

Ocjena preoblikovanja kosti nakon endodontske terapije periapeksne lezije

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Svrha je istraživanja ocijeniti preoblikovanje kosti mjereći površinu osteoida, debljinu osteoida, osteoklasni indeks i broj upalnih stanica nakon dviju različitih endodontskih terapija periapeksnih lezija na psećim zubima.

Na 23 donja premolara (37 korijenskih kanala) 6 pasa mješanaca inducirane su periapeksne lezije. U skupini 1, 17 korijenskih kanala instrumentirano je do apeksne delte crown-down tehnikom služeći se ProFile® Ni-Ti rotirajućim instrumentima napunjeno do iste dužine tehnikom Thermafill® i Top Seal® cementom. Ostalih 20 korijenskih kanala (skupina 2) instrumentirani su tehnikom kontrolirane preinstrumentacije do točke određene elektroodontometrijski (električni apeks lokator EED-11, Struja, Zagreb, Hrvatska). Kanali su napunjeni tehnikom Thermafill® na dužini 2 mm kraćoj od radne dužine. U objema skupinama dužina punjenja provjerena je radiološki, a pristupni kaviteti ispunjeni amalgamom. Životinje su žrtvovane 35 dana nakon endodontske terapije. Nedemineralizirani rezovi debeli 5-7 mm obojeni su Toluidinskim modrilom. Histomorfometrijski indeksi (površina osteoida, debljina osteoida, osteoklasni indeks i broj upalnih stanica) mjereni su svjetlosnim mikroskopom koristeći se računalnim programom (ISSA, Vams, Zagreb, Hrvatska).

Razlike između skupina statistički su znatne za sve mjerene indekse. U skupini 1 površina osteoida je manja ($10,34 \% \pm 11,60$), a tako i debljina osteoida ($15,62 \mu\text{m} \pm 7,41$) i broj upalnih stanica ($111,39 \pm 75,81$), dok je osteoklasni indeks viši ($111,34 \text{ mm}^{-2} \pm 115,46$). U skupini 2 površina osteoida je veća ($33,21 \% \pm 21,43$), kao i debljina osteoida ($16,26 \mu\text{m} \pm 6,46$) i broj upalnih stanica ($137,62 \pm 46,34$) a osteoklasni je indeks niži ($27,00 \text{ mm}^{-2} \pm 39,03$). Za statističke raščlambe upotrijebljen je Mann-Whitney U test.

Rezultati dobiveni mjerenjem morfometrijskih indeksa pokazuju održavanje aktivnosti resorpcije kosti u skupini 1 i brže stvaranje kosti u skupini 2. Veći broj upalnih stanica u skupini 2 vjerojatno je uzrokovan dodatnom traumom

periapeksno tkiva prigodom preinstrumentacije. Ova trauma ne utječe na remodelaciju kosti.

Evaluation of Bone Remodelling After Endodontic Therapy of the Periapical Lesion

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The aim of the study was to evaluate bone remodelling by measuring osteoid surface, osteoid thickness, osteoclast index and inflammatory cell count after two different approaches in endodontic therapy of periapical lesion on dogs' teeth.

After inducing periapical lesion in 23 mandibular premolars (37 root canals) from six mongrel dogs, 17 root canals were instrumented to the apical delta with crown-down technique using ProFile® Ni-Ti rotary instruments and filled to the same length with Thermafill® obturation technique and Top Seal® cement (group 1). The other 20 root canals (group 2) were instrumented using controlled overinstrumentation technique to the point determined electronically (electronic apex locator EED-11, Struja, Zagreb, Croatia). Teeth were obturated with Thermafill® at the length 2mm shorter than the working length. Length of obturation was confirmed radiographically and access cavities sealed with amalgam in both groups. The animals were sacrificed 35 days after the end of endodontic treatment. Undemineralized sections 5-7 mm thick were stained with toluidine blue. The histomorphometric indices (osteoid surface, osteoid thickness, osteoclast index and inflammatory cell count) were measured by light microscopy using computer program (ISSA, Vams, Zagreb, Croatia).

The difference between groups was statistically significant in all measured indices. In group 1 the osteoid surface was lower ($10,34 \% \pm 11,60$) as well as osteoid thickness ($15,62 \mu\text{m} \pm 7,41$) and inflammatory cell count ($111,39 \pm 75,81$) while osteoclast index was higher ($111,34 \text{ mm}^{-2} \pm 115,46$). In group 2 osteoid surface was higher ($33,21 \% \pm 21,43$) as well as osteoid thickness ($16,26 \mu\text{m} \pm 6,46$) and inflammatory cell count ($137,62 \pm 46,34$), while osteoclast index was lower ($27,00 \text{ mm}^{-2} \pm 39,03$). Statistical analysis was performed using Mann-Whitney U Test.

Results obtained by measuring histomorphometric indices indicate sustained bone resorption activity in group 1 and faster bone formation in group 2. The greater number of inflammatory cells in group 2 was probably caused by additional trauma of periapical tissues during overinstrumentation. This trauma does not interfere with bone remodelling.

Samoliječenje analgeticima u stomatoloških bolesnika

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Uklanjanje boli jedan je od glavnih izazova stomatološke prakse. Akutna bol značajka je većine odontogenih boli i često je povezana sa samoupotrebom analgetika. No samoliječenje stvara rizik uzimanja prekomjerne doze lijeka, preduge upotrebe, klinički znatnih interakcija s već pripisanim lijekovima, te polipragmatizacije i mogućih štetnih učinaka. Početno zbijanje kod većine bolnih stanja jest bolni podražaj koji izaziva destrukciju tkiva, sintezu i otpuštanje biokemijskih medijatora koji sudjeluju u nastanku boli. Za ublažavanje boli najčešće se rabe analgetici-antipiretici, nesteroidni (NES) lijekovi koji djeluju na periferiji. Oni inhibiraju biokemijske medijatore boli. Svi NES analgetici izazivaju kvalitativno slične neželjene učinke, uzimaju se kroz usta i lako su dostupni u ljekarnama bez recepta - u slobodnoj prodaji.

Svrha ovoga rada bila je odrediti čestoću samoliječenja analgeticima stomatoloških bolesnika s akutnom boli. 32 bolesnika sa zuboboljom u dobi od 19 do 73 godine, prosječne dobi 32,5 godine i oba spola, ispitana su o intenzitetu boli prije liječenja i o uporabi lijekova. 68% bolesnika opisalo je svoju bol kao jaku, 21,9% kao umjerenu i 10,1% kao neugodni osjećaj. Rezultati su pokazali da je 99,6% bolesnika samo uzelo lijek za neposredno otklanjanje bolova. Najčešće uzeti analgetici jesu: kombinacija analgetika-antipiretika (propifenazon+paracetamol+kofein+kodein) u 33% i diklofenak (Voltaren) u 29,1%, zatim metamizol u 21,8%, aspirin u 13% i ibuprofen u 3,1% slučajeva. 56% bolesnika lijekove je nabavilo kod ljekarnika, a 44% iz kućne zalihe. Bolesnici (87,5%) su dobro obaviješteni o mogućim neželjenim učincima i toksičnosti NES analgetika. Neželjene učinke opisalo je 21,8% bolesnika, veći-

nom kao gastrointestinalne simptome: mučnina i želučana bol. To je u skladu s dobro opisanim nuspojavama NES-analgetika, koje su najvjerojatnije rezultat inhibicije ciklo-oksigenaza i znatan uzrok bolesti.

Auto-Medication of Analgesics by Dental Patients

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Pain is one of the major challenges in dental care. The most common types of odontogenic pain are characterised as acute pain which is frequently associated with self-medication with analgesics. However, there is a risk with self-medication such as the use of excessive drug dosage, prolonged duration of use, clinically significant interactions with prescription medicines and polypharmacy and possible side effects. The initial event for most painful conditions is a noxious stimulus that results in tissue destruction, the synthesis and the release of biochemical mediators involved in the pain process. Peripherally acting nonsteroid analgesic-antipyretic drugs /NSAIDs/ are the most commonly used analgesics. They inhibit these biochemical mediators of pain. All NSAIDs share a qualitatively similar side effect profile, the oral route of administration and all of them are freely available to the general public without prescription-over the counter drugs (OTC).

The aim of this study was to determine the incidence of auto-medication with analgesics among dental patients with acute pain. 32 patients aged from 19 to 73 years, (32.5) of both sexes and with odontalgia were interviewed personally regarding the intensity of their pre-treatment pain and the use of medications. 68% of patients described their pain as severe, 21.9% as moderate pain and 10.1% as unpleasant sensation. The results showed that 99.6% of the patients self-medicated a drug for the immediate relief of toothache. The most frequently self-medicated analgesics were: analgesic-antipyretic combined formulations (propiphenazon + paracetamol + caffeine + codeine) in 33% and diclofenac (Voltaren) in 29.1%, the metamizol in 21.8%, aspirin in 13% and ibuprofen in 3.1%. Self-medicated drugs came from the pharmacist in 56% patients and 44% from the family stock. Patients (87.5%) were well informed about possible side effects and toxicity