristup

TRAUMATIC BONE CYST - INTERDISCIPLINARY APPROACH

CASE PRESENTATION

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ABSTRACT

Introduction: A traumatic bone cyst is a solitary, atypical bone cavity without presence of cystic epithelium in the form of a cystic sheath. Most often, it is an accidental radiological finding, without pronounced clinical symptoms, localized in the area of the lateral part of the base of the mandible, under the roots of the lateral teeth. In the anamnesis, it is possible to single out trauma as an etiological factor; however, in a large percentage, the cause cannot be determined and its occurrence is attributed to a disorder of calcium metabolism, local bone growth disorders, venous obstruction and bone ischemia caused by a primary vascular or neurogenic disorder.

Material and methods: Patient M.K. comes to the Clinic for Children's and Preventive Dentistry at the age of 16 and for the purpose of examination and restoration of teeth. As a random finding, a one-sided, irregular, independent, clearly delimited cavity under the roots of the teeth 34, 34, 36 can be seen on the OPG scan, which reaches and communicates with the mandibular canal. No resorption of tooth roots is observed 34,35,36.

Clinically, the soft tissues are unchanged, the affected teeth have no discoloration, pathological mobility, or sensitivity to mechanical and chemical stimuli, and the vitality of the teeth is partially preserved or does not exist. The patient denies any history of trauma.

In consultation with an oral surgeon, under local anesthesia, and in one session, endodontic treatment with definitive obturation of the tooth 34,35,36 is performed, followed by cystectomy with the preparation of the affected mandibular nerve at the Clinic for Oral Surgery.

The pH test showed the presence of traces of blood coagulum without elements of cystic membrane cells.

The radiological evaluation of the patient after 3 and 6 months shows regeneration of bone tissue and filling of bone defects.

Conclusion: The presence of a traumatic bone cyst requires close cooperation and a synchronized interdisciplinary approach of a pedodontist and an oral surgeon to achieve optimal treatment in terms of preoperative preparation and surgical care of patients.

Keywords: traumatic cyst, incidental radiological finding, interdisciplinary approach

PSEUDOCISTA

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SAŽETAK

Uvod: U ordinaciju za Oralnu kirurgiju upućena je petnaestogodišnja djevojčica. Pacijentica je bila u pripremi za ortodontsku terapiju. Panoramski radiološki pregled pokazao je veću osteolitičku sjenu u regiji donjeg desnog prvog molara. CBCT pokaže potpuni gubitak spongioze, očuvani kortikalis. Slabo naznačena interface linija ukazivala je na agresivniju tvorbu, slabije obrambene kapacitete organizma. Alveolarni kanal je potisnut prema donjem rubu mandibulae.

Zubi 45,46,47 su bili vitalni, caltensprey pretraga. Aspiracija se pokušala učiniti, tvrdi mandibularni corticalis. Sluznica iznad promjene bojom i reljefom je odgovarala urednome nalazu. Pacijentica bez dosadašnjih tegoba, dobroga zdravlja, negirala je preosjetljivosti na lijekove i anesteziju.

U preoperativnoj pripremi se endodontski liječio 45. Girlandiformni uz 47,46,45 i jednostrano

rasteretni mukoperiostalni režanj uz 44 omogućio je dobar pregled intraoperativnog polja, postavljen je na očuvanoj kosti i pošteđan po n. mentalis.

Intraoperativna koštana fenestra veličinom primjerena nalazu pokazala je šupljinu bez ovojnice i sadržaja. Učinila se atraumatska ekstrakcija 46. Kohleirao se prostor nalaza pseudociste, ispirao

fiziološkom otopinom i H₂O₂ do u potpuno čisto. Mukoperiostalni režanj se repositionirao na svoje mjesto i sašio resorptivnim šavovima.

Materijali i metode: Korišteni su materijali i metode sukladni kliničkom protokolu za enukleaciju ciste.

Zaključak: Pseudociste su progresivne lezije, mogu rasti asimptomatski, poprimiti velike dimenzije, uzrokovati opsežno razaranje tkiva, funkcijske i estetske poremećaje. Materijal za PHD može biti oskudan i neprikladan.

Ključne riječi: cista, pseudocista, enukleacija

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ABSTRACT

Introduction: A fifteen-year-old girl was referred to the Oral Surgery office. The patient was undergoing orthodontic therapy. An OPG showed a larger osteolytic shadow in the region 46.

CBCT scan showed complete loss of spongiosa, preserved cortex. A weakly indicated interface line indicated a more aggressive formation and weaker defensive capacities of the organism. The alveolar canal was pushed towards the mandible's bottom edge.

Teeth 45,46,47 were vital, caltensprey examination. Aspiration was attempted, hard mandibular corticalis. The mucosa above the change corresponded to a normal finding.

The patient was in good health, had no previous complaints and denied hypersensitivity to drugs and anesthesia.

In the preoperative preparation, 45 was treated endodontically. Garlandiform next to 47,46,45 and one-sided relief mucoperiosteal flap in next to 44 enabled a good examination of the intraoperative field, it was placed on preserved bone and spared by n. mentalis.

An intraoperative bony fenestra with a size appropriate to the findings showed a cavity without a sheath and contents. An atraumatic extraction was performed on 46.

The area where the pseudocyst was discovered, was coxheated and thoroughly cleaned with saline and H₂O₂.

The mucoperiosteal flap was repositioned and sutured with absorbable sutures.

Materials and methods: Materials and methods were used according to the clinical protocol for cyst enucleation.

Conclusion: Pseudocysts are progressive lesions which can grow asymptotically, be large dimensions, cause extensive tissue destruction, functional and aesthetic disorders. PHD material can be scarce and unsuitable.

Keywords: cyst, pseudocyst, enucleation

AKCIDENTALNO VAĐENJE ZAMETKA STALNOG ZUBA ZAMJENIKA KAO KOMPLIKACIJA VAĐENJA MLIJEČNOG ZUBA

PRIKAZ SLUČAJA

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SAŽETAK

Uvod: Vađenje zametka stalnog zuba predstavlja rijetku komplikaciju koja se može dogoditi tokom vađenja mliječnog zuba ukoliko korijenovi nisu resorbovani. Između korijenova mliječnih molara nalaze se zametci stalnih premolara koji mogu pri ekstrakciji da budu izvađeni zajedno sa mliječnim molarima.

Cilj rada: Cilj ovog rada je prikazati akcidentalno vađenje zametka stalnog zuba kao komplikaciju vađenja mliječnog drugog molara.

Prikaz slučaja: Prilikom vađenja mliječnog desnog drugog molara donje vilice kod 11-godišnje djevojčice akcidentalno je izvađen neeruptirani drugi premolar. Zametak stalnog zuba je odmah replantiran i postavljen je zavoj cink oksid eugenola. Kliničkim i radiografskim pregledom utvrđena je pravilna replantacija zametka donjeg drugog molara sa desne strane. Tri mjeseca nakon replantacije kliničkim pregledom utvrđeno je da je donji premolar sa desne strane eruptirao na svoje mjesto u zubnom nizu. Pacijentica nije imala subjektivne tegobe, na zubu se ne uočavaju nikakve patološke promjene, vitalan je i nije osjetljiv na perkusiju. Godinu dana nakon replantacije radiografski nalaz je pokazao fiziološki blago otvoren apex bez periapikalnih promjena.

Zaključak: U slučaju akcidentalnog vađenja zametka stalnog zuba tokom vađenja mliječnog zuba može se očekivati da će stalni zub imati dobru prognozu ukoliko se neposredno nakon akcidentalnog vađenja vrati u alveolu.

Ključne riječi: akcidentalno vađenje zametka stalnog zuba, replantacija zametka, mliječni zubi

ACCIDENTAL EXTRACTION OF THE GERM OF A PERMANENT TOOTH AS A COMPLICATION OF EXTRACTION OF A PRIMARY TOOTH CASE REPORT

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ABSTRACT

Introduction: Extraction of the germ of a permanent tooth is a rare complication that can occur during the extraction of a primary tooth if the roots are not resorbed. Between the roots of the primary molars are the germs of the permanent premolars, which can be taken out together with the primary molars during extraction.

The objective: The aim of this study is to show the accidental extraction of the germ of a permanent tooth as a complication of the extraction of the primary second molar.

Case report: During extraction of the primary mandibular right second molar in an 11-year old girl, the unerupted second premolar was accidentally extracted. The extruded germ of the second premolar was immediately repositioned and applied a zinc oxide eugenol bandage. Clinical and radiographic examination showed that the immediately replanted immature premolar was oriented and positioned correctly. Three months after replantation, a clinical examination revealed that the lower right premolar had erupted into its place in the dental arch. The patient reported no complaints, no pathological changes can be observed on the tooth, it is vital and not sensitive to percussion. After 1 year radiograph showed root with slightly open apex and no periapical inflammation.

Conclusion: In the case of accidental extraction of the germ of permanent tooth during extraction of primary tooth it can be expected that the permanent tooth will have a good prognosis if it returns to the socket immediately after the accidental extraction.

Keywords: accidental tooth extraction, replantation, primary teeth

POSTANESTEZIONI UGRIZ ZA USNU

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SAŽETAK

Uvod: U savremenoj kliničkoj praksi nemoguće je zamisliti uspješno provođenje stomatoloških intervencija bez primjene lokalne anestezije. Tokom djelovanja anestetika na meka tkiva, može doći do njihove traumatske povrede ugrizom. Postanestezioni ugriz je vrsta mekotkivnog oštećenja prouzrokovana samoozljedom te se smatra rijetkim stanjem. Često je zbunjujuće i može dovesti do pogrešne dijagnoze. U dostupnoj literaturi rijetki su dokumentovani slučajevi postanestezionog mastikatornog ulkusa, iako je to relativno česta pojava u dječijoj stomatologiji. Smatra se da je učestalost 13%.

Cilj rada je prikazati slučaj ugriza donje usne nakon davanja lokalne anestezije kao podsjetnik za prevenciju ovog stanja.

Materijal i metode: U ordinaciju za dječiju i preventivnu stomatologiju se javila devetogodišnja djevojčica u pratnji majke, sa otokom i bolovima u predjelu donje usne. Heteroanamnestički smo dobili podatak da je, dan ranije, pacijentica primala lokalnu anesteziju zbog vađenja donjeg lijevog mliječnog kaninusa. Klinički, kompletna lijeva polovina donje usne je bila edematozna, sa fibrinskim nakupinama i deskvamiranim epitelom, te se postavi Dg: Morsicatio labii inferioris lateri sinistri post anaesthesia. Uključi se lokalna terapija za smanjenje boli, otoka, ubrzanja epitelizacije te sprječavanje sekundarne infekcije.

Zaključak: Često savjeti stomatologa izrečeni po završenoj intervenciji ne budu zapamćeni od strane pacijenta ili roditelja. Stoga je preporučljivo kompletne upute dati nakon apliciranja lokalnog anestetika, dok se čeka kompletno djelovanje iste, a po završenoj intervenciji još jednom ih ponoviti, kako bi prevenirali ugrizne povrede mekih tkiva.

Ključne riječi: Lokalna anestezija, djeca, ulcus traumatica postanestesionem

POSTANESTHETIC LIP BITE

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ABSTRACT

Introduction: In modern clinical practice, it is impossible to imagine the successful implementation of dental interventions without use of local anesthesia. As a result of the anesthetic, a traumatic bite injury may occur. It most often occurs on the lower lip. It is often confused with other disorders affecting the oral mucosa, which can lead to misdiagnosis. In the available literature, documented cases of postanesthesia ulcer are rare, although it is a relatively common occurrence in pediatric dentistry. The frequency is thought to be 13%.

The aim of the paper is to present a case of biting the lower lip after the administration of local anesthesia as a reminder for the prevention of this condition.

Material and methods: A nine-year-old girl, accompanied by her mother, came to the pediatric and preventive dentistry office with swelling and pain in the area of the lower lip. Heteroanamnestically we obtained that, the day before, the patient received local anesthesia for the extraction of the lower left deciduous canine. Clinically, the entire left half of the lower lip was edematous, with fibrin accumulations and desquamated epithelium. The concluded diagnosis was Dg: Morsicatio labii inferioris lateri sinistri post anaesthesia. Local therapy was included to reduce pain, swelling, the acceleration of epithelization and prevention of secondary infection.

Conclusion: The dentist's advice given after the intervention often doesn't get remembered by the patient or parents. Therefore, it is advisable to give complete instructions after the application of the local anesthetic while waiting for its complete effect and to repeat them once more after the intervention in order to prevent bite injuries of soft tissues.

Keywords: Local anesthesia, children, ulcus traumatica postanestesionem

TERAPIJSKI TRETMAN TRAUMATIZIRANIH GORNJIH CENTRALNIH SJEKUTIĆA KOD OSMOGODIŠNJAKA

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SAŽETAK

Uvod: Povrede zuba mogu dovesti do različitih oštećenja dentalnih tkiva i potpornih struktura. Predstavljaju jedan od glavnih problema u dječjoj stomatologiji, a zbog svoje učestalosti postaju i ozbiljan javnozdravstveni problem. Najčešće su zastupljene u dječjoj u dobi, između 1. i 3., kao i 8. i 11. godine.

Prikaz slučaja: Djevojčica stara 8 godina, u pratnji oca, javlja se u ambulantu dječje stomatologije u 11. mjesecu 2019. godine, nakon pada u školskom dvorištu, koji je doveo do povrede zuba. Vrijeme proteklo od povrede je 2 sata. Kliničkim pregledom, ekstraoralno se uoče povrede desne strane lica, periorbitalno i desnog krila nosa, u vidu površnih rana i edem gornje usne s desne strane. Intraoralnim pregledom se ustanovi horizontalna fraktura krunica zuba 11 i 21, bez ekspaniranja pulpe, bez znakova luksacije, meke strukture bolno osjetljive na palpaciju. Nakon toaleta ekstraoralnih i intraoralnih povreda mekih tkiva, pristupi se aplikaciji „zavoja“ Ca-hidroksida i glasjonomer cementa na frakturirane krune zuba s ciljem zaštite pulpodentinskog kompleksa od vanjskih faktora. Pacijentici ordinirana i antibiotska terapija, AT zaštita, obloge acidi borici 3 %, Chymoral forte 3X1. Kontrolni pregledi planirani po protokolu za zbrinjavanje frakture krune zuba bez komplikacija.

Rezultat: Trideset dana nakon povrede zubi su restaurirani kompozitnim materijalom. Pacijentica nema subjektivnih smetnji a nadogradnje zuba su funkcionalno i estetski prihvatljive. Pacijentica se javlja na redovne kontrole kod dječijeg stomatologa, gdje se kontroliše vitalitet povrijeđenih zuba

THERAPEUTIC TREATMENT OF TRAUMATIZED UPPER CENTRAL INCISORS IN EIGHT-YEAR-OLDS

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ABSTRACT

Introduction: Tooth injuries can lead to various damages to dental tissues and supporting structures. They represent one of the main problems in children's dentistry, and due to their frequency, they also become a serious public health problem. They are most often represented in children's age, between 1 and 3, as well as 8 and 11 years.

Case report: An 8-year-old girl, accompanied by her father, was referred to the children's dental clinic in November 2019, after a fall in the school yard resulted in a tooth injury. Two hours elapsed since the injury. Clinical examination was performed, injuries were observed extra orally on the right side of the face, periorbital and on the right wing of the nose, in the form of superficial wounds and edema of the upper lip on the right side. An intraoral examination revealed a horizontal fracture of the crowns of teeth 11 and 21, without exposing the pulp, without signs of luxation, soft structure painfully sensitive to palpation. After treatment of extraoral and intraoral soft tissue injuries, the application of "bandages" of Ca-hydroxide and glass ionomer cement was applied to fractured tooth crowns with the aim of protecting the pulpodentine complex from external factors. Antibiotic therapy, AT protection, boric acid compresses 3%, Chymoral forte 3X1 was administered. Control examinations were planned according to the protocol for care of tooth crown fracture without complications.

Results: Thirty days after the injury, the teeth were restored with composite material. The patient had no subjective disturbances and the dental composite reconstructions were functionally and aesthetically acceptable. The patient was coming for regular check-ups at the children's dentist, where the vitality of the injured teeth was checked.

REVASKULARIZACIJA MLADOG TRAJNOG ZUBA SA NEKROZOM PULPE I NEZAVRŠENIM RASTOM KORIJENA

PRIKAZ SLUČAJA

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SAŽETAK

Uvod: Revaskularizacija predstavlja postupak invaginacije nediferenciranih stanica iz apikalne regije u korijenski kanal, nakon njegove dekontaminacije antibioticima.

Cilj rada: Cilj ovog rada je na kliničkom slučaju prikazati postupak revaskularizacije mladog trajnog zuba sa nezavršenim rastom korijena.

Prikaz slučaja: Kliničkim i radiografskim pregledom kod 10-godišnje djevojčice uočene su promjene u vidu nekroze pulpe zuba 35 i fistule na lingvalnoj strani alveolarnog grebena. Nakon hemijskomehaničke obrade korijenskog kanala, u dva navrata je ponovljeno punjenje antibioticom sa ciljem potpune dekontaminacije kanala. Nakon toga je u trećoj seansi izazvano krvarenje iz periapikalnog tkiva, i punjenje korijenskog kanala sa krvlju do caklenskocementne granice. Na krvni ugrušak je apliciran mineral trioksid agregat (MTA). Kruna zuba je restaurirana kompozitnim ispunom. Nakon 3 mjeseca se na kliničkoj i radiološkoj kontroli observira odsustvo kliničkih znakova upale i radiološki vidljiv nastavak razvoja apeksa korijena.

Zaključak: Revaskularizacija je dobra alternativa konvencionalnim postupcima apeksifikacije sa CaOH₂ kod zuba sa nezavršenim rastom korijena i nekrozom pulpe.

Ključne riječi: regenerativna endodoncija, apeksifikacija, mineral trioksid (MTA)

REVASCULARIZATION OF YOUNG PERMANENT TOOTH WITH PULP NECROSIS AND INCOMPLETE FORMATION OF THE ROOT

CASE REPORT

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ABSTRACT

Introduction: Revascularization is the procedure of invagination of undifferentiated cells from the apical region in the root canal after its decontamination with antibiotics.

The objective: The aim of this work is to present a clinical case regarding the procedure of revascularization of a young permanent tooth with incomplete root growth.

Case report: Case report: Clinical and radiographic examination of a 10-year-old girl revealed changes in the form of necrosis of the pulp of tooth 35 and a fistula on the lingual side of the alveolar ridge. After the chemo mechanical treatment of the root canal, it was filled with antibiotic paste on two occasions with the aim of complete decontamination of the root canal. After that, in the third session, bleeding from the periapical tissue was induced and root canal was filled with blood up to the enamel-cement border. Mineral trioxide aggregate (MTA) was applied to the blood clot. The crown of the tooth was restored with a composite filling. After 3 months, the absence of clinical signs of inflammation is observed and radiologically visible continuation of the development of the root apex can be observed during radiological control. **Conclusion:** The use of revascularization is a good alternative to conventional apexification procedures with CaOH₂ in teeth with incomplete root growth and pulp necrosis.

Keywords: regenerative endodontics, apexification, mineral trioxide (MTA)

HIPODONCIJA – terapijske mogućnosti**Šehidić Selma^{*1}, Pejčinović Tanja², Udovičić Lejla², Murtić Lejla², Gagula Irena², Nudžejma Čengić²**¹Dom zdravlja s poliklinikom Dr Mustafa Šehović Tuzla²Javna ustanova Dom zdravlja Kantona Sarajevo**SAŽETAK**

Uvod: Hipodoncija predstavlja nedostatak jednog do šest zuba, u mliječnoj ili stalnoj denticiji. Incidenca hipodoncije u mliječnoj denticiji je neznatna, 0,1-0,9%, i najčešće je praćena hipodoncijom u stalnoj denticiji. Javlja se podjednako i kod dječaka i djevojčica. Hipodoncija u stalnoj denticiji se javlja u 2-9% slučajeva, češće kod djevojčica. Etiološki, genetika igra najčešću ulogu u nastanku hipodoncije. Gornji lateralni incizivi su najčešći zubi koji nedostaju, a prate ih gornji i donji drugi premolari.

Prikaz slučaja: Pacijent, 5 godina, u pratnji majke, javlja se u martu 2013 na prvi stomatološki pregled. Kliničkim pregledom ustanovljen nedostatak gornjih mliječnih lateralnih inciziva, obostrano. Roditeljima a ni djetetu ne smeta isti nedostatak. U narednim posjetama proveden je preventivni program, dijete se na dalje preglede naručuje svakih 6 mjeseci. Nakon smjene centralnih inciziva uradi se OPG snimak i konstatuje se nedostatak zametaka gornjih lateralnih inciziva. Pacijent se uputi ortodontu. Roditeljima su predložene mogućnosti stomatološke (ortodontsko-implantološko protetske rehabilitacije) Odbijaju tretman jer im stanje ne smeta.

Pacijent se sa 14 godina javlja na pregled navodeći da mu smeta izgled očnjaka koji su špicasti i navodi da to utiče na njegovo samopouzdanje.

Odlučio je u dogovoru s roditeljima na preoblikovanje gornjih lateralnih inciziva kompozitnim materijalima.

Zaključak: Rana dijagnoza i multidisciplinarni pristup, kao i navike i mogućnosti pacijenta i roditelja su neophodni za potpunu estetsku, funkcionalnu i psihološku rehabilitaciju.

Ključne riječi: Hipodoncija, rana dijagnoza, rehabilitacija

HYPODONTIA – therapeutic possibilities**Šehidić Selma^{*1}, Pejčinović Tanja², Udovičić Lejla², Murtić Lejla², Gagula Irena², Nudžejma Čengić²**¹Health Care Center with Polyclinic Dr Mustafa Šehović Tuzla²Public Institution Health Care Center the Sarajevo Canton**ABSTRACT**

Introduction: Hypodontia is defined as absence of one to six teeth or dental follicle, in both primary and permanent dentition. The incidence of Hypodontia in primary dentition is 0,1-0,9%, and it is usually followed by hypodontia in permanent dentition. It is found in both, girls and boys, equally. Hypodontia in permanent dentition is found in 2-9% cases and it usually affects girls. Children inherit hypodontia, but in some cases it can be symptom of some genetic disorders. Teeth that are missing are usually upper lateral incisors, but upper or lower second premolars can also be affected.

Case study: Patient (5), accompanied by his mother was referred to the dental exam for the first time. Clinical exam was performed and the upper lateral deciduous incisors were found missing. Mother didn't find it a big deal. Preventive program was performed in later visits and patient was followed up every six months until first upper central incisors were there. The OPG was done and it showed the lack of permanent lateral incisors follicles. The patient was referred to the orthodontist who presented both parents and the child the possibilities of further treatment (orthodontics, implantology and prosthetics) and they didn't want to accept it.

After some years, when child was 14, he was in puberty and asked about the appearance of his teeth. His upper canines were too pointy. The possibility of changing the shape of canines with composite materials was presented, and both the child and his parents accepted that as a solution.

Conclusion: Early diagnosis and multidisciplinary approach, as well as the child and parents' habits and possibilities have to be considered in finding the best solution in esthetic, functional and psychological rehabilitation of our patients.

Keywords: hypodontia, early diagnosis, rehabilitation

METODA POSTEPENOG UKLANJANJA KARIJESA KOD MLADIH TRAJNIH ZUBA

PRIKAZ SLUČAJA

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SAŽETAK

Uvod: Duboke karijesne lezije mladih trajnih zuba najčešći su problem kod djece. Postepeno uklanjanje karijesnih masa (engl. stepwise caries excavation, SWCE) predstavlja višeseansni terapijski postupak sa ciljem očuvanja integriteta i kontinuiteta pulpodentinskog kompleksa (PDK) u ovakvim situacijama. Indikovano je kod klinički zdrave pulpe ili pojave reverzibilnog pulpitisa mladih trajnih zuba, u slučajevima nemogućnosti potpunog uklanjanja karijesnih masa u prvoj posjeti. Suština SWCE ogleda se u kariostatskom djelovanju na preostali aficirani dentin, kao i poticanju reparatornih sposobnosti PDK stvaranjem terciarnog dentina kroz vrijeme, usljed dobrih hemijskih i zaptivnih djelovanja korištenih materijala.

Metodologija i rezultati: Pacijentica dobi 13 godina javila se na našu Kliniku. Na osnovu kliničkog pregleda i RTG nalaza ustanovila se dijagnoza Caries profunda complicata dentis 47. U prvoj posjeti se pristupilo uklanjanju karijesa sa svih zidova kaviteta izuzev pulpalnog ostavljanjem sloja aficiranog dentina. Preparirani kavitet se dezinficirao sa 1% NaOCl, na aficirani dentin se aplicirao Ca(OH)₂ lajner, zatim ZnOE i privremeni GJC ispun. U sljedećoj posjeti, po postizanju inicirane terciarne dentinogeneze nakon perioda od 6 mjeseci, uklonit će se aficirani dentin, uraditi IPP i zub će se definitivno restaurirati.

Zaključak: SWCE predstavlja metodu izbora kod tretmana dubokih karijesnih lezija mladih trajnih zuba zdrave ili reverzibilno promijenjene pulpe u slučaju nemogućnosti potpunog uklanjanja karijesa u prvoj posjeti, čime se omogućava očuvanje njihovih bioloških vrijednosti kroz duži vremenski period.

Ključne riječi: mladi trajni zubi, duboke karijesne lezije, postepeno uklanjanje karijesnih masa, Ca(OH)₂

STEPWISE CARIES EXCAVATION METHOD (SWCE) IN YOUNG PERMANENT TEETH

CASE REPORT

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ABSTRACT

Introduction: Deep carious lesions of young permanent teeth are the most common problem in children. SWCE is a multi-session therapeutic procedure aimed to preserve the integrity and continuity of the pulp-dentine complex (PDC) in these situations. It is indicated in cases of clinically healthy pulp/reversible pulpitis, with impossibility of complete caries removal in the first visit. The SWCE essence is reflected in the cariostatic effect on the remaining affected dentin and stimulation of the PDC reparative abilities by creating tertiary dentin over time, due to the good chemical and sealing effects of the used materials.

Methodology and results: A 13-year-old girl referred to our Clinic, with the clinical and X-ray diagnosis of deep carious lesion in tooth 47. In the first visit caries was removed from all of the cavity walls except the pulpal one, leaving there affected dentin layer. The prepared cavity was disinfected with 1% NaOCl, a Ca(OH)₂ liner was then applied to the affected dentin, followed by ZnOE and a temporary GIC filling. In the next visit, due to achieving the initiated tertiary dentinogenesis after a period of 6 months, the affected dentin will be removed, IPP will be performed and the tooth will be definitively restored.

Conclusion: SWCE represents the method of choice in the treatment of deep carious lesions of young permanent teeth with healthy or reversibly changed pulp in case of impossibility of complete caries removal in the first visit enabling the preservation of their biological values over a longer period of time.

Keywords: young permanent teeth, deep carious lesions, stepwise caries excavation, Ca(OH)₂

PROCJENA KEP INDEKSA KOD PACIJENATA UPUĆENIH NA ORTODONTSKI PREGLED

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SAŽETAK

Uvod: Prevalenca karijesa u ranom djetinjstvu zabilježena je u gotovo 30-60% predškolske djece na globalnom nivou. Prisustvo karijesa kod pacijenata upućenih na ortodontski pregled prolongira početak ortodontske terapije, a može biti uzrok nastanka ortodontske nepravilnosti. Prije bilo kakve aktivne ortodontske terapije nužno je da pacijent provodi zadovoljavajuću oralnu higijenu i ima izliječene sve kariozne lezije kako na mliječnim, tako i na stalnim zubima.

Cilj istraživanja bio je utvrditi KEP/kep index kod pacijenata upućenih na prvi ortodontski pregled sa akcentom na procentualni odnos pacijenata sa i bez karijesa, pacijenata sa karijesom na mliječnim i stalnim zubima, saniranih i pacijenata bez KEP indexa.

Metode i materijal: Istraživanje je provedeno na Univerzitetu u Sarajevu Stomatološki fakultet sa stomatološkim kliničkim centrom, Katedra i Klinika za ortodontiju. Studijom su bili obuhvaćeni svi pacijenti koji su upućeni na prvi ortodontski pregled u periodu od šest mjeseci. Pregled je obavljen prema preporukama Svjetske zdravstvene organizacije, a evaluirao se KEP/kep indeks. Dijagnoza karijesa također je postavljena po preporukama Svjetske zdravstvene organizacije.

Rezultati: Od 300 pacijenata utvrđeno je da 128 (42,7%) ima karijes, od toga 55(43%) na mliječnim, a 73(57%) na stalnim zubima. 75(43,6%) pacijenata ima plombirane, a 40(23,3%) ekstrahirane zube.

Zaključak: Rezultati studije su pokazali visok KEP/kep index kod pacijenata upućenih ortodontu. S obzirom da ortodontska terapija otežava održavanje oralne higijene i povećava rizik nastanka karijesa, ovi rezultati pozivaju na oprez. Samo u potpunosti sanirani pacijenti mogu biti upućeni na prvi ortodontski pregled.

Ključne riječi: KEP/kep indeks, ortodontski tretman

KEP INDEX ASSESSMENT AMONG PATIENTS REFERRED TO ORTHODONTIC EXAMINATION

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ABSTRACT

Background: The prevalence of caries in early childhood was recorded in almost 30-60% of preschool children globally. The presence of caries in patients referred for orthodontic examination prolongs the beginning of orthodontic therapy and can be the cause of orthodontic irregularities. Before any active orthodontic therapy, it is essential that the patient maintains satisfactory oral hygiene and has cured all carious lesions on both deciduous and permanent teeth.

The objective of the research was to determine the KEP/kep index in children and adolescents referred for the first orthodontic examination.

Methods and materials: The research was conducted at the Faculty of Dentistry, University of Sarajevo, at the Department of Orthodontics. The study included all patients referred for the first orthodontic examination within six months. The examination was performed according to the recommendations of the World Health Organization, and the KEP/kep index was evaluated. The diagnosis of caries was also made according to the recommendations of the World Health Organization.

Results: Out of 300 patients, it was determined that 128 (42,7%) had caries, of which 55(43%) were on primary teeth and 73(57%) were on permanent teeth. 75(43,6%) patients have fillings, and 40(23,3%) have extracted teeth.

Conclusion: The results of the study showed a high KEP/kep index in patients referred to an orthodontist. Orthodontic therapy makes it difficult to maintain oral hygiene and increases the risk of tooth decay, these results call for caution. Only fully rehabilitated patients can be referred for the first orthodontic examination.

Keywords: KEP/kep index, orthodontic treatment

UČESTALOST TEMPOROMANDIBULARNIH DISFUNKCIJA KOD ORTODONTSKIH PACIJENATA

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SAŽETAK

Temporomandibularne disfunkcije (TMD) predstavljaju jedno od najčešćih oboljenja kraniofacijalne regije koje karakterišu funkcionalne smetnje mastikatornog aparata. Najčešći simptomi TMD su glavobolja, bol u području lica, bol unutar viličnih zglobova, bol u uhu i bol u vratu. Od znakova TMD su najčešće prisutni: ograničeni pokreti donje vilice, devijacija mandibule, zvukovi škljocanja, zaključavanje vilice i dislokacija. Prema podacima iz literature, učestalost TMD je najčešća u dobi između 45 i 65 godina. Češće obolijevaju žene nego muškarci.

Materijal i metode istraživanja: Ukupan broj ispitanika unutar ovog istraživanja iznosio je 300, 141 muško i 159 ženskih ispitanika. Istraživanje je provedeno prema RDC/TMD dijagnostičkom protokolu koji se sastoji iz kliničkog dijela istraživanja i anamnestičkog upitnika.

Rezultati istraživanja: Rezultati istraživanja pokazuju da su znakovi i simptomi TMD učestaliji kod ženskih ispitanika. Prisutno je signifikantno učestalije prisustvo glavobolje kod ženskih u odnosu na muške ispitanike ($p < 0,03$). Zvuk škljocanja je znatno češće zabilježen kod žena u odnosu na muškarce.

Zaključak: Na osnovu ove studije utvrđeno je statistički signifikantno učestalije prisustvo kako znakova tako i simptoma TMD kod ženskih ispitanika.

Ključne riječi: temporomandibularne disfunkcije, malokluzije, ortodoncija

PREVALENCE OF TEMPOROMANDIBULAR DISORDERS IN ORTHODONTIC PATIENTS

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ABSTRACT

Temporomandibular dysfunctions (TMD) are one of the most common diseases of the craniofacial region characterized by functional disorders of the masticatory apparatus. Patients with TMD often complain about the following symptoms: headache, facial pain, jaw pain, ear pain and neck pain. The most common signs of TMD include: restricted jaw mobility, deviation of the lower jaw, clicking sounds, jaw locking and dislocation. The TMD incidence is most common between the ages of 45 and 65 with TMD affecting women more often than men.

Materials and methods: The total number of respondents within this study was 300, 141 men and 159 women. The research was conducted according to the RDC/TMD protocol. The protocol consists of an anamnestic questionnaire and a clinical trial.

Results: The results of this study have shown that signs and symptoms of TMD are more frequent in female subjects. A statistically significantly higher percentage of female respondents have experienced headache problems ($p < 0,03$). Clicking sounds occurred more frequently in women than in men.

Conclusion: Obviously, there is a significantly more frequent presence of TMD signs and symptoms in female subjects.

Keywords: temporomandibular disorders, malocclusion, orthodontics

PROCJENA RASTA I RAZVOJA U ORTODONCIJI

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SAŽETAK

Uvod: Procjena rasta i razvoja ključni je faktor u ortodontskoj dijagnostici i planiranju ortodontske terapije za pacijente sa skeletnim ortodontskim nepravilnostima. Zbog toga je važno znati vrijeme pubertetskog ubrzanja rasta i time iskoristiti potencijal rasta pacijenta. Postoji više različitih parametara za procjenu rasta, od kojih su neki manje, a neki više pouzdani.

Cilj ovog rada je opisati parametre rasta i razvoja za procjenu biološke dobi.

Materijali i metode

Pregledom su obuhvaćeni radovi iz sljedećih baza podataka: Pubmed, Google Scholar, Semantic Scholar, a prihvatljivi su bili samo radovi objavljeni u cjelini. Izbor radova je izvršen uz upotrebu ključnih riječi i izraza, kao i kombinacijom istih (ortodoncija, parametri rasta, rendgenogram šake, stadij razvoja cervikalnih kralježaka). Uključeni su radovi objavljeni na engleskom jeziku, u periodu od 2010. do 2023 godine.

Rezultati: U ovom radu će biti opisani najznačajniji parametri rasta kao i njihove prednosti i nedostaci.

Zaključak: Prema podacima literature za procjenu biološke dobi i stepena razvoja općenito moguće je primijeniti niz kliničkih, radioloških i biohemijskih indikatora zrelosti. Manje pouzdani parametri rasta su: hronološka dob, težina i visina, spolna zrelost i hronologija nicanja zuba. Pouzdani i najviše klinički primjenjivi parametri su radiološki i biohemijski parametri.

Ključne riječi: ortodoncija, parametri rasta, dentalna dob, rendgenogram šake, stadij razvoja cervikalnih kralježaka

ASSESSMENT OF GROWTH AND DEVELOPMENT IN ORTHODONTICS

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ABSTRACT

Introduction : Assessment of growth and development is a key factor in orthodontic diagnosis and orthodontic therapy planning for patients with skeletal orthodontic malocclusions. It is important to know the time of puberty acceleration of growth and use the growth potential of the patient. There are several different parameters for estimating growth, some less and some more reliable.

The aim of this review is to describe the parameters of growth and development indicators for estimating biological age for clinical purposes.

Materials and methods: The review included articles from the following databases: PubMed, Google Scholar, Semantic scholar where only articles published in English were acceptable. The selection of articles was made with the use of key words (orthodontics, skeletal maturity, indicators, dental age, cervical vertebral maturation, biomarkers etc.) and phrases, as well as their combination. Articles published in the period from 2010. to 2023. were analyzed.

Results: This article will describe the most important growth parameters as well as their advantages and disadvantages.

Conclusion: According to literature data, it is generally possible to apply a number of clinical, radiological and biochemical indicators of maturity to assess biological age and level of development.

Less reliable parameters of growth are: chronological age, weight and height, sexual maturity and chronology of tooth eruption.

Reliable and most clinically applicable parameters are radiological and biochemical parameters.

Keywords: orthodontics, growth parameters, dental age, cervical vertebral maturation, biomarkers.

ORALNE NAVIKE I OROFACIJALNA MORFOLOGIJA

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SAŽETAK

Uvod: Oralne navike, poput sisanja prsta, tiskanja jezika i načina disanja, odnosno disanja na usta, mogu doprinijeti razvoju određenih malokuzija i promjena orofacijalne morfologije. Dok loše navike mogu ometati položaj zuba i normalan obrazac skeletalnog rasta, s druge strane opstrukcija gornjih disajnih puteva, što rezultira disanjem na usta, mijenja obrazac kraniofacijalnog rasta uzrokujući malokluziju. Cilj ovog istraživanja je utvrditi da li postoji korelacija između loših oralnih navika i nastanka malokluzija, a samim tim i promjena orofacijalne morfologije među pacijentima Klinike i Katedre za ortodontiju Stomatološkog fakulteta sa stomatološkim kliničkim centrom Univerziteta u Sarajevu.

Materijal i metode: U ovom istraživanju su uključeni pacijenti Klinike i Katedre za ortodontiju Stomatološkog fakulteta sa stomatološkim kliničkim centrom Univerziteta u Sarajevu bez kraniofacijalnih anomalija, dobrog psiho-fizičkog stanja, te su evidentirane njihove oralne navike i ortodontske anomalije koje imaju.

Rezultati: Rezultati istraživanja će biti statistički obrađeni, kako deskriptivnom statistikom tako i statističkim provjerama za testiranje nivoa povezanosti ispitivanih varijabli.

Zaključak: Na osnovu dobijenih rezultata formulisat će se zaključci iz kojih će proisteći preporuke provedenog istraživanja.

Ključne riječi: loše oralne navike, malokluzije, orofacijalna morfologija, ortodontija.

ORAL HABITS AND OROFACIAL MORPHOLOGY

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ABSTRACT

Introduction: Oral habits, such as finger-sucking, tongue thrusting and mouth breathing can contribute to the development of certain malocclusions and changes in orofacial morphology. While bad habits can interfere with tooth position and the normal skeletal growth pattern, on the other hand, upper airway obstruction resulting in mouth breathing, alters the craniofacial growth pattern causing malocclusion. The aim of this research is to determine whether there is a correlation between bad oral habits and the occurrence of malocclusions, and therefore changes in orofacial morphology among patients of the Clinic and Department of Orthodontics of the Faculty of Dentistry with Dental Clinical Center of the University of Sarajevo.

Material and methods: This study included patients from the Clinic and Department of Orthodontics of the Faculty of Dentistry with Dental Clinical Center of the University of Sarajevo without craniofacial anomalies, in good psycho-physical condition and their oral habits and orthodontic anomalies were recorded.

Results: The results of the research will be statistically processed, both with descriptive statistics and with statistical tests to test the level of connection between the examined variables.

Conclusion: Based on the obtained results, conclusions will be formulated from which the recommendations of the conducted research will be derived.

Key words: bad oral habits, malocclusions, orofacial morphology, orthodontics.

USPOREDBA ŠIRINE ZUBA NA 3D PRINTANIM I VIRTUALNIM ORTODONTSKIM MODELIMA

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SAŽETAK

Uvod: Napredovanje tehnologije dovelo je do poboljšanja rada u svim zanimanjima pa tako i u dentalnoj medicini. U ortodontici kao zamjena za kovencionalne otiske usne šupljine i studijske modele čeljusti našli su se intraoralni skeneri, 3D printeri i računalni softveri. Printani studijski modeli predstavljaju vrstu fizičkih radnih modela dobivenih pomoću 3D printera konverzijom digitalnog snimka. Računalni softveri omogućuju stvaranje virtualnog modela iz intraoralnih skenova. Cilj rada je utvrditi razlike između 3D printanih i virtualnih modela u meziodistalnim širinama zuba.

Materijali i metode: U istraživanje je uključeno 20 printanih i 20 virtualnih modela dobivenih intraoralnim skeniranjem čeljusti 20 pacijenata. Mjerenja su rađena sa digitalnim pomičnim mjerilom na printanim modelima te u ortodontskom softveru na virtualnim modelima. U istraživanje su uključeni zubi punog zubnog luka počevši od prvog molara s jedne strane do prvog molara druge strane čeljusti.

Rezultati: Rezultati su pokazali kako nema statistički značajnih razlika među modelima u prikazivanju mezodistalne širine zuba i visoku ponovljivost mjerenja.

Zaključak: Iako virtualni modeli imaju nekih prednosti pred printanim u smislu nepotrebnosti prostora za skladištenje, lakše komunikacije sa drugim ordinacijama i zubotehničkim laboratorijima te mogućnosti planiranja terapije isključivo u softveru, za odluku o korištenju jednih ili drugih modela potrebno je više istraživanja na ovu temu.

Ključne riječi: ortodontski modeli, printani modeli, virtualni modeli, digitalna ortodontcija

COMPARISON OF TEETH WIDTH ON 3D PRINTED AND VIRTUAL ORTHODONTIC MODELS

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ABSTRACT

Introduction: Advances in technology have led to work improvements in all professions, including dental medicine. In orthodontics, intraoral scanners, 3D printers and computer software have been used as a replacement for conventional impressions and study models of jaws. Printed study models are a type of physical study models obtained using a 3D printer by converting a digital image. Computer software allows the creation of a virtual model from intraoral scans. Objectives of this research is to determine the differences between 3D printed and virtual models in the mesiodistal widths of the teeth.

Materials and methods: The research included 20 printed and 20 virtual models obtained from intraoral scans of the jaws of 20 patients. Measurements were made with a digital caliper on printed models and in orthodontic software on virtual models. The research included teeth of the full dental arch starting from the first molar on one side to the first molar on the other side of the jaw.

Results: The results showed that there are no statistically significant differences between the models in displaying the mesiodistal width of the teeth and high reproducibility of measurements.

Conclusion: Although virtual models have some advantages over printed models in terms of no need for storage space, easier communication with other offices and dental laboratories and the possibility of planning therapy exclusively in software, the decision to use one or the other model requires more research on this topic.

Keywords: orthodontic models, printed models, virtual models, digital orthodontics

ZNAČAJ CBCT DIJAGNOSTIKE U ODREĐIVANJU PLANA TERAPIJE KOD KOMPLIKACIJA ENDODONTSKIH LIJEČENJA - PRIKAZ SLUČAJA

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SAŽETAK

Uvod: CBCT dijagnostika omogućava nam uvid o anatomskim strukturama regije od interesa. Snimci dobijeni CBCT-om su jednostavni za korištenje, obuhvataju koštane i mekotkivne strukture, te daju sa velikom preciznošću relevantne podatke za razliku od 2D snimaka.

Materijal i metode: Pacijent E.B., 21 godina, upućen od ordinirajućeg stomatologa zbog sumnje na false route. Nakon pregleda u Prijemnoj ambulanti evidentira se trepaniran zub 21. Endodontskom instrumentacijom uočeno je prisustvo hemoragičnog eksudata. Sprovedenjem dalje dijagnostike urađen je RVG snimak te analizom istog ustanovljena je periapikalna svjetlina oko korijena zuba 21. Na osnovu prethodnih dijagnostičkih postupaka predložen je CBCT snimak. Analizom CBCT dijagnosticirano je postojanje periapikalne promjene i njen odnos prema susjednim anatomskim strukturama i potvrđeno je postojanje false routa u apikalnoj trećini korijena zuba. Na osnovu dobijenih podataka određuje se dalji tok terapije.

Rezultat: Kroz ovaj slučaj prikazan je značaj CBCT-a i detaljnog dijagnostičkog protokola kod nesvakidašnjeg toka endodontskih tretiranih zuba. Zbog adekvatne dijagnostike pacijent je upućen na dalji tok liječenja koji podrazumijeva oralno hirurški tretman.

Zaključak: Stomatolozi koji se bave endoterapijom pored poznavanja morfologije korijenskih kanala, moraju biti upućeni u mogućnosti koje pruža savremena dijagnostika (upotreba CBCT-a) da bi se uspješno postavila dijagnoza patoloških stanja i odredio adekvatan terapijski tok.

Ključne riječi: CBCT, RVG, false route, periapikalna promjena

THE SIGNIFICANCE OF CBCT DIAGNOSTICS IN DETERMINING THE THERAPY PLAN FOR COMPLICATIONS OF ENDODONTIC TREATMENT - A CASE REPORT

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ABSTRACT

Introduction: CBCT diagnostics gives us an insight into the anatomical structures of the regions of interest. Images obtained by CBCT are simple to use, include bone and soft tissue structures and give relevant data with great precision unlike 2D images.

Materials and methods: Patient E.B., 21 years old, referred to a practicing dentist due to a suspicion of false route. The patient is examined in the reception room where trepanation of tooth 21 is recorded. Endodontic instruments revealed the presence of haemorrhagic exudate. By carrying out further diagnostics an RVG scan is taken and the analysis of the same shows periapical brightness around the root of tooth 21. Based on previous diagnostic procedures CBCT scan is recommended. Analysis of CBCT image diagnosed the existence of periapical change and its relation to the neighbouring anatomical structures and confirmed the existence of a false route in the apical third of the tooth root. Further course of therapy is determined based on the obtained data.

Results: Through this case, we have shown the importance of CBCT and of a detailed diagnostic protocol in the unusual course of endodontically treated teeth. Due to adequate diagnostics the patient is referred to a further therapy course which includes oral surgical treatment.

Conclusion: Dentists who deal with endotherapy, in addition to understanding the morphology of root canals, must be familiar with the possibilities offered by modern diagnostics (the use of CBCT), in order to successfully diagnose pathological conditions and determine adequate therapy course.

Keywords: CBCT, RVG, false route, periapical change