

dokazati postojanje određenih kationa s udjelom mase veći od 1%, ne oštećujući pritom sam uzorak. Metoda se pokazala prikladnom za uzorkovanje kovina zlata i srebra, što je nastavak dosadašnjih istraživanja u identifikaciji određenih sastavnica u pojedinim slitinama ili u inkorporiranome protetskom radu.

## Estimation of Standards for Gold and Silver Sampling

Živko-Babić J<sup>1</sup>, Jasprica I<sup>2</sup>, Medić-Šarić M<sup>2</sup>, Jakovac M.<sup>1</sup>

<sup>1</sup>Department of Prosthodontics, School of Dental Medicine, University of Zagreb, Zagreb, Croatia

<sup>2</sup>Department of Pharmaceutical Chemistry, Faculty of Pharmacy and Biochemistry, University of Zagreb, Zagreb, Croatia

Different precious dental alloys are used in prosthodontic therapy. Precious metals are the synonym for biocompatibility. Gold is one of the most inert and silver the most active precious metals.

The purpose of this study was to develop and analyze the chromatographic spots of pure gold and silver (Aurodent, Celje, Slovenia).

The sampling was performed in a water-HCl<sub>(conc.)</sub> solution in a 10 : 1 volume ratio at room temperature using a 4,5 V battery. Dissolved cations and solutions of standard elements (salts of gold and silver) were applied to HPTLC plates (Mareck, Darmstadt, Germany) 10 x 10 cm precoated with cellulose. Plates were developed in a vertical separating chamber to a height of approximately 8 cm saturated with *iso*-amyl (3-methyl-1-butanol) - HCl (36,5%) - acetonitrile in a volume ratio 5,4 : 4,3 : 0,3. After development, plates were dried in (a steam of) hot air and the cations were visualized by spraying with the saturated ethanolic solutions of alizarin, diphenylcarbazide, quercetin and 0,1% chlorophorm solution of dithizone. After drying, plates were exposed to NH<sub>3</sub> vapor.

According to the R<sub>f</sub> value and the color of the spots, the difference between gold and silver were obtained.

Anodic sampling with thin-layer chromatography is a suitable, nondestructive method for identification of cations presents in different dental alloys. It is possible to identify the cations with their mass ratio W > 1%. The results have shown that the described method is suitable

for analysis of gold and silver and it can be used in future work to identify those cations in dental alloys of unknown composition.

## Kompenzacijski pristup liječenju skeletnog tipa otvorenoga zagriža

Weber-Pavlec M<sup>1</sup>, Weber D<sup>1</sup>, Muretić Ž.<sup>2</sup>

<sup>1</sup>Specijalistička stomatološka ordinacija za ortodonciju Weber, Varaždin, Hrvatska

<sup>2</sup>Zavod za ortodonciju, Stomatološki fakultet Sveučilišta u Zagrebu, Zagreb, Hrvatska

Za razliku od dentoalveolarnog oblika otvorenoga zagriža, koji se uspješno liječi u doba mlječne i mješovite denticije, skeletni otvoreni zagriž teška je ortodontska anomalija, ponekad genski uvjetovana, koja zahtijeva složen terapijski pristup. Osobito je važna točna dijagnoza i procjena intenziteta anomalije, o čemu ovisi plan liječenja. Osim temeljita kliničkoga pregleda nužna je rendgenfalometrijska raščlamba na temelju koje se donosi odluka o konvencionalnom ortodontskom liječenju ili ortodontsko-kirurškom pristupu. Prezentiran je tijek ortodontskoga liječenja pacijentice s dijagnosticiranim skeletnim otvorenim zagrižom uzrokovanim posteriornom rotacijom donje čeljusti. Dijagnostičkom obradom zaključeno je da se anomalija može korigirati konvencionalnim postupkom liječenja, primjenom fiksne ortodontske tehnike, s ciljem da se postigne kompenzacijski učinak. Završetkom liječenja postignut je dobar i stabilan okluzijski odnos, čime je potvrđena procjena o načinu liječenja temeljena na objektivnoj dijagnostici.

## Compensational Approach to the Treatment of Open Skeleton Type of Occlusion

Weber-Pavlec M<sup>1</sup>, Weber D<sup>1</sup>, Muretić Ž.<sup>2</sup>

<sup>1</sup>Weber-Specialist Orthodontic Dentist's Office, Varaždin, Hrvatska

<sup>2</sup>Department of Orthodontics, School of Dental Medicine, University of Zagreb, Zagreb, Croatia

Unlike a dental-alveolar type of open occlusion, which has been successfully treated in the period of milk and

---

mixed dentition, an open skeletal occlusion presents a serious orthodontic anomaly, sometimes genetic, required a complex therapeutic approach. An accurate diagnosis and estimate of intensity of the anomaly is of particular importance, determining the treatment schedule. Besides a thorough clinical check-up, an X-ray cephalometric analysis is essential, as the basis for reaching a decision on conventional orthodontic treatment or orthodontic surgery. This paper presents the development of ortho-

dontic treatment of a patient with a diagnosed open skeletal occlusion, caused by posterior rotation of the mandible. Through diagnostics, a decision was made to correct the said anomaly by conventional treatment, using fixed orthodontic technique, with the purpose of reaching the compensational effect. Upon the finished treatment, a good and stabile occlusive relation was achieved, thus proving accurate the estimation on treatment method based on objective diagnostics.