

Oral Lichen Ruber (OLR) Epidemiology and Clinical Findings in 143 Cases

Oralni lichen ruber (OLR)
epidemiologija i klinički nalaz 143 slučaja

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Summary

All cases of OLR during a period of five years in the Department of Oral Pathology are analyzed. The aim of this study was.

- to present epidemiological and clinical findings of OLR
- to determine if Grinspan syndrome exist and if so in what percentage.

OLR affected women more frequently (72.3%) than men (27.7%), and after the age of 40 OLR is more frequent. The ratio of lichen ruber planus and erosivus was 68.5% : 31.5%. DM is present in 16.1%, hypertension in 30.1%, Grinspan syndrome in 4.2% cases. All the six cases of Grinspan syndrome had the erosive form of lichen. There is also significant correlation of OLR with gastrointestinal disease (85.3%), where, gastritis and hepato-biliar diseases prevail.

Key words: Oral lichen ruber, diabetes mellitus, hypertension, Grinspan syndrome

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Introduction

Lichen ruber is a chronic inflammatory disease of the mucosa and the skin. It is a mucocutan autoimmune disorder which, due to possible outcomes can become a precancerous lesion. The incidence of this disease ranges from 0.5% to 2.0% in the general population (1). It more often affect women than men, and most often between the age of forty and sixty. In one third of the cases oral lesions are followed by skin disorders (2). Basic characteristics of lichen are inflammation and occurrence of hypeke-

ratotic papule which are confluent, giving thus a different clinical picture.

There are three basic forms of lichen ruber:

1. lichen ruber planus,
2. lichen ruber erosivus,
3. lichen ruber bullosus.

Lichen ruber planus is the most frequent of the three (75 - 85%) and is manifested in different clinical forms: reticularis, annularis, plaquosus, atrophicans, hypertrophicans and pigmentosus.

Lichen often associates with systemic diseases such as: diabetes mellitus (1,3,4), hypertension (5), rheumatic collagen diseases (6), chronic stress syndrome (7), drug allergy (8), and HLA predisposition (8). The real cause of the development of lichen remains undefined (9).

The purpose of this study was to present the epidemiological data and clinical findings of five years research of oral lichen ruber (OLR) in the Department of Oral Pathology, School of Dental medicine, University of Zagreb, and to establish whether Grinspan syndrome exists and in what percentage.

Materials and methods

The research was done retrospectively. From the medical card files of the Department of the Oral Pathology, the cards were selected of patients who were diagnosed OLR in the five year period - from 1.1.1991. to 31.12.1995. The case histories consist of a dental medical card for specialist check-ups with relevant clinical and lab. findings, and a record of the treatment given on different occasions. The following data were taken: sex, age, profession, clinical diagnosis of OLR, duration of the disease, blood sugar level, blood pressure value, clinical diagnosis of skin changes, changes in the gastrointestinal system, complete blood count (CBC) and allergy.

Results

There were 143 patients with diagnosed OLR. Table 1 shows sex and age distribution of patients.

Table 1 Sex and Distribution of patients
Tablica 1. Raspodjela bolesnika po spolu

Sex	Number	Percentage	Relation	Age m	Age range
Men	39	27.7	1.00	54.8	14-84
Women	104	72.3	2.66	49.9	17-85
Total	143	100	—	53.4	14-85

Table 2 shows the number of patients in each ten year age group.

OLR occurs most frequently at the age of 40 and before the age of 70. Values outside this range are low.

Table 2 Age groups
Tablica 2. Dobne skupine

Age up to:	10	20	30	40	50	60	70	80	90	100
Men	0	1	6	2	11	8	7	3	1	0
Women	0	1	4	9	18	33	27	11	1	0
Total	0	2	10	11	29	41	34	14	2	0
Percentage	0	1.4	7	7.7	20.3	28.7	23.8	9.8	1.4	0

Since it is difficult to establish when the disease begins, it is hard to determine how long the patient has been affected. As the illness initially has an asymptomatic course, it obviously began much earlier than was confirmed.

Morphologically, L.R. planus prevails in the clinical picture of OLR with 68.5%, and its entity reticularis with 52.2%. The erosive form in this sample prevails with 31.5%.

No incidence of the bullous form was recorded, probably because bulla, as an efflorescence, is not stable in the mouth, as the functions of chewing, swallowing and speaking cause its rapid rupture. If there had been a case of bulla, it soon passed into its erosive form. No case of hypertrophic or pigmentous forms of lichen were recorded.

Grinspan syndrome is characterized by OLR, diabetes mellitus (DM) and hypertension (H). Table 4 gives the relation of clinical findings in Grinspan trias.

Table 3 Clinical morphological variations of OLR
Tablica 3. Kliničko-morfološke inačice OLR

L.R. Planus	L.R. Eresoisuv	L.R. Bullousus
Reticularis	79	
Annularis	4	
Plaquosus	5	
Atrophicans	9	
Hypertrophicans	0	
Pigmentosus	0	
Total	98	45
Percentage	68.5	31.5
		0
		0

Table 4 OLR, diabetes mellitus (DM), hypertension (H)
Tablica 4. OLR, diabetes mellitus (DM), hipertenzija (H)

Diagnosis	OLR	OLR			OLR
		Total	DM	H	DM+H
No. of. cases	143	60	23	43	6
Percentage	100	41.9	16.1	30.1	4.2
Age	53.4	57.1	59	57.6	57.2

In the sample of 143 patients 23 had hyperglycemia, and 43 hypertension. Six of these patients had both DM and hypertension, i.e. Grinspan syndrome. In all six cases the clinical picture was that of erosive oral lichen.

Table 5 shows the relation between OLR and skin changes.

Table 5 OLR and skin changes
Tablica 5. OLR i kožne promjene

Diagnosis	Number	Percent
OLR	143	100
Skin L.R.	15	10.5
Dermatitis	5	3.5
Psoriasis	3	2.1
Vitiligo	1	0.7
Rosacea	1	0.7
Total	25	17.5

Table 6 indicates the relation between OLR and changes in the gastrointestinal system.

Table 6 OLR changes in the gastrointestinal system
Tablica 6. OLR promjene u probavnom sustavu

Diagnosis	Number	Percentage
Gastritis	52	36.4
Cholecystis	21	14.7
Hepatopathia	19	13.3
Ulcus duodeni	9	6.3
Ulcys ventriculi	6	4.2
Cholelithiasis	5	3.5
Opstipatio	5	3.5
Cholecystectomy	3	2.1
Pancreatitis	1	0.7
Total	122	85.3

Patients with OLR have a high percentage of gastrointestinal diseases, most frequently gastritis and diseases of the hepatobiliar tract.

Hematological laboratory findings, excluding blood sugar level, are presented in Table 7.

Table 7 OLR and haematological changes
Tablica 7. OLR i krvne promjene

Diagnosis	Number	Percentage
Anemia	17	11.9
S.E.	16	11.2
Lymphocytosis	3	2.1
Leucopenia	2	1.4
Eosinophile	2	1.4
Thrombocytopenia	1	0.7
Total	41	28.7

OLR was present in women in 72.3% of cases; and a high percentage of syderopenic anemia was also determined. Allergy was found in 39 cases i.e. 27.3% of patients.

The most frequent allergies: penicillin (in 10 patients), dust (8), sinersul (5), food (3), analgetic (2), sulphonamide (2), pollen (2), feather (2), iodine (1), preservatives (1), paint (1), sun (1) and sea salt (1).

Discussion

The purpose of this work was not to elaborate the therapy of OLR, but to evaluate epidemiological characteristics of OLR and its clinical picture, as well as to analyze controversial data from medical literature in Grinspan syndrome exists.

Lichen ruber is a chronic inflammatory disease of the mucosa and skin with yet undefined aetiology (9,10,11,12, 13). The finding that it is more frequent in women (72.3%) and that it more often affects people over 40, corresponds to findings of other authors (14,25,16). In this sample, the skin changes are present in 10.5% cases, while other authors found them identified than oral diseases, go to dermatological out-patient departments or to dermatological hospital departments.

It is important to stress the high level of the interaction of gastrointestinal diseases with OLR (85.3%) which is very important for diagnosis, and even more important for OLR therapy.

One of the purposes of this study was to establish the possible existence of Grinspan syndrome. Grinspan syndrome was present in six patients, or 4.2 per cent of the cases. As early as 1949 Lynch (5) related OLR to vascular hypertension. Grinspan et al. (3) postulated the association of the oral lichen, diabetes mellitus and hypertension. Grupper and Avril (18) called this trias Grinspan syndrome.

In medical literature there are controversial data on Grinspan syndrome. Non controversial data are based on isolated cases (19) or a limited number of patients (20). Diabetes mellitus is more frequent in elderly persons, and so is OLR.

Borghelli et al (21) found OLR in comparative groups -0.55% in diabetics (729 patients), 0.74% non-diabetics (676 examinees), and 0.47% (2260 examinees) in a general population. The differences were not significant. We should not overlook the fact that lichenous mucocutane reactions can be ca-

used by drugs which are prescribed for diabetes and hypertension (22).

In the sample of 143 patients 60 had either diabetes or hypertension, out of which 23 had diabetes and 43 hypertension. Diabetes mellitus, hypertension and the erosive form of oral lichen were present in 6 patients. Each patient with OLR had sugar blood level and blood pressure results.

The results of the authors reset on the frequency of diabetes mellitus and OLR is shown in Table 8.

Table 8 *OLR and diabetes mellitus*
Tablica 8. *OLR i diabetes mellitus*

Author	Year	References	OLR No.	Diabetes mellitus	
				No. of patients	%
Grinspan et. al.	1966	3	61	23	38
Jolly	1972	4	33	28	85
Powell et. al.	1974	23	21	13	62
Lowe et. al.	1976	20	40	17	42
Bussel et. al.	1979	24	47	6	13
Topić et. al.	1995	—	143	23	16

Conclusion

On the basis of a five year study of 143 cases of OLR in the Department of Oral Pathology, School

of Dental medicine, University of Zagreb, the following can be concluded:

1. OLR more often affected women - 72.3 per cent, than men.
2. After the age of 40 OLR is more frequent.
3. The most frequent clinical picture was lichen ruber planus - 68.5% per cent: followed by lichen ruber erosivus 31.5%, lichen ruber bullosus (0.0 per cent). In the sub-group of lichen ruber planus the reticular form prevailed (55.2%).
4. Diabetes mellitus in OLR was present in 16.1%, hypertension in 30.1%, while diabetes and hypertension was found in 4.2% of cases. All the six cases of Grinspan syndrome had the erosive form of lichen.
5. In this sample skin lichen was present in 10.5% of cases.
6. The association of OLR with gastrointestinal diseases was present in 85.3% of cases; gastritis and diseases of hepato-biliar tract prevailed.
7. Haematological laboratory findings apart from blood sugar level, indicated syderopenic anemia in 11.9% and raised SE in 11.2% of cases.
8. Allergy to drugs, food and dust was present in 27.3% of cases.

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Sažetak

Elaborirani su svi slučajevi OLR za vrijeme od pet godina za Zavodu za Oralnu patologiju Stomatološkog fakulteta Sveučilišta u Zagrebu.

Svrha rada bila je utvrditi

- epidemiologiju i klinički nalaz OLR i
- nastajanje Grinspan sindroma i ako postoji u kojem postotku je prisutan.

OLR aficira češće žene (72.3%) nego muškarce (27.7%), poslije 40 godina starosti je češći. Lichen ruber planus i lichen ruber erozivus bili su u omjeru 68.5% : 31.5%. DM je prisutan u 16.1% hipertenzija u 30.1%, Grinspan sindrom u 4.2% slučajeva. Svih 6 slučajeva Grinspan sindroma imali su erozivnu formu. Značajna je povezanost OLR sa gastrointestinalnim bolestima (85.3%) gdje preveliraju gastritis i hepatobilijarne bolesti.

Ključne riječi: Oralni lichen ruber, diabetes melitus, hipertenzija, Grinspan sindrom;

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