

Editorial board of International Electronic Scientific and Practical Journal «WayScience»
(ISSN 2664-4819 (Online))

The editorial board of the Journal is not responsible for the content of the papers and may not share the author's opinion.

Transcending Boundaries: Unraveling the Dynamics of Cutting-Edge Research and its Transformative Impact on the Global Sphere: Proceedings of the 1st International Scientific and Practical Internet Conference, July 11-12, 2024. FOP Marenichenko V.V., Dnipro, Ukraine, 116 p.

ISBN 978-617-8293-30-7

1st International Scientific and Practical Internet Conference "Transcending Boundaries: Unraveling the Dynamics of Cutting-Edge Research and its Transformative Impact on the Global Sphere" is devoted to theoretical and applied research, latest approaches to the development of science.

Topics:

- public administration sciences;
- philosophical sciences;
- economic sciences;
- historical sciences;
- legal sciences;
- agricultural sciences;
- geographic sciences;
- pedagogical sciences;
- psychological sciences;
- sociological sciences;
- political sciences;
- philological sciences;
- technical sciences;
- medical sciences;
- chemical sciences;
- biological sciences;
- physical and mathematical sciences;
- other professional sciences.

Dnipro, Ukraine – 2024

FEATURES OF ORAL HYGIENE IN PATIENTS WITH ORAL LICHEN PLANUS AND DESQUAMATIVE GINGIVITIS

Manukhina O.M.

Doctor of Medicine, Associate Professor, Associate Professor
of Postgraduate Dentistry Department
Zaporizhzhia State Medical and Pharmaceutical University

Oral lichen planus (OLP) is a chronic autoimmune disease. Oral lesions can occur alone or in combination with lesions of other mucocutaneous areas. Despite the fact that this disease affects the oral mucosa, its great impact on the quality of life is underestimated [1, p. 288].

OLP is a common disease found throughout the world. The overall incidence of OLP has not been determined but is estimated to range from 0.5 to 1.5%. Damage to the oral mucosa in patients with systemic OLP ranges from 70 to 77%. The disease usually appears in older people, between the fifth and sixth decades of life, predominantly in women. This disease is rarely seen in young patients. This was confirmed by a study examining oral mucosal lesions in adolescents: only 0.13% of more than 6000 patients actually suffered from OLP as a cause of oral mucosal lesions. The course of the disease is influenced by local aggravating factors, including tobacco smoking, dry mouth, mechanical irritants and bacterial plaque [1, p. 288-290; 2, p. 816].

The etiology of OLP is still unknown. Additionally, the pathogenesis is not entirely clear, but is thought to arise from an immune response, presumably involving CD4+ and CD8+ T-lymphocytes producing cytokines, interleukin-2 and tumor necrosis factor in the oral epithelium, which cause chronic inflammatory response and apoptosis of keratinocytes. There is a genetic predisposition to this disease. Genetic polymorphisms of various human leukocyte antigen (HLA) markers; Gene polymorphisms of various HLA markers, as well as inflammatory cytokines and chemokines, are associated with the presence of OLP. Although the cause of these polymorphisms is not clear, their occurrence supports the autoantigen hypothesis [3, p. 289; 5, p. 386].

The link to other autoimmune diseases not limited to OLP has recently been rationalized with the discovery of “Survivin,” a multifunctional protein that is part of the apoptosis inhibitor family and is functionally important for cell division, apoptosis, and possibly microRNA biogenesis. This protein has been found to be involved in various autoimmune diseases, thereby shedding more light on their pathogenesis. [3, p. 289; 6, p. 11-15].

Some reviews have noted that the development of OLP and especially the exacerbation of this disease is associated with stress, anxiety, depression and, ultimately, a deterioration in the patient’s quality of life. The rationale for this was confirmed by increased levels of cortisol in saliva and/or urine, which corresponded to increased anxiety and depression [1, p. 288; 2, p. 815].

Experienced dentists and dermatologists can often diagnose OLP clinically, but a biopsy may be required to rule out immunobullous disorders (eg, mucosal pemphigoid and pemphigus vulgaris) if there is extensive ulceration and mucosal desquamation. A biopsy is necessary if there are concerns about dysplastic or neoplastic transformation of OLP, since this disease belongs to the group of potentially malignant ones [4, p. 289; 6, p. 11-15; 7, p.410].

To date, no treatment for OLP is completely effective due to its resistant nature and idiopathic etiology, and most available treatments focus on eliminating the signs and symptoms of the disease [4, p. 288; 5, p. 386; 9, p.410].

During 2022-2024, at the Department of Postgraduate Dentistry, 7 patients with OLP (3 with ulcerative form of the disease, 2 with exudative-hyperemic, 2 with typical) were treated, accompanied by desquamative gingivitis. OLP in these patients was associated with multiple systemic connotations, such as metabolic syndrome, diabetes mellitus, hypertension, thyroid diseases, psychosomatic diseases, chronic liver diseases, gastrointestinal diseases, as well as generalized periodontitis.

Clinical signs of desquamative gingivitis (DG) associated with OLP depended on the severity of the lesion (mild, moderate and severe). Mucous acquired a bright red color with small opaque areas of keratosis, which were located at the level of the attached gum. The epithelium sloughed off with friction, leaving a bright red underlying connective tissue that was very tender and bleeding on clinical examination. Associated symptoms included a burning sensation in the mouth and sensitivity to temperature changes. The patients could not eat spicy food, and brushing their teeth was very difficult and painful, and therefore secondary marginal gingivitis developed.

This situation led to a deterioration in oral hygiene; the Fedorov-Volodkina hygiene index during the initial examination ranged from 2.1 to 2.5 points. Dental plaque aggravated the inflammation of tissues affected by OLP.

Understanding the importance of maintaining good oral hygiene to prevent the development of new lesions, we have identified a treatment strategy aimed at preventing pain. It included the use of topical anesthetic gels, non-alcoholic rinses and toothpaste without fragrances or irritants. Professional hygiene was carried out using gentle methods. Much attention was paid to teaching rational hygiene using a soft toothbrush, superfloss and control methods, as well as individual selection of hygiene products. A control examination and determination of the hygiene index were carried out a week and then a month after the intervention. Since frequent professional cleaning helps maintain and repair tissue affected by oral lichen planus, the procedure was performed every 3 months. This set of measures made it possible to reduce pain, reduce the frequency and intensity of gum bleeding, up to its elimination, and speed up the process of epithelization of lesions.

Considering the literature data on the important role of hyaluronic acid in various biological processes, such as cell signaling, morphogenesis, matrix organization, tissue hydration, lubrication, wound healing, regulation of gene expression and cell proliferation, its safety is also high [8, p. 817; 9, p. 409], we used products with sodium hyaluronate in the form of gels and rinses to influence the lesions in patients with DG and OLP. Sodium hyaluronate coated the oral mucosa, enhanced tissue hydration and accelerated healing.

Taking into account the anti-inflammatory, healing effect and the absence of side effects associated with its use, sodium hyaluronate can be effectively used as an alternative and adjuvant local therapy in the treatment of OLP accompanied by desquamative gingivitis.

References:

1. Shavit E, Hagen K, Shear N. Oral lichen planus: a novel staging and algorithmic approach and all that is essential to know. *F1000Res*. 2020 Mar 24;9:F1000 Faculty Rev-206. doi: 10.12688/f1000research.18713.1. PMID: 32226613; PMCID: PMC7096219.
2. Gonzalez-Moles MA, Warnakulasuriya S, Gonzalez-Ruiz I, Gonzalez-Ruiz L, Ayen A, Lenuvel D, et al. Worldwide prevalence of oral lichen planus: a systematic review and meta-analysis. *Oral Dis* 2021;27:813–8.
3. Manchanda, Yashpal; Rathi, Sanjay K. 1; Joshi, Arun; Das, Sudip 2. Oral lichen planus: an updated review of etiopathogenesis, clinical presentation and treatment. *Online Journal of Indian Dermatology* 15(1):pp. January 8–23–February 2024 | DOI: 10.4103/idoj.idoj_652_22.
4. Idris M, Kujan O, Shearston K, Farah KS: Oral lichen planus has a very low incidence of malignant transformation: a systematic review and meta-analysis using strict diagnostic and inclusion criteria. *J Oral Pathol Med* 2021;50:287–98.
5. Lavoro A, Cultrera G, Gattuso G, Lombardo C, Falzone L, Saverio C, Libra M, Salmeri M. Role of Oral Microbiota Dysbiosis in the Development and Progression of Oral Lichen Planus. *J Pers Med*. 2024 Apr 3;14(4):386. doi: 10.3390/jpm14040386. PMID: 38673013; PMCID: PMC11050998.
6. Bozhyk, S.S. & Mazur, I.P. & Hasiuk, N.V. & Radchuk, Volodymyr. (2023). Lichen planus is a multidisciplinary problem of the mucous membrane of the mouth. Monitoring current views on issues. *Oral and General Health*. 4. 10-15. 10.22141/ogh.4.1.2023.145.
7. Sciuca AM, Toader MP, Stelea CG, Maftai GA, Ciurcanu OE, Stefanescu OM, Onofrei BA, Popa C. Desquamative Gingivitis in the Context of Autoimmune Bullous Dermatoses and

Lichen Planus-Challenges in the Diagnosis and Treatment. *Diagnostics* (Basel). 2022 Jul 20;12(7):1754. doi: 10.3390/diagnostics12071754. PMID: 35885656; PMCID: PMC9322493.

8. Zhang Z, Jia Y, Tao L, Liu X, Han Y, Wang X. Clinical Evaluation of Dexamethasone Plus Gentamycin Mouthwash Use in Combination with Total Glucosides of Paeony for Treatment of Oral Lichen Planus without Fungal Infection: A Comparative Study with Long -Term Follow-Up. *J Clin Med*. 2022 Nov 27;11(23):7004. doi: 10.3390/jcm11237004. PMID: 36498580; PMCID: PMC9739003.

9. Waingade M, Medikeri RS, Gaikwad S. Effectiveness of hyaluronic acid in the management of oral lichen planus: a systematic review and meta-analysis. *J Dent Anesth Pain Med*. 2022 Dec;22(6):405-417. doi: 10.17245/jdapm.2022.22.6.405. Epub 2022 Nov 24. PMID: 36601134; PMCID: PMC9763825.

Content

Alekseychuk O.M. CALCULATION OF THE STRESS-DEFORMED STATE OF MULTI-LAYER SHELLS BY THE FINITE ELEMENT METHOD	4
Bazylevych N.V. THE DYNAMISM OF THE CONTEMPORARY ENGLISH-CANADIAN SHORT STORY GENRE	6
Budi G., Loh T.C., Ahaotu E.O., Ihenacho R.A., Okoro C.N., Seng M., Simeon-Ahaotu V.C. EFFECTS OF EXTREME THERMAL CONDITIONS ON SERUM BIOCHEMICAL INDICES IN WEST AFRICAN DWARF GOATS	10
Frederic F., Jerome B., Ahaotu E.O., Ihenacho R.A., Okoro C.N., Osuagwu C.O., Seng M., Simeon-Ahaotu V.C. SUSTAINABILITY OF OIL PALM INDUSTRY IN IMO STATE, NIGERIA. (A STUDY OF ADAPALM OIL PALM ESTATE)	16
Manukhina O.M. FEATURES OF ORAL HYGIENE IN PATIENTS WITH ORAL LICHEN PLANUS AND DESQUAMATIVE GINGIVITIS	24
Tshmarityan M.V. HEALTH CONDITION AND HEALTHY LIFESTYLE OF SCHOOLCHILDREN IN ARMENIA	27
Zhukov Yu.I., Shevchenko M.D., Dankevych N.I., Roman L.G., Striczhak T.A. POLYMORPHISM OF THE GONADS OF DAIRY COWS WITH CHRONIC GYNECOLOGICAL PATHOLOGIES	28
Амрахова Л.Г. СВЯЗЬ МЕЖДУ ОЖИРЕНИЕМ И СЕРДЕЧНО-СОСУДИСТЫМИ ЗАБОЛЕВАНИЯМИ	31
Амрахова Л.Г. ОЖИРЕНИЕ И НАРУШЕНИЯ ЛИПИДНОГО ОБМЕНА	33
Бондарчук Я.В. ТЕНДЕНЦІЙНІСТЬ ПРОМИСЛОВОГО КАПІТАЛУ У ХХІ СТ.	35
Босенко Є.І., Гуртовий І.І., Гузов Д.А. АНАЛІЗ МЕТОДІВ ОТРИМАННЯ ОЦІНОК ПАРАМЕТРІВ СТАТИСТИЧНИХ МОДЕЛЕЙ РОЗПОДІЛУ ВИПАДКОВИХ ВЕЛИЧИН ПОКАЗНИКІВ ЯКОСТІ	38
Босенко Д.І., Євтушенко А.О., Андрієць В.В. АНАЛІЗ МЕТОДІВ КІЛЬКІСНОЇ ОЦІНКИ СИСТЕМ УПРАВЛІННЯ ЯКІСТЮ (СУЯ) ПІДПРИЄМСТВ ВІДПОВІДНО ДО МІЖНАРОДНИХ СТАНДАРТІВ	40
Бурка В.М., Плахотний А.П. ОСОБЛИВОСТІ ТАКТИКО-СПЕЦІАЛЬНОЇ ПІДГОТОВКИ ПРАЦІВНИКІВ НАЦІОНАЛЬНОЇ ПОЛІЦІЇ УКРАЇНИ В УМОВАХ ВОЄННОГО СТАНУ	42
Верховцева І.Г. ПРОПАГАНДА ЯК МІФОТВОРЧІСТЬ ЦИФРОВОЇ ЕПОХИ: ІНФОРМАЦІЙНЕ НАСИЛЬСТВО ТА ІДЕНТИЧНІСТЬ ЛЮДИНИ	45
Воробйова Ж.Ю. ДОСЛІДЖЕННЯ ГЕНЕЗИСУ ТЕОРЕТИЧНИХ ЗАСАД ПОЛІКУЛЬТУРНОЇ ОСВІТИ В УНІВЕРСИТЕТАХ США ДЛЯ ДОСВІДУ УКРАЇНИ	48
Григор'єв О.Ю., Чмир Я.І. ПАРЛАМЕНТ УКРАЇНИ В УМОВАХ ВОЄННОГО СТАНУ	51
Держевецька М.А., Гетьман І.А. НАВЧАННЯ КУРСУ «МЕТОДИ ДОСЛІДЖЕННЯ ОПЕРАЦІЙ» В УМОВАХ ДІДЖИТАЛІЗАЦІЇ ОСВІТИ	54
Дзевецька Л. АНГЛІЙСЬКА МОВА ЯК ЗАСІБ ФОРМУВАННЯ КОМПЕТЕНЦІЇ СОЦІАЛЬНОЇ ВЗАЄМОДІЇ У МАЙБУТНІХ ФАХІВЦІВ ПРАВА ТА ПРАВООХОРОННОЇ ДІЯЛЬНОСТІ	56
Жінчин М.В. ПРАЦЕВЛАШТУВАННЯ ВНУТРІШНЬО ПЕРЕМІЩЕНИХ ОСІБ: ПРИКЛАДИ ПРОГРАМ ПІДТРИМКИ	58
Зубик П.Р., Клечак І.Р., Дзигун Л.П. КУЛЬТИВУВАННЯ МАКРОМІЦЕТІВ <i>LAETIPORUS SULPHUREUS</i> НА АГАРИЗОВАНОМУ СЕРЕДОВИЩІ З ДОДАВАННЯМ ПЕКТИНУ	59