Oral Pathology and Oral Medicine

Photobiomodulation laser therapy in pemphigus vulgaris oral lesions: a randomized, double-blind, controlled study

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Aim: Pemphigus vulgaris (PV) is a rare, chronic, autoimmune, mucocutaneous, vesiculobullous disease. Systemic corticosteroids are the mainstay treatment for PV oral lesions; the aim of this study is to evaluate the efficacy of PBMT with a 645 nm diode laser as a supportive topical therapy in patients with PV induced erosive-ulcerative oral lesions.
Methods: This double-blind placebo-controlled study was carried out at the Department of Oral Medicine of the Dental Clinic of Spedali Civili of Brescia (Italy). Patients were consecutively enrolled from March 2019 till February 2020. Inclusion criteria were: (a) clinic, serologic and histologic diagnosis of Pemphigus Vulgaris according to the conventional WHO criteria (b) presence of erosive-ulcerative oral lesions with a diameter > 1,5 cm (c) symptomatic lesions (d) acceptance of participating in the study by signing the informed consent. Selected patients were divided into two groups: group A, patients receiving laser therapy and group B, receiving sham therapy (placebo). All patients were being treated also with a systemic corticosteroid therapy i.e. prednisone 0.5 mg Kg per day. Size of lesions, VAS and satisfaction were evaluated before the treatment (T0), after 4 weeks (T1) and after 8 weeks as a follow-up (T2). The device used for this study (Raffaello 980 Bio, Dental Medical Tecnologies, Italy) had the following parameters: 100mW power, 645 nm wave length, irradiation area 1cm2, application time 30 sec/cm^2, energy density 3J/cm2, scanning modality. Laser treatment/placebo were performed 2 times a week for 4 weeks by trained clinicians.
Results: A total of 50 lesions (23 patients) were evaluated. About lesions size, there was a statistical significative difference between the two groups just at T2 (p=0.0193), though VAS significantly decreased both at T1 (p=0.0198) and at T2 (p=0.0087). VAS median for group A were: 3.5 at T0, 0 at T1 and 0 at T2; for group B: 5 at T0, 2 at T1 and 1 at T2. In general, all patients were satisfied of the treatment received.
Conclusion: PBMT can be considered a validate supportive therapeutic option, even if further RCTs studies with wide sample sizes and standardized management protocols are suggested.

Oral and psychological alterations in haemophiliac patients

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Aim: Haemophilia is a hereditary coagulopathy whose basic anomaly consists of the quantitative or qualitative alteration of one or more plasma proteins (factor VIII and factor IX) in the coagulation system. It occurs only in the male sex, while women are healthy carriers: this is because it inherits in recessive mode through the X chromosome and the other non-

Psoriasis occurs in approximately 1-3% of the world population, affecting white individuals of both sexes. Its etiology is unknown: there is a defect in the normal cycle of epidermal development, with a leukocyte infiltrate. Psoriasis can be localized or generalized, affecting almost all the skin with an unpredictable course. Several studies show that geographic tongue is the oral manifestation more commonly associated with psoriatic disease. The geographic tongue (GT) is a chronic, inflammatory oral lesion, immunologically mediated and with unknown etiology. It affects the 0.6%-4.8% of the world population. It is characterized by slightly eroded areas with depapillated mucosa often but not always, with white sclerotic border around. The difficulty however in accepting the diagnosis of geographic tongue as oral psoriasis is the fact that not all patients with geographic tongue present psoriasis. Recent studies have investigated the role of anxiety, depression, stress and psoriasis. Depression and stress decrease the quality of life and this fact in patients with psoriasis is directly associated with the severity of the disease. The role of vitamin D deficiency was also investigated. Hypovitaminosis D has been associated with a variety of autoimmune diseases such as rheumatoid arthritis, Crohn's disease, systemic lupus erythematosus, and osteoporosis. In addition, vitamin D deficiency is often associated with skin disorders, such as pemphigus vulgaris, bullous pemphigus, alopecia areata, vitiligo and psoriasis. Some studies have identified an association between polymorphisms of vitamin D receptor (VDR) and the severity of psoriasis disease, believing it affects the alteration of the cutaneous barrier. The aim of this work is to evaluate the relationship of these conditions in a small sample population.

Methods: The tongue of 52 patients with a diagnosis of psoriasis (32 women and 20 men) aged between 9 and 64 years was carefully checked in a dermatological private practice, than in a dental private practice to evaluate the presence or absence of migratory glossitis.

Results: Of the 52 patients visited, 8 (15,2%) of them (5 women and 3 men) presented a tongue with the characteristics of GT. Several studies have highlighted the association between cutaneous psoriasis and geographic tongue. Common features are the clinical presentation, the histological pattern and the presence of common genetic markers (HLA). We have found a percentage of GT in psoriatic patient higher than the association found in previous works in the scientific literature. However, it is true that not all the people who show a geographic tongue have psoriasis.Despite this, the presence of geographic tongue may be an early sign of psoriasis. Several studies have shown that early diagnosis of psoriasis can reduce the risk of complications and damage and functional disability due to psoriasis. Therefore the clinician, in particular the dentist, should always investigate more thoroughly when a patient with a geographic tongue appears at the first visit.

Conclusions: General practitioners and dermatologists are encouraged to perform a detailed oral examination of psoriatic patients, in the same way dentists are advised to recommend a dermatological examination to patients with a geographic tongue.

Photodynamic therapy as support of pharmacological therapy in a case of particular refractory oral lichen planus: a case report

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Aim: Lichen planus (LP) is a chronic autoimmune mucocutaneous condition, primarily affecting the oral and genital mucous membrane, skin, nails, and scalp. The oral lichen planus (OLP) affects approximately 2% of the population. OLP, in general, may arise in > 70% of persons with skin lesions. The frequency of malignant change ranges from 0.4% to 3.3%. OLP is seen worldwide, mostly in the fifth to sixth decades of life, and is twice as prevalent in women as in men. OLP has demonstrated numerous systemic connotations such as diabetes mellitus (DM), hypertension, metabolic syndrome (MS), thyroid diseases, psychosomatic ailments, chronic liver disease, gastrointestinal diseases, and genetic susceptibility to cancer. The treatment options for OLP are numerous and include topical and systemic agents. Topical corticosteroids remain the mainstay of therapy.

Case report: A 62-year-old woman came to our observation for a lesion present for about 1 year extended to the hard palate and the upper vestibular gingival mucosa. In the anamnesis she reported osteoporosis and gastro-esophageal reflux. On objective examination there were erosion areas of different width and depth interspersed with erythematous and rare areas white patterns. The patient also reported the formation of bubbles that in a very short time exploded. The negative Nickolsky sign on physical examination did not testify for a diagnosis of vesicular-bullous disease. An incisional biopsy was performed in the palatine area. The subsequent histological evaluation and immunofluorescence were significant for the diagnosis of lichen planus bullous. Topical therapy prescribed with Clobetasol 0.05%

2 times a day and topical Nystatin (100.000 ul/ml) 3-4 times a day for 3 weeks brought an evident improvement; however an erosive lesion persisted in the area 22-23. It was decided to proceed with a photodynamic support therapy with 460 nm diode light, 4 watts (FlashMax P4 CSM Dental, Copenhagen, Denmark) and 3% hydrogen peroxide. Mucous surface was wetted with hydrogen peroxide then illuminated with diode light 20 times for 3 seconds, subsequently the hydrogen peroxide was removed with a sterile gauze. This treatment was repeated 3 times every 7 days.

Results: One week later there was an important clinical improvement, the subsequent therapeutic sessions allowed an almost complete remission of the lesion unresponsive to corticosteroid treatment. Numerous invasive and non- invasive therapeutic methods including local and systemic corticosteroids, laser therapy, and surgical intervention for the treatment of OLP are suggested. Extended use of corticosteroids for chronic OLP may have certain local and systemic complications, which includes opportunistic candidiasis, mucosal atrophy, adrenal insufficiency, gastrointestinal disorders, hypertension, and diabetes. To surmount the side effects of steroid therapy, photodynamic therapy (PDT) has been proposed as an alternative treatment strategy for OLP. PDT uses a photosensitizing agent which, when activated by the energy of light, creates a photodynamic reaction that is cytotoxic. A systematic review of the literature assessed the effectiveness of PDT in the management of OLP. PDT also showed an increase in the bactericidal activity of hydrogen peroxide in a case of refractory hairy tongue.

Conclusions: Photodynamic therapy appears to have some effect in the symptomatic treatment of OLP in adult patients. However, further randomized controlled trials with standardized PDT parameters are needed.

Efficacy of different strategies in MRONJ prevention

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Aim: The aim of this study is to evaluate the efficacy of preventive oral visit and its relation with the risk of MRONJ (Medication Related Osteonecrosis of the Jaw).

Methods: In this retrospective study were examined all the medical records of patients in treatment care at the Hospital of Padova (departments of Dental Clinic, Maxillofacial Surgery, Hematology and Clinical Immunology) and the Veneto Oncology Institute between 2010 and 2019, subjected to drug therapies related to the risk of ONJ. Were included patients with diagnosis of drug-related osteonecrosis of the jaws, in therapy (or previous therapy) with drugs related to the development of osteonecrosis of the maxillary bones, head and neck radiotherapy was an exclusion criteria. Patients were grouped according to the preventive dental visit. Group 0: patients who didn't receive preventive dental visit. Group 1: patients who received preventive dental visit before the treatment with antiresorptive/antiangiogenetic drugs in the Dental Clinic of the University of Padova; Group 2: patients who received preventive dental visit before therapy with antiresorptive/antiangiogenetic drugs in Oral Maxillo Facial Surgery Unit; Group 3: patients who received preventive dental visit in private dental clinics. Group 4: patients who received preventive dental visit in one of the above categories, but didn't stick to the treatment proposed; Group 5: patients who didn't receive preventive oral visit, but were evaluated as eligible for the therapy with antiresoptive/antiangiogenetic drugs from the oncologist that evaluated only a radiographic exam of the jaws. Staging of osteonecrosis of the study population was performed following SICMF-SIPMO (Italian Society of Maxillofacial Surgery and Italian Society of Oral Pathology and Medicine) recommendations. Descriptive analysis was used, being a retrospective study; the software used was SAS 9.4 (SAS Institute Inc., Cary, NC, USA) for Windows. The Fisher's exact test was applied to assess whether the results obtained were statistically significant ($p < 0.05$) relative to the osteonecrosis event in the respective groups.

Results: In 1305 patients taking MRONJ-related drugs, 93 of them had diagnoses of drug-related osteonecrosis of the jaws. 21 patients were excluded from the study population. The 72 patients belonging to our study population were grouped in the indicated groups. In Group 0, 26.92% of patients had Stage 1 MRONJ; 65.38% Stage 2; 7.69% Stage 3. All Group 1 patients had MRONJ Stage 2. In Group 2, 25% of patients had Stage 1 MRONJ and the remaining 75% Stage 2. In Group 3, 27.27% of patients had Stage 1 MRONJ; 54.55% Stage 2 and 18.18% Stage 3. In Group 4 half of the patients had MRONJ Stage 1 and the other half MRONJ Stage 2. In Group 5, 17.39% of patients had Stage 1 MRONJ; 39.13% Stage 2 and the remaining 43.48% Stage 3. The exact Fisher test was performed, which shows that the results obtained are not statistically significant ($p > 0.05$), this also due to the limited number of the study population, it is always a rare pathology. In any case, the incidence of MRONJ in the sample that had done the dental assessment prior to therapy is 3.22%, significantly lower than the incidence reported by the Italian Association of Medical Oncology in 2016 which