

## ABSTRACT

**Oral manifestations in patients affected by psoriasis**

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**Aim.** Psoriasis is a common multifactorial inflammatory skin disease, affecting from 1% to 3% of the world population, with geographic and ethnic variations. It has a bimodal age distribution, with the earlier peak incidence between 15 and 30 years of age (Psoriasis Type I), and the later peak incidence between 50 and 60 years of age (Psoriasis Type II). Psoriasis is classified clinically into several types: vulgaris, erythrodermic, guttate, onychodystrophy, pustular, inverse and psoriatic arthritis. Even though it is a common disorder, in International literature there are only few publications about its oral manifestations. Typical cutaneous lesions are flat polygonal red scaly-plaques, that evolve into hyperpigmented lesions. In the oral cavity, manifestations include small whitish papules that yield bleeding points when scraped and red/white plaques having the same trend of the skin lesions. Of interest to the oral health care provider is the increased frequency of fissured and geographic tongue (FT and GT). Psoriasis and periodontitis have a common etio-pathology; in fact, probing depth and periodontal attachment level are significant higher in psoriatic patients. Patients affected by arthropathic psoriasis report Temporo-Mandibular Joint Disorders (TMJD). In addition, patients using methotrexate and cyclosporine as immunosuppressive therapy of psoriasis show higher risk to develop oral candidosis. The aim of this study is to investigate and compare the prevalence of oral mucosal lesions in a group of psoriatic patients and healthy subjects.

**Methods.** 40 psoriatic patients, 24 males and 16 females, aged from 21 to 91 years old, followed in Dermatology and Venereology Department of Policlinico Umberto I in Rome, were enrolled in this preliminary study. There were included 4 cases of psoriasis Type I and 36 of psoriasis Type II, counting 24 with diagnosis of vulgaris psoriasis, 9 with arthropathic psoriasis, 2 with erythrodermic psoriasis, 4 with pustular psoriasis, 1 with guttate psoriasis. Clinical examination, Panoramic XR, Magnetic Nuclear Resonance (MNR) of Temporo Mandibular Joint (TMJ), parodontal evaluation, oropharyngeal buffer and incisional biopsies by scalpel were done in order to value the patients. The control group was formed by 40 non-psoriatic patients of Odontostomatologic Clinic of Policlinico Umberto I in Rome.

**Results.** According to International Literature data, we found out that there is a statistically significant difference between the number of patients with oral lesions in the psoriatic group as compared to the control group. The lesions positively related to psoriasis are FT and GT. 40% of psoriatic patients presents FT compared to 17% in the control group, while 7,5% of patients affected by psoriasis shows GT compared to 2,5% of the control group. TMJD was found in about half the patients with arthropathic psoriasis.

Periodontitis was discovered in 15 out of the 40 patients affected by psoriasis, especially those affected by vulgaris psoriasis and arthropathic psoriasis. Furthermore, smoking patients have an increased risk of developing periodontal's disease. Duration and severity of disease did not influence the prevalence of oral lesions.

**Conclusion.** Due to the strong match between psoriasis and oral lesions, dermatologists and oral health care providers have to cooperate efficiently being aware of the predisposition of psoriatic patients to different oral diseases. The goal of achieving and maintaining periodontal health leads to healthy and functional dentition in psoriatic patients and reduce the risk factors triggering psoriasis itself.

**Painful oral aphthous-like lesions in patient with kidney cancer after target therapy and bisphosphonate administration: a case report of adverse drug reaction**

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**Aim.** Tyrosine kinase inhibitors (TKIs) targeting tumor angiogenesis and mammalian target of rapamycin inhibitors (mTOR) are indicated for the management of several cancer types, as for renal cell carcinoma (RCC).

Oral ulcerations are reported as common adverse drug reactions of mTOR inhibitors and are currently classified as mTOR inhibitor associated stomatitis (mIAS). Interestingly, these lesions appear as aphthous-like stomatitis rather than the mucositis seen with chemotherapy agent.

**Case report.** A 49 years old male patient underwent to the left radical nephrectomy in May 2014 for clear RCC. From July to October 2014 he was treated with Pazopanib, a tyrosine kinase inhibitor. In December 2014 the patient started the treatment with Zoledronic acid and Everolimus, an amino-bisphosphonates and an mTOR inhibitor, respectively. Everolimus administration was suspended on the 1<sup>st</sup> of January 2015 and resumed on the 4<sup>th</sup> of February. In February 2015, the patient referred to our department for acute pain of mouth floor and tongue; the onset of these symptoms was subsequent to mTOR therapy. This pain compromised his oral functions (chewing, swallowing, phonetic) and quality of life. Intraoral examination showed aphthous-like lesions on both borders of the tongue and on the right side of the mouth floor.

Local antiseptic (0.2% chlorhexidine rinse, twice daily for 1 week), 0.050 g clobetasol propionate cream (twice a day for 4 week, and one times a day for the following 4 weeks) and a wound-healing promoter (Mucosamin Spray<sup>®</sup>, twice a day for 2 weeks) were administered. Since the oncologist decided to not discontinue the target therapy, the patient continued local therapy until the end of the treatment with everolimus.

After two weeks from the first visit, a complete heal-

ing of the oral mucosa was observed and the patient complained no pain.

**Conclusion.** This case report confirms the recent view that target therapy with everolimus may induce the onset of aphthous-like stomatitis as adverse drug reaction. Therefore, diagnostic algorithms for stomatitis should include a careful drug history, emphasizing the focus also on oral adverse effects the new target cancer therapies.

### Risk factors and medication related osteonecrosis of the jaw: a single center 11-year experience

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**Aim.** Medication-related osteonecrosis of the jaw (MRONJ) is a well-recognized side-effect of medications prescribed in patients suffering from several forms of cancer, bone metastases from solid tumors, multiple myeloma and dismetabolic bone diseases.

This study describes the 11 years experience of a Oral Surgery Unit in the management of patients affected by this avascular necrosis pathology of the maxillo-facial district, evaluating the relationship between risk factors and onset and progression of this maxillary pathology.

**Methods.** During a period ranging from 2005 to 2015 a group of 93 patients affected by MRONJ was consecutively observed and treated by the Oral Surgery Unit of the University of Messina -School of Dentistry. The patients (23 males, 70 females) aged between 46 and 89 years.

MRONJ diagnosis and staging was assessed according to the SIPMO - SICMF criteria, adopting a work-flow including CT examinations.

According to the MRONJ stage, antimicrobial therapy (systemic antibiotics and topical antiseptics) surgical treatment (sequestrectomy, alveolar resection) and/or palliative treatments were adopted to manage the patients.

Different parameters were evaluated to analyze MRONJ onset and progression: demographic data; local risk factors (tooth extraction, oral infections, decubitus ulcers by dental prosthesis, etc.); systemic risk factors (diabetes, hypertension, etc.); cumulative dose of each medication taken on, contemporary and/or consecutive assumption of different at risk drugs.

Statistical analysis was conducted using multiple regression, ANOVA and Spearman correlation.

A scoring system to evaluate the severeness of the MRONJ was used considering the following phenomena (indicating with 0 the absence of event and with 1 its presence): pain, bone exposure, purulent discharge, extra-oral fistula, displaced mandibular stumps, nasal leakage of fluids.

**Results.** The statistical analysis showed how the MRONJ is far more severe in the oncologic patients treated with zoledronic acid, with a strong correlation between the cumulative dose and the MRONJ score. The data demonstrate how the main oral triggers are tooth extraction, periodontal disease and decubitus ulcers by dental prosthesis. On the other hand, drug therapies including steroids and antiangiogenic factors, as long as

hypertension and diabetes had lower cumulative dose related to the pathology onset.

**Conclusion.** A group of MRONJ patients consecutively treated in 11 years was analyzed.

Data regarding diagnosis and treatment were exposed. Oncologic patient showed the worst clinical outcomes. Hypertension, diabetes, and specific drug therapies that interfere with the vascular asset of the patient are the most significant risk factors involved, lowering the mean cumulative dose of the drug hastening the MRONJ onset.

### Oral carcinoma and its precursors in patients with graft-versus-host disease (GVHD)

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**Aim.** Chronic Graft-Versus-Host Disease (cGVHD) is an immuno-mediated disorder occurring as a frequent complication of allogeneic Hematopoietic Stem Cell Transplantation (HSCT), and affecting multiple organ system (skin, oral cavity, GI tract, lung, muscles and joints). Its prevalence is between 25-80 % in long-term survivors. The immune cells of the marrow bone donor mediates the immune attack to the recipient tissues. This immune attack probably causes an overstimulation of the apoptotic processes, that play a role in the pathogenesis of this disease. Frequently, oral manifestations can be the first symptom of systemic GVHD (80%), presenting as atrophic-erosive and/or hyperkeratotic lesions that clinically mimic autoimmune diseases such as Lichen Planus, Scleroderma, and Sjögren's syndrome with oral inflammation and erythema, atrophy, fibrosis with narrow mouth, tongue depapillation, hyposalivation and pain.

The aim of this study was to describe the development of oral carcinoma and its precursors in patients affected by GVHD and the importance of a periodical and careful oral follow-up of patients with oral GVHD to detect pre-malignant or evident malignant lesions at an early stage.

**Methods.** Ten consecutive patients undergoing first allogeneic HSCT from consanguineous were visited at the Complex Operative Unit of Odontostomatology, Policlinic of Bari and were included in this study.

Clinical examination showed seventeen ulcerative, leukoplasic and/or erythroplastic lesions in different oral sites (tongue, cheek, retrocommissural side, lower lip). All these lesions underwent an incisional biopsy for histopathological assessment in order to assess the presence of dysplastic or neoplastic areas; specifically for neoplastic tissues, six prognostic factors were also evaluated: tumor thickness, invasion pattern (single cell, large front), vascular, neural, ducts of the salivary glands and muscle infiltration.

**Results.** All the surgical wounds healed without complications. Histological examination highlighted: