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LICHEN PLANUS IN THE MOUTH:
EVALUATION OF ANXIETY AS RISK
ETIOLOGICAL FACTOR

LICHEN PLANUS USNE DUPLJE:
EVALUACIJA ANKSIOZNOSTI KAO ETIO-
LOŠKOG FAKTORA RIZIKA

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Abstract

In 28 patients anxiety was evaluated, in clinically and histologically diagnosed patients with Lichen Planus, as well as its implication in appearance of atrophic-erosive clinical forms of the disease.

This condition (anxiety) has frequently been cited as possible factor in the development of Lichen Planus in the Mouth (LPM), though this possibility is not universally accepted.

Psychometric (Max Hamilton) tests were conducted in the Department of Maxillofacial Surgery at University Hospital Insular at Las Palmas.

Should be considered that anxiety plays a triggering role in LPM and may also contribute to exacerbate the lesions.

INTRODUCTION

LPM is the most frequent mucocutaneous disorder of the oral cavity⁽¹⁾, with a prevalence of 0.2-4%⁽²⁾. Its clinical diagnosis is based on the presence of papules and striations, often associated with oral mucosal atrophy and erosions⁽³⁾.

Since the first descriptions of LPM by Wilson in 1869, a number of aspects relating to emotional stability and personality modulation (e.g., hysteria, anxiety or depression) have been cited as possible etiological factors. Although most authors presently link LPM to stress and anxiety⁽⁴⁾, a number of researchers have found the degree of anxiety or stress among LPM patients to be no greater than among controls⁽⁷⁾.

Recent studies suggest an underlying cellular immune mediated mechanism; although the etiology of LPM remains uncertain⁽⁸⁾ various questionnaires have been developed to objectively appraise anxiety⁽⁹⁾. The present study evaluates anxiety in patients diagnosed of LPM, and its influence upon the development of reticular or atrophic-erosive clinical forms of the disease, in comparison with a control group.

MATERIAL AND METHODS

A prospective study (2003 - 2009) involved two groups of patients: (a) 28 patients clinically and histological diagnosed of LPM in the Department of Maxillofacial Surgery of University Hospital Insular, Las Palmas (Spain), and (b) a second, control group (n=28) of the similar age, sex and marital status, with clinically and histological benign oral processes (fibrous hyperplasia, pyogenic granulomas, candidiasis, etc.).

We classified LPM as, either reticular or atrophic-erosive, retrospectively, (based on the clinical evidence of papules and striations or defined by the presence of mucosal erythema and erosions, with or without papules). Patients with associated systemic disease (e.g., diabetes, hepatitis C or other liver diseases) were excluded from the study.

The patients with LPM were aged 30 to 81 years (mean 56,5 years). There were 20 females (66%) and 8 males (34%)

The clinical variables comprised age, sex, red or white clinical presentation of lichen planus⁽¹⁵⁾, number and type of location, and cause for consultation (symptomatic or symptomless lesions) were studied.

The Max Hamilton test was used to evaluate the degree of anxiety in both groups. The test comprises 14 questions with 5 possible answers each. Anxiety level was scored as: normal or no anxiety 80-5 points), non-morbid or minor anxiety (6-14 points), and morbid or severe anxiety (over 14 points) (16). Marital status and educational level (primary, secondary or higher) were also recorded.

The questionnaire was delivered once the patients and controls were informed of the benign nature of their illnesses.

RESULTS

Of the 28 patients with LPM, 10 exhibited reticular lesions while 18 had atrophic- erosive presentations – i.e., the proportion between the two variants was 2/3. The lesion affected a single location in 15 cases (5), two locations in 19 (47,5%), and three or more locations in the rest of the series. Five patients consulted for pain caused by LPM (atrophic-erosive lesions in all 5 cases), whereas in the rest of the patients the lesions were asymptomatic and the reasons for consultation ranged from dental reviews to fear of cancer generated by the oral lesions.

As regards marital status in both groups, 3 subjects were single, 22 were married and 3 were widowed. Of the patients with LPM, 15, 10 and 3 had primary, secondary and higher education, respectively (versus 11, 12 and 5 among the controls).

The mean Hamilton score among the LPM patients was 14.1250 (standard deviation, s.d.=5.266) versus 8.5938 in the control group (s.d.=3.942). Anxiety levels were found to be significantly higher in the MLP group than among the controls ($p<0.01$). Increased anxiety was also significantly related to the atrophic-erosive presentation of the lesions ($p<0.01$). Finally, MLP was found to be significantly more common among patients with primary education ($p<0.001$).

There were no significant differences between the level of anxiety and age, sex, marital status or lesion extent in either the LPM patients or control group.

DISCUSSION

In our series the patients with LPM were similar to those described in other studies regarding sex, age at onset, clinical form and location of the lesions (15, 17). Thus, our results confirm peak incidence to be in the 30-70 years age range, with predominance among females. However, unlike in other series (22, 23), where reticular lesions tend to predominate, we found atrophic-erosive lesions with or without striations to be the most common clinical form of the disease.

Most of our patients were married. However, in agreement with the observations of other authors, no significant relation was established between this variable and the development of LPM. None of our patients were separated or divorced, and although one patient acknowledged marital problems, the proportion falls well short of the 9.8% incidence of such problems reported by Burkhart et al. (24).

As regards the multifactor etiology of LPM, a number of studies in the fields of dermatology and oral pathology have suggested stress and anxiety to be factors in the development of lichen planus (25,26). However, difficulties remain in verifying such an association between emotional factors and LPM (27).

The pathogenic association between stress and LPM has been fundamented upon the findings in experimental models. In this sense, animals have been found to respond to

stress by diminishing the number of mononuclear cells (especially T cells) in the spleen and blood (28). If stress becomes chronic, the relative lymphocyte counts vary, with a decrease in the T helper/suppressor ratio and an increase in the presence of killer cells (29).

Anxiety is relatively common among the general population. An epidemiological survey conducted by the World Health Organization (WHO) found the global prevalence of pathological anxiety to be 10 % (30) – a percentage equivalent to that recorded in our control series. Burkhart et al. (17), in a study with characteristics very similar to our own in terms of subject age and sex, found the causes of stress among their patients (present in 51, 4% of cases) to be related to occupational activities, the death of someone close, family problems, the illness of a relative or friend, personal illness and marital or relational problems – in descending order of frequency.

The literature reports variable prevalence of mental disorders among patients with LPM, in the range of 10% ,22% and 49% . According to Hampf et al. (8), 21,4% of patients (56 cases) suffered slight mental disorders, while 5,4% and 25% had moderate and severe mental problems, respectively. Psychiatric care was required in 21%. On the other hand, the association between lichenoid reactions and a depressive patient character has been well documented (29).

Anxiety is not a causal factor of lichen planus as such, though anxiety in susceptible patients exposed to sufficient levels of stress may trigger the lesions. In the present study we found anxiety levels to be significantly higher among patients with LPM than among the controls. In this context, anxiety was observed to be morbid or severe in 35% of patients – an intermediate figure in relation to the above cited studies, but much higher than the prevalences reported at national and worldwide level.

Two categories of lichen planus according to the bio-psychological characteristics of the patients by Lowental (32). In this sense, erosive-bullous lesions were generally associated to psychosocially stressful lifestyles, while more chronic papulo-reticular lesions were not considered to be triggered by or related to anxiety or stress.

The studies of Hampf et al. (8) and McCartan (33) found that the atrophic and/or erosive forms are not significantly related to the degree of anxiety. In our study, a significant relationship was established between the atrophic-erosive presentation and maximum anxiety levels: consequently, our findings support the idea that anxiety is both able to trigger LPM and exacerbate the lesions in patients with established disease.

Further clinical and pathological knowledge of lichen planus will allow us to establish the relation between anxiety and LPM or its different clinical forms. This will require the adoption of psychotherapeutic and anxiolytic measures as coadjuvants in the management of such lesions, as suggested by Hampf et al. (8) in application to some of their patients.

CONCLUSION

Anxiety levels were significantly higher in the LPM group than among the controls. Increased anxiety was also significantly related to the atrophic-erosive presentation of the lesions.

It might be concluded that anxiety plays a triggering role in LPM and may also contribute to aggravate the lesions.

Apstrakt

Kod 28 bolesnika, sa histološki verifikovanim Lichen Planus-om, je uočena anksioznost i njena implikacija kod klinički atrofično-erozivnog oblika ovog oboljenja. Stanje anksioznosti pacijenata je često navođeno u literaturi kao faktor u nastanku i razvoju Lichen Planus-a u ustima, mada ova pretpostavka do sada nije univerzalno prihvaćena. Pri Univerzitetnoj Bolnici Insular u Las Palmasu, Španija, primenjeni su psihometrijski testovi (Max Hamilton) i to direktno u Klinici za Maksilofacijalnu Hirurgiju. Na osnovu ove studije može se izvući zaključak da anksioznost ima pokretačku ulogu ("trigger"), dovodeći na taj način do pogoršanja kliničke slike oboljenja / lezije.

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