

and group SB/RS. Further statistical analysis performed by Mann-Whitney U test showed that different instrumentation technique were responsible for the results of analysis.

Under the conditions of this research, results obtained with fluid transport model indicate that there is no statistically significant difference between groups where root-canals were filled with different materials. Apical leakage was significantly lower where root-canals were instrumented by "double flare" technique.

## Postupci liječenja Dens Invaginatusa

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Dens invaginatus je razvojna anomalija koja se očituje uvlačenjem cakline i dentina u unutrašnjost krune i korijena. Aberacija se može očitovati u širokome spektru morfoloških varijacija of foramen coecum do manjeg ili većeg uvlačenja u korijen, a ponekad sve do vrška korijena. Suvremenu podjelu anomalije ponudio je Oehlers godine 1957. Prema njoj postoje tri tipa abnormalnosti. Najčešće se otkriva radiografskim pregledom. Ako postoji komunikacija invaginacije s pulpom ili periradikularnim tkivom, vrlo će brzo nakon nicanja zuba nastati promjene u vitalnosti pulpe, njezine afekcije, nekroze i periapikalne patološke promjene koje zahtijevaju hitnu intervenciju. Liječenje ovisi o tipu anomalije i njezine komunikacije s pulpom i periapikalnim tkivom. Svrha rada bila je prikazati mogućnosti endodontskoga liječenja navedene anomalije. Dvadesetogodišnji pacijent javio se je u Zavod za dentalnu patologiju Stomatološkoga fakulteta u Zagrebu zbog bolova u području gornjega desnog središnjeg sjekutića. Kliničkim pregledom ustanovljena je palatinalna protuberancija i Y oblik palatinalne plohe zuba, te tri foramena. Radiološkom pretragom vidljiva je invaginacija klase III po Oehlersu s komunikacijom s periapeksom te s opsežnim periapeksnim procesom. Provelo se je endodontsko liječenje, a istodobno su proširena oba invaginacijska otvora i središnji prostor između njih. Distalni kanal imao je oblik C, a mezijalni je bio ovalan. Instrumentacija je provedena kombinirano: profile i step-back tehnikom.

Radna dužina korijenskoga kanala provjeravana je elektroničkim uređajem Endometer ES-03. Kanali su ispunjeni termoplastičnim postupkom i napravljena je kontrolna snimka nakon što je ispunjen endodontski prostor. Kruna je estetski rekonstruirana kompozitnom smolom. Kontrola je provedena nakon jedan, tri i šest mjeseci, te je opažena redukcija patološkog procesa bez kliničkih simptoma.

## Dens Invaginatus - Treatment method

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Dens invaginatus is a developmental anomaly, manifested by insertion of enamel and dentin inside the crown and root. This aberration is revealed by the broad spectrum of morphological variations, from the foramen coecum to the smaller larger insertion in the root, sometimes extending to the very apex. Current anomaly classification, presented by Oehlers in 1957, divides the anomaly into three categories. It is usually detected by roentgen examination. If there is a communication between the invagination and the pulp or a periradicular tissue, soon after tooth eruption change occurs in the pulp vitality in the form of affectation, necrosis and periapical pathological transformation which necessitates urgent dental intervention. The treatment depends on the type of anomaly and its communication with the pulp and the periapical tissue. The purpose of the study was to present endodontic treatment possibility for the stated anomaly. A 20 year-old patient contacted the Department of Restorative Dentistry at the University of Zagreb school of Dental Medicine complaining of pain in the area of the upper right central incisor. Clinical examination determined palatal protuberation and Y shape form of the palatal tooth surface including three foramens. Radiological examination showed class II invagination according to Oehlers with periapical communication and extensive periapical process. Endodontic treatment was performed simultaneously with enlargement of both invagination foramens as well as the central area inbetween. Distal root canal was C-shaped while the mesial was oval. Method of instrumentation was