

Methods: The basal cell carcinoma of the prolabium was surgically excised in accordance with Mohs surgery technique. The central part of the fresh tissue excised and all the margins were analyzed with FCM and with the gold-standard histopathological examination.

Results: We detected a perfect concordance between FCM analysis and the gold-standard histopathological examination in all sections examined.

Conclusions: FCM is a promising tool for a rapid intra-operative real time margins assessment of non melanoma skin cancers. The technique is simple and time sparing compared to the traditional histopathological examination, with consequent advantages both for the patient and the public health system.

EX VIVO PILOT STUDY OF A 976 NM DIODE LASER USE IN THE REMOVAL OF ORAL LESIONS

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Objective: Aim of this study was to evaluate, through an histological examination, the thermal effects induced by a 976 nm diode laser (Solase, Lazon medical Laser, Shenyang, China).

Materials and methods: Six ex vivo laser biopsies on a swine tongue were taken at

- 4W-5W-6W in PW (Ton-Toff: 100ms/100ms)
- 4W-5W-6W in CW

Two sections were performed from each sample for histological thermal damage measurement.

Results: The mean thermal epithelial damage of PW samples was 130 μm while in CW it was 196 μm . The mean thermal connective damage was 238 μm in PW and 330 μm in CW.

The peripheral damage never exceeded 0.4 mm and the reability was always good allowing an optimal histological evaluation.

Conclusions: Considering the mean thermal epithelial and connective damages and considering that the highest damage ever found was 319.88 μm in the epithelium and 402.71 μm in the connective tissue, this pilot study showed that a 976 nm diode laser may be safely used in the excision of oral lesions with a suitable width of resection margins. More researches with a larger sample size and in vivo studies are needed to confirm these results.

LOW LEVEL LASER THERAPY IN TEMPOROMANDIBULAR DYSFUNCTION. A CLINICAL STUDY

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Background: Temporomandibular dysfunction (TMD) is defined as a group of disorders affecting the masticatory muscles, temporomandibular joint (TMJ) and associated structures. Pain is a major manifestation of TMD and can affect masticatory muscles, temporomandibular joint, or other adjacent structures. Several treatment options are available including low level laser therapy (LLLT).

Objective: To evaluate the efficacy of LLLT in the treatment of symptomatic TMD.

Methods: An observational clinical study was conducted with 18 patients (13 females and 5 males) diagnosed with temporomandibular dysfunction with painful symptoms during a study period from March to July of 2018. Patients were submitted to a 635 nm wavelength laser (Lasotronix M, Lasotronix Marcin Pokora[®], Piaseczno Żytunia, Poland), 200 mW using an 8-mm spot hand-piece, in a continuous mode for 25 sec, delivering 8 J/cm² in each application point, performed in 4 sessions. Pain score (using visual analog scale - VAS), satisfaction score (0 to 10), complications score and efficacy score treatment were recorded in a follow-up of one month.

Results: The degree of pain after the laser treatment (0.4 ± 0.7) was statistically lower than the degree of pain before treatment (4.8 ± 2.3) ($p < 0.001$). A statistical difference was found for most group muscles comparing before and after the treatment with reduction or elimination of pain on palpation. Regarding the satisfaction of the patients, the mean patient satisfaction level corresponded to 9.6 ± 0.8 . There were no complications on the patients.

Conclusions: Low level laser therapy was effective on the remission of painful symptoms associated with TMD, without complications and with a high level of satisfaction of the patients.

ANALYSIS OF CERAMIC LAMINATES REMOVAL WITH Er,Cr:YSGG LASER BY OPTICAL COHERENCE TOMOGRAPHY

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Porcelain laminated veneers have been widely used. For wear of hard tissue such as enamel and dentin, the diamond rotary instrument is the most traditional, but the laser has become recently used to remove aesthetic facets. Optical coherence tomography (OCT) used as an optical biopsy, is important for morphological analysis and attenuation coefficient is related to the property of the photons to be scattered by the samples. After approval by the Ethics Committee, the present study investigated the detachment of 30 ceramic E-max fragments cemented in human dental enamel of dimensions 3 mm x 3 mm x 0.7 mm with 3 types of resin cements, RelxY Veneer, Relx U200 and Variolink Veneer. The samples (Enamel + Ceramic Fragment) were randomly distributed in the 3 groups and cemented according to the manufacturer. After that, they were prepared for irradiation with the Er,Cr: YSSG laser under pre-determined conditions (3.5 and 3 W, 20Hz, 60% water and 40% air flow). OCT analysis was done before and after irradiation. We observed that the morphological changes of the enamel surface showed an increased surface area due to the cement remaining in the enamel. We concluded that the Er, Cr: YSSG laser, when used in the irradiation protocol tested, seems to be a safe tool for the removal of laminates.