

## Osteoplastika autolognom spongiozom kuka

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Autologni koštani graftovi i danas se smatraju metodom izbora u rekonstrukciji limitiranih defekata donje čeljusti, te rekonstrukciji koštanih "defekata" srednje i gornje trećine lica. Autologna kost je izvrstan osteokonduktivan materijal i iznimno rijetko ga organizam odbacuje. Najčešća donorna regija krista ilijaka. Kao slobodni koštani graft može se primjeniti koetikalna kost spongioza.

U radu je prikazana uporaba autologne spongioze kuka kod:

- osteoplastike alveolarnoga grebena u djece s rascjepom,
- korekcije kontura čela bolesnika nakon maksilektomije,
- rekonstrukcije defekta donje čeljusti.

Bolesnici su praćeni godinu dana nakon osteoplastike. Uspješnost uporabe koštanih graftova verificirana je kliničkim nalazom, rtg-om, te kod rekonstrukcije donje čeljusti i histološkom verifikacijom nakon odstranjivanja OS materijala.

Osim manjeg ožiljka nije bilo drugih oštećenja donorne regije.

Osteoplastika autolognom spongiozom kuka predstavlja i danas "zlatni standard" kod ispravno odabranih indikacija.

Ključne riječi: maksilofacijalna rekonstrukcija, metode, spongioplastika.

## Osteoplasty with Autologous Cancellous Hip Bone

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Autologous bone grafts are believed to be the method of choice in the reconstruction of limited mandibular

defects and in the reconstruction of the bone defects of the middle and upper part of the face. Autologous bone is an excellent osteoconductive material and is very rarely rejected by the body. The most frequent donor region is crista iliaca. Cortical bone and cancellous bone can be used as a free bone flap.

In this study we present the application of autologous cancellous hip bone in the following cases:

- Osteoplasty of the alveolar ridge in children with shisis.
- Correction of the forehead contour after maxillectomy.
- Reconstruction of mandibular defects.

The patients were followed during one year after osteoplasty. The success of the implementation of bone grafts was verified with clinical findings, X-rays, in cases of mandibular reconstruction, with pathohistological verification after the removal of the OS material.

Apart from a small scar, there was no other damage to the donor region.

Osteoplasty with autologous cancellous hip bone graft represents a golden standard in properly chosen indications.

Key words: maxillofacial reconstruction, methods, spongioplasty.

## Konfokalno lasersko istraživanje penetracije dentin adheziva i zaljevača u fisure

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Proces zaljevanja fisura u idealnim bi uvjetima trebao potpuno spriječiti prodor mikoorganizama u duboke jamice i fisure. Utvrđeno je da zaljevači sada dostupni na tržištu ne prodiru uvijek i potpuno u duboke i srednje duboke fisure tipa I (oblika pukotine) ili IK tipa (oblika ampula). S obzirom na nisku viskoznost i izvrsno vlaženje

postojećih dentin adheziva, oni se upotrebljavaju u kombinaciji sa zaljevačima fisura da bi se poboljšala kvaliteta veze između zaljevača i cakline.

Svrha ove eksperimentalne studije bila je ispitati postoji li mogućnost poboljšanja penetracije zaljevača u fisure humanih molara, u kombinaciji s dentin adhezivima.

Istraživanje je provedeno na 20 izvađenih intaktnih ljudskih molara i premolara. Čišćenje je učinjeno zračnim polirajućim uređajem 60 sekundi. Eksperimentalna grupa od 10 uzoraka tretirana je s dentin adhezivom Prime&Bond NT i zaljevačem fisura Dyrect Seal. Kontrolna skupina (10 zuba također) tretirana je samo sa zaljevačem fisura Dyrect seal. Tretirani uzorci rezani su na reznjeve debljine 700 mikrometara (ukupno 53 komada), usporedno sa zubnom osovinom. Vrijednovanje je provedeno s konfokalnim laserskim mikroskopom.

Rezultati eksperimentalne skupine pokazuju da je 12 dubokih fisura potpuno punjeno, 9 nije bilo punjeno potpuno, 9 je bilo punjeno s postojanjem mjehurića zraka, a jedna široka fisura bila je punjena potpuno. Rezultati kontrolne skupine pokazuju da je 6 dubokih fisura potpuno punjeno, 19 nije punjeno, 5 je punjeno s postojanjem mjehurića zraka i 6 širokih fisura je punjeno potpuno. Uporabljjen je Hi-kvadrat test za statističku raščlambu sa stupnjem korekcije  $p = 0,0465$ . To znači da postoji znatna razlika između kontrolne i eksperimentalne skupine.

Uporaba dentin adheziva u metodi zalijeivanja fisura ima određene prednosti u usporedbi s standardnom metodom zalijeivanja fisura.

## Confocal Laser Scanning Microscopy Investigation of the Penetration of Adhesives and Sealant Resins Into Fissures

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The process of fissure sealing should ideally avoid the delivery of any microorganism substrate into the depths

of plaque-retentive pits and fissures. Up to now, available sealing materials have been found to not always completely penetrate to the bottom of deep and medium deep fissures of type I (slit-like) or type IK (ampoule-like). Due to the low viscosity and excellent wetting properties of current dentin adhesive systems, they were used in combination with sealant materials in order to improve the filling of fissures.

The purpose of this experimental study was to evaluate whether penetration by filled sealing materials into fissures of human molars could be improved by combining them with enamel-dentin adhesives.

The investigation was carried out on 20 extracted clinically caries-free, human premolars and molars. Cleaning was carried out with an air polishing device for 60 seconds. In the test groups, each containing ten teeth, a two material combination of an enamel-dentin adhesive (Prime&Bond NT) and a filled sealing resin was used to seal the fissures (Dyrect SEal). In the control groups (ten teeth) only the filled sealing material without an initial adhesive was applied. The scaled teeth were sectioned into slices of 700 micrometers in thickness (total of 53 slices), parallel to the tooth axis. Evaluation under CLSM was carried out.

In the experimental group, 12 deep fissures were completely filled, 9 were not filled, 9 were filled with bubbles of air, 1 wide fissure was filled. In the control group, 6 deep fissures were filled, 19 were not filled, 5 were filled with the bubbles of air and 6 wide fissures were filled. We used Chi-square test as a statistic method and later Yates correction  $p = 0.0465$ . Differences between the control and experimental group are significant.

Use of enamel-dentin-adhesive system in fissure sealing have some advantages.

## Utjecaj nove generacije samojetkajućih adheziva na kakvoću kompozitnih ispuna

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Samojetkajući dentin adhezivi uvedeni su u praksu kako bi se uklonilo nanocurenje, izbjegla uporaba vlaže teh-