Avens Publishing Group
J Clin Investigat Dermatol
July 2016 Volume 4, Issue 2
© All rights are reserved by Svyatenko et al.

Manifestative Papular Dermatoses: Lichen Ruber Planus of the Mucous Membrane of Oral Cavity

Keywords: Manifestative papular dermatoses; Lichen ruber planus; Mucous membrane of the oral cavity

Abstract

In the article literary data and data of own supervision on one of actual problems of modern dermatology- lichen ruber planus (LRP) of a mucous membrane of oral cavity (MMOC) are cited. Lesion of the mucous membranes is a characteristic feature LRP and is one of the most frequent manifestations of dermatoses, and may be related carried to "great" attributes which is of important diagnostic value. According to supervision of the authors, lesion of the mucous membrane was marked in 69 (32,2%) of patients with LRP. The authors registered a significant variety of clinical forms and variants of LRP course of the mucous membranes. As it is known, skin and mucous membranes are the basic organs where numerous pathomorphologic pathological manifestations of LRP are developed. But existence of both endo and exogenous mechanisms, influence on intertissue and interorgan immune relations, homeostasis, and metabolic processes this cannot but affect clinical polymorphism of skin lesions and those of mucous membrane of the oral cavity in LRP. To the authors' opinion, hereafter it would be perspective to detail and clear up what factors of LRP and in what way affect skin lesions and those of mucous membranes, as well as under what conditions they are realized.

Open Access **Research Article**

Journal of Clinical & Investigative Dermatology

Svyatenko T.V[1*], Litus A.I[2], Kadenko O.A[2] and Svistunov I.V[2]

[1]*State establishment, Dnepropetrovsk medical academy of HM of Ukraine, Dnepropetrovsk, Ukraine*
[2]*National medical academy of postgraduate education named after P. Shupik, Ukraine*

***Address for Correspondence**
Svyatenko T.V, State establishment, Dnepropetrovsk medical academy of HM of Ukraine, Dnepropetrovsk, Ukraine, E-mail: tsvyat@rambler.ru

Submission: 13 June, 2016
Accepted: 27 June, 2016
Published: 01 July, 2016

Copyright: © 2016 Svyatenko TV, et al. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Reviewed & Approved by: Dr. Taihao Quan, Department of Dermatology, University of Michigan, USA

Introduction

Among many diseases of a human being, lesions of the skin probably are the most prevalent ones and occupy a special place. By the influence of life's quality, capacity to work, communicative functions and social adaptation, manifestative dermatosis play an important role.

Clinical manifestations of these diseases create cosmetic defects of the skin, its appendages and visible mucous membranes in the form of easily defined rash. The most often popular is accompanied by unpleasant subjective sensation, often by acute and chronic itching, marked psychasthenia and other complications.

Among such manifestative diseases lichen ruber planus (LRP) - a multifactor disease with various forms of the course and great clinical variability occupies a special place, being difficult for diagnosis and treatment programs, directed at achieving clinical well-being and stable remission.

At the same time it should be mentioned that in the number of cases, treatment of patients with LRP requires prolonged period of time. It is a well-known tendency on somewhat forced reduction of inpatient treatment terms to reduce temporal incapacitation and bed rotation.

It should be considered that in diagnosis making the following aspects are reflected: priority of appearing skin manifestations as well as severity of course of previous recurrences, denoting dermatosis severity at large. Analysis of patients' hospitalization over the last 15 years in Ukraine made it possible to draw the following conclusions:

- Clear, unified criteria for referral of LRP patients to inpatient treatment are absent;

- Cases of improper hospitalization and improper terms of hospital stay;

- Absence or insufficient complex examination of patients with manifestative papular chronic recurrent dermatosis by allied specialists aimed at revealing, diagnosing and sanitation of pathogenetically significant comorbid pathology or pathology caused by skin disease.

On examination, choice of treatment modality, prognosis of the disease course and its outcome, multifocal character of lesions in case of lichen ruber planus, in particular concomitant lesion of mucous membranes is not taken into account.

Involvement into the process of mucous membranes is a typical feature of LRP [1], being one of the most frequent manifestation of dermatosis and may be related to "large" signs having important diagnostic significance [2-4]. By the data of different authors, incidence of lesion of mucous membranes reaches 50% and more [5]. Wilson was the first to give the description of skin rash appearance of mentioned localization. In 3 of 50 patients, he observed simultaneous skin lesion and mucous membrane of oral cavity (MMOC). Thibierge and Pospelov PI made follow-up observation. Pospelov PI noted LRP symptoms on the mucous membranes in 6 of 20 patients examined. Many native and foreign authors described changes on the mucous membrane of oral cavity Bernanke NG, et al. [6,7]. Clinical signs and diversity as well as histopathological changes, characterizing LRP and MMOC were studied [8-10].

ISSN: 2373-1044

Attention was paid to possibility of mucous membrane lesion of other localization [11]. Kozhevnikov P reported about lichen rubber acuminatus with diffuse eruptions on the mucous membrane of the nose, lips, cheek, hard palate, tonsils, fauces, larynx and conjunctiva. Nikolsky P mentioned about appearance of eruptions on the oral, genital and anal mucosa. A vast amount of material is accumulated by the researches of Moscow Dentistry Medical Institute [8], with their contribution in development, classification, peculiarities of clinical course, histopathology and therapy of mucous membranes lesions. On examination of 436 patients the following incidence of localization was set: 85 - oral mucosa, 20 - vermilion border. Isolated oral lichen planus is sufficiently difficult to diagnose. Mashkilleison AL, Abramova EI report that since 1957 only 51,2% of LRP patients who have undergone treatment over the last 30 years in the Clinic of Skin Diseases of Moscow Dentistry Medical Institute named after Semashko NA, were referred with proper diagnosis [8].

In patients with eruptions on the mucous membranes, skin lesions either precede these changes or appear along with them, or in a certain period of time appear after initial changes on the mucous membranes [12]. However, data of the present day literature about lesion of MMOC by LRP are very controversial and depend on specific features of the patients' contingent under observation [13,14]. By the data of Abramova EE of 249 patients with LRP of MMOC and vermilion border, only 2,3% experienced skin lesion simultaneously. By Loafer and Kuffer, 2001, LRP of MMOC makes up 30-35% of the number of all diseases of oral mucosa in the countries of the Central Europe. By the data of Slesarenko NA among 325 LRP patients aged from 4 to 82 years, being under author's observation, oral mucosa lesions are noted in 168 patients (51,7%), of them MMOR -- in 161 and genital mucosa in - 7 patients [15]. Isolated lichen oris was observed in 6,4% of patients. Literature data on the incidence of MMOR in LRP patients, presented by various researches, vary from 17% to 77% [16]. In epidemiological researches Esmaili N, Emami Rasavi H (Iran) revealed 39% of LRP among MMOC diseases (erosive-ulcerative type of LRP in MMOC turned out to be in 1% of patients) [16]. By the data of Brattacharya M and Kaur I, reticular form of MMOR lesions occurs in 86% of patients, atrophic - in 55%, plaque - in 51%, papular - in 7%, erosive - in 6% of patients with LRP of MMOR [17].

Ukrainian researchers Barannik NG et al. examined 562 patients with various clinical forms of LRP of MMOC [6,7]. 71,5% of them were females and 28,5% were males aged from 29 to 61 years. Median age was 49,9 ± 0,64 years. Depending on the clinical form of the disease, patients were distributed as follows: typical from - 208 (37%) patients, exudative-hyperemic - 111 (19,7%), erosive-ulcerative - 174 (31%) and hyperkeratotic - 69 (12,3%) of patients. Among the total number of patients under examination, patients aged from 51 to 60 (46,4 ± 2,1%) and from 41 to 50 (22,1 ± 1,7%) years prevailed. Coexistence of MMOC and skin lesions with LRP were noted in 45 (8%) of patients.

In total pathology of the oral cavity, LRP occupies one of the leading places (1/3 of all dental patients) [16]. Predominantly the disease affects people over 40 years of age, males-females ratio being 2:1. The most frequent localization of dermatosis manifestations is buccal mucosa along the line of occlusion of cheek-teeth - 75%, more rarely - on the tongue - 32%, palate - 21%, gums - 11%, lips - 7%, floor of the oral cavity - 3,5, fauces - 2% [16]. Eruptions on the lower lip are observed more often than on the upper one [17]. Mashkilleison AL, et al. noted possibility of the isolated lesion of the vermilion border.

In the development of LRP with localization on the MMOC and vermilion border provoking factors, which damage its integrity, resistance to traumas play an important role, as well as toxic-allergic phenomena caused by the affect of chemical irritants [17]. Mashkilleison AL, et al. point to the role of mucosa trauma, caused by dental pathology (dentures from acrylic resin, various metals, fillings from dental amalgams, etc.); there was traced link with diseases of gastro-intestinal tract (anacid and hypocid gastritis, gastric and duodenal ulcer disease, chronic colitis, syndrome of malabsorption, disbacteriosis), liver diseases, endocrine disorders. Appearance of clinical signs of the disease on the mucosa is a peculiar Kebner's isomorphic reaction and response to mechanic or chemical trauma [17].

Rabinovich AF has studied immunologic processes occurring in MMOC of LRP patients and defined polyclonal activation of B-system of immunity in every form of MMOR in this category of patients [18]. In patients with LPR of MMOR there was defined increase of cells containing γ-interferon, both among the total number of lymphocytes and among T-lymphocytes (CD3+), and synthesis of γ-interferon. In LRP of MMOC, there were studied data testifying to the advantage of activity of T-helpers of the first order. Occasional reports on studying the role of TNF in LRP patients with MMOC are available in the literature [16]. There exist reports on the increase of TNF-á level in the saliva of LRP patients with MMOC [17,18], and participation of TNF-á in the processes of apoptosis in LRP of MMOC [18].

Clinical picture of mucous membranes lesion is diverse. Researchers have developed classification which envisages distinguishing of combined MMOC lesions and mucous membranes of gastro-intestinal tract [6]. In classification developed by Hollander (1979) the following varieties are distinguished: lichen planus mucosae, lichen pemphugoides mucosae (frequent - upto 50%), lichen atrophicans mucosae. Distinguishing of separate forms does not contraindicate to possibility of appearance of transition variants and transformation of one form into another at different stages of diseases development, as it referred to different expressiveness of pathologic process. [16]. Clear synchronism between skin lesions and that of mucous membranes was failed to be revealed [17]. Exacerbation of the process and appearance of the new eruptions on the skin is not always accompanied by aggravation of inflammatory manifestations on the mucous membrane and vice versa [17]. The most frequently in the native literature five forms of LRP on the MMOC are distinguished: typical, exudative-hyperemic, erosive-ulcerous, bullous, hyperkeratotic. So, variety of subjective and objective symptomatic is typical for LRP of MMOC.

Materials and Methods

Under our own observation there were 325 patients with various forms of lichen ruber planus (LRP).

Results

So, by the data of our own observations, lesions of MMOC are of quite often occurrence in LRP patients. We have registered a great

ISSN: 2373-1044

variety of clinical forms and variants of LRP in MMOC, this may testify to possibility of multi-factorial or independent character of the disease or syndrome as diverse lichenoid skin reaction and that of mucous membranes to different exo- and endogenous irritants. As is well-known, skin and MMOC are the main organs where numerous patho-morphologic pathologic manifestations in LRP develop. But existence of many both exo- and endogenous mechanisms affect on disorders of intertissue and interorgan immune relations, homeostasis, metabolic processes, this cannot but affect clinical polymorphism of skin lesions and those of mucous membrane of the oral cavity in LRP. At present, in the literature sources contradictory data on MMOC lesions in LRP are available. Consequently, to our opinion, hereafter it would be perspective to detail and clear up what factors of LRP and in what way affect skin lesions and those of mucous membranes, as well as under what conditions they are realized.

Discussion

Lesion of the mucous membrane was noted in 99 patients, including lesions of the oral cavity (inner surface of the cheeks, gum, tongue) - in 94 people, external genitals - in 5 (1,9%), comorbid lesions both of MMOC and external genitals - in 1 patient. Main localizations of LRP foci on the oral mucous membrane were: line of dental occlusion - 43 (20,1%), gingival mucous membranes - 23 (10,7%), tongue - 17 (7,9%) of cases, vermilion border - 9 (4,2%). On the mucous membrane of labia minora lesions were noted in 1 woman.

Isolated lichen ruber planus of the oral mucous membrane was observed in 31 (14,5%) patients. These patients were referred by dental practitioners, who had revealed LRP accidentally on sanitation or when patients sought medical advice.

Clinical picture of MMOR lesions and those of the lips was marked by a variety of symptoms. We managed to diagnose 6 clinical variants: typical - in 17 (54,8%) patients, exudative-hyperemic - in 8 (25,8%), erosive-ulcerous - in 3 (9,7%), bullous - in 1 (3,2%), hyperkeratotic - in 1 (3,2%) and atrophic - in 1 (3,2%). As it is seen among clinical variants typical and exudative-hyperemic, LRP of MMOC was observed. Typical form of LRP was characterized by fine papules, of the size of millet grain of silver-white or grey-white color which when flown together, formed specific white net or lace. On the tongue, papules formed plaques up to 1 cm in diameter, sometimes they resembled smoker's patch. In 2 patients, on the vermilion border small plaques of pink-violet tint with insignificant desquamation were formed, on their surface there was noted grayish-white net. In typical variant only 3 patients experienced subjective disorders.

Exudative-hyperemic form was manifested by hyperemia and swollen mucosa with solitary or grouped typical papules. Patients experienced pain and sometimes heartburn, which became worse while drinking alcohol, eating hot, rough or spicy food. In differentiation typical and exudative-hyperemic forms of LRP from typical form of lupus erythematosus of the lips and form without clinical atrophy and hyperkeratosis, we focused our attention on the fact that intensive cyanosis of lesion focus, consisting of papules, flowing together was characteristic for LRP. In LRP, papular eruptions always form original drawing of lesion. As distinct from LRP, in typical form of lupus erythematosus atrophy is observed. Presence of atrophy and erythema, different character of keratosis, possibility of spreading of the process from vermilion border onto the skin distinguish typical form of lupus erythematosus, as well as icy-blue radiance of lesion foci under the rays of Wood's lamp. This form of LRP was also differentiated from actinic cheilitis, with its typical, more expressed hyperemia and uneven infiltration, giving the lip (motley) look, exfoliation; absence of atrophy and radiance under the rays of Wood's lamp [8].

Erosive-ulcerous form in the main appears due to the trauma of mucous membrane areas and is characterized by the appearance of erosions and ulcers around typical papules. Erosions were of uneven outlines. Their surface was covered with fibrous coat, which was removed with the appearance of blood spots on the surface. Patients with erosive-ulcerous LRP frequently complained of pain and burning sensation, especially after taking alcohol drinks, hot, rough or spicy food. The biggest difficulties of differential diagnostics arouse in erosive-ulcerous form of LRP and lupus erythematosus in their localization on the vermilion border. Often drawing on clinical picture only, it was impossible to differentiate mentioned-above diseases. Only by means of histological study and direct reaction of immune-fluorescence (RIF) by which IgG are revealed in affected mucous membrane or in vermilion border in the area of epidermis-dermis junction in the form of granules let us to steadily distinguish these two diseases in lupus erythematosus patients.

In 1 patient we observed atrophic lichen planus, so-called glossed mucous membrane, sulci of white color. From past history it was known that this lesion appeared on the site of long-existing typical LRP. Hyperkeratotic form of LRP of MMOC revealed in 1 patient was characterized by the presence of thick foci of keratinization with even borders of various forms, with typical papules nearby. From past history it was known that this patient received previous treatment during 12 months, but without any effect. In 1 patient bullous form was manifested by 2 blisters and erosions in the epithelization stage on the mucous membrane together with typical LRP eruptions. It should be noted that the main difficulties arising in carrying out differential diagnostics of isolated lesion of the mucous membrane in LRP patients are linked with similarity in manifestations of LRP of MMOC and those of lupus erythematosus, smoker's patch, syphilitic papules, Mibelli porokeratosis, true pemphigus and other diseases. All mentioned above, requires developing clear differential algorithms, which would be used in the work of a dermatologist.

As it is known, LRP is one of the most frequent chronic inflammatory diseases of skin, mucous membrane of the oral cavity and vermilion border. In the majority of cases lichen ruber planus is of benign course. Cases of its transformation in cancer are noted fairly rare - 0,1-1% [19-22]. Our own observation is presented. We followed-up two males aged 49 and 54 years with erosive-ulcerous form of LRP of the oral mucous membrane and vermilion border. Disease duration made up 21 and 16 years correspondingly. Diagnosis of LRP was confirmed histological on initial address of a patient to the doctor. In the following years, the diseases had chronically recurrent course. From retrospective analysis, it became clear that patients received diverse drug therapy: glucocorticoids, immune-modulators, vitamins, symptomatic treatment, varied topical treatment (creams, dental adhesive pastes), physiotherapy, psychotherapy. In patients

ISSN: 2373-1044

under follow-up timely, there were revealed various signs of malignancy: consolidation of mass, sudden erosion appearance on one of LRP, erosions easily bleed when traumatized. Histologically: deep dipping of epithelial processes into stroma, disappearance of basal membrane, discomplexation of cells of basal and spinous layer, growth of infiltrate with formation of keratinization zones and exfoliation of epithelium. We share the opinion of a number of authors, who consider erosive-ulcerous form of LRP on the mucous membrane of the oral cavity and lips as pre-cancer state. In this regard, while treating such patients, methods which irritate and cauterize mucous membrane should be avoided. In prolonged treatment of erosive-ulcerous forms of LRP, especially those which are difficult to treat, it is necessary to perform histology examination to diagnose malignancy development.

References

1. Popov J, Lalova A, Negenzova Z (2004) Coexistence of psoriasis vulgaris and oral lichen planus. J Eur Acad Dermatol Venereol 11: 341.
2. Ismail SB, Kumar SK, Zain RB (2007) Oral lichen planus and lichenoid reactions: etiopathogenesis, diagnosis, management and malignant transformation. J Oral Sci 49: 89-106.
3. Seoane J, Romeo MA, Varela-Centelles P, Diz-Dios P, Garcia-Pola MJ (2004) Oral lichen planus: a clinical and morphometric study of oral lesions in relation to clinical presentation. Braz Dent J 15: 9-12.
4. Tunca A, Calikoglu E, Aktas D, Safak N, Ustün H (2004) Oral lichen planus: an unusual cause of facial and abducens nerve paralysis associated with conjunctival and oesophageal invovement. J Eur Acad Dermatol Venereol 18: 630-633.
5. Antiga E, Caproni M, Parodi A, Cianchini G, Fabbri P (2014) Treatment of cutaneous lichen planus: an evidence-based analysis of efficacy by the Italian Group for Cutaneous Immunopathology. G Ital Dermatol Venereol 149: 719-726.
6. Barannik NG (1995) State of some hormonal systems in patients with oral lichen planus. Topical Questions of Dentistry. Collection of Abstracts/ Bashkir. SMI, Edition by Mingazov GG, Ufa, pp. 30-34.
7. Barannik NG (1995) Oral lichen ruber planus: the question of etiopathogensis. Bulletin of Dentistry 1: 14-17.
8. Abramova YI (1966) Lichen ruber planus in the oral cavity. pp. 19.
9. Sonkodi I, Gyori I (1975) Histological classification of keratoses and lichen planus of the mouth mucosa by computer analysis. Fogorv Sz 68: 215-219.
10. Sugerman PB, Savage NW (2002) Oral lichen planus: causes, diagnosis and management. Aust Dent J 47: 290-297.
11. Schlosser BJ (2010) Lichen planus and lichenoid reactions of the oral mucosa. Dermatol Ther 23: 251-267.
12. Allik YL (2001) Improvement of therapy of various forms of oral lichen planus taking into account psychologic factor of patients. pp. 21.
13. Axell T, Rundquist L (1987) Oral lichen planus--a demographic study. Community Dent Oral Epidemiol 15: 52-56.
14. Farshchian M, Zamanian (2004) A study of lichen planus analysis of 363 cases in Hamedan, west of Iran. J Eur Acad Dermatol Venereol 11: 362.
15. Slesarenko NA (1995) Lichen ruber planus (modern immunologic and biochemical aspects) and methods of pathogenetic therapy. pp. 36.
16. Esmaili N, Emami Rasavi H (2003) Oral lichen planus: frequency and clinical features. J Eur Acad Dermatol Venereol 17 Suppl 3: 286.
17. Usatine RP, Tinitigan M (2015) Diagnosis and treatment of lichen planus. Am Fam Physician 84: 53-60.
18. Shumskiy AV, Trunina LP (2004) Oral lichen ruber planus: (Monograph). Samar Medical Institute, REAVIZ, pp. 162.
19. Rabinovich OF (2004) Treatment of patients with lichen planus and immunomodulatory drugs Likopid polyoxidonium. Immunology 4: 226-229.
20. Lavanya N, Jayanthi P, Rao UK, Ranganathan K (2011) Oral lichen planus: an update on pathogenesis and treatment. J Oral Maxillofac Pathol 15: 127-132.
21. Petrova LV (2002) Modern peculiarities of clinical course of oral lichen planus. Rus J Skin Vener Dis 3: 31-33.
22. Kalyuzhna LD, Biloklytska GF (2007) Diseases of facial skin, oral mucosa and vermilion border of lips. Manual, Gramota, pp. 280.