

Hypothyroidism And Oral Lichen Planus: Is There Any Association: An Original Research.

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Abstract:

Background: Many systemic disorders have been seen in association with OLP and have been attributed to the causation of OLP. Recently hypothyroidism has been associated with OLP. The aim of the present study was to evaluate the association between OLP and hypothyroidism by measuring the thyroid hormone levels in OLP patients.

Materials and methods: 56 OLP patients were selected from the outpatient clinic of oral medicine and radiology
Results: There was positive correlation between OLP and hypothyroidism in the present study. 26.8% of OLP patient had Hypothyroidism.

Conclusion: From the present study it is concluded that thyroid profile should be routinely done in OLP patients to rule out hypothyroidism in oral lichen planus patient.

Keyword: Oral lichen planus, hypothyroidism, thyroid

Date of Submission: 06-06-2019

Date of acceptance: 21-06-2019

I. Introduction

Lichen planus (LP) is a chronic mucocutaneous disorder of the stratified squamous epithelium that affects oral and genital mucous membranes, skin, nails, and scalp. Oral lichen planus (OLP) is the mucosal counterpart of cutaneous LP.[1] Oral lichen planus may present anywhere in the oral cavity. The buccal mucosa, tongue and gingiva are the most common sites, whereas palatal lesions are uncommon. They are usually symmetrical and bilateral lesions or multiple lesions in the mouth. Andreasen divided oral lichen planus into six types: reticular, papular, plaque-like, erosive, atrophic, and bullous.[2] The etiology of OLP appears to be multifactorial and complicated. Lodi G et al. reported that lichen planus is sometimes associated with infections or auto immune diseases and / or neoplasia, but the association had not been established. Certain systemic diseases like diabetes mellitus, hypertension, ulcerative colitis, myasthenia gravis, lupus erythematosus etc were considered to be associated with OLP.[3] Studies reported a connection between thyroid diseases, particularly hypothyroidism, and OLP. On the other hand, Compilato et al. detected no significant association between the autoimmune thyroid diseases and OLP. Considering the controversial results of former studies in other populations about the association between hypothyroidism and OLP, the current study aimed to evaluate this association in local population. [4]

II. Materials And Methodology

This study was conducted over a period of 6 months and 56 oral lichen planus patients were included in the study. Patients were selected on the basis of recognized clinical features as most cases can be diagnosed clinically according to revised WHO criteria of 2003 however in case of suspected lesions biopsy was taken to confirm the diagnosis. Adequate consent was taken from the patients by signing an informed consent proforma. Thyroid function was assessed with T3, T4 and thyroid stimulating hormone measured by radioimmunoassay.



PIC.1 and 2 showing bilateral white striations seen on the buccal mucosa surrounded by erythematous hallo seen in 40 yr old female patient

III. Results

Result is tabulated in table (I,II,III)

| TABLE-I | | |
|---------|----------|------------|
| AGE | PATIENTS | |
| | NUMBER | PERCENTAGE |
| 20- 29 | 7 | 12.5 |
| 30-39 | 24 | 42.8 |
| 40-49 | 19 | 33.9 |
| 50-59 | 6 | 10.7 |

| TABLE-II | | |
|----------|---------|------------|
| GENDER | PATIENT | |
| | NUMBER | PERCENTAGE |
| MALE | 19 | 33.9 |
| FEMALE | 37 | 66.07 |

| TABLE-III | | |
|------------------|----------|------------|
| THYROID FUNCTION | PATIENTS | |
| | NUMBER | PERCENTAGE |
| NORMAL LIMITS | 41 | 73.21 |
| ABNORMAL LIMITS | 15 | 26.8 |

IV. Discussion

Oral lichen planus is recognized as an autoimmune mucocutaneous disease and is more common among females. Multiple factors have been identified as potentially contributing to its pathogenesis. The prevailing theory is that a complex series of immune-modulated events is responsible for OLP pathogenesis, but the main cause of OLP remains unknown. [5] In recent years, the association between OLP and thyroid disorders has drawn attention. In our study we found hypothyroidism in 26.8% of the Oral lichen planus patients as compare to 73.21% patients were having normal thyroid levels. OLP was seen in females more than males. Most of the OLP patients belonged to 30-39years age group. A study done by Tingting Zhou et al on noted the prevalence of thyroid diseases in the OLP group (72.4%) and OLL group (68.3%) was higher than the control group (49.4%).[6] Some authors have suggested that the association between OLP and hypothyroidism could be linked to an unidentified common immune-mediated process, justifying the need for further studies regarding such intriguing theory.[7] To evaluate the systemic association of OLP, many studies have been conducted in the past. Association of OLP and hepatitis C virus (HCV) in southern Europe and in Asia, has also been reported in literature. [8-11]The presence of HCV-specific T-cells in the oral mucosa of patients with chronic hepatitis C and OLP has also been found. In our study Reticular pattern was most common followed by erosive pattern, while plaque type of lesions was least common. We didn't find any case of bullous type. There are many studies showing correlation between increased lipid profile, increase blood sugar, increased blood pressure and severe form of lichen planus.

One Study examined the association between the clinical severity of OLP and TPOAb titer in patients with thyroid disease. The results indicate that the severity of the clinical expression of OLP lesions were directly linked to the level of TPOAb[12]Thyroid-stimulating hormone receptor was more highly expressed in the OLP lesions of patients with thyroid disease than in the healthy oral mucosa.[13] the prevalence of HT in the OLP

group was 14.3 % whereas the prevalence of HT-related hypothyroidism in the general population was reported to be equal to 1 % [14]

In our study we found hypothyroidism in 26.8% oral lichen planus patients. This suggests that hypothyroidism could be the possible cause oral lichen planus. We noticed increased incidence of hypothyroidism and oral lichen planus in females.

V. Conclusion

Hypothyroidism could be the cause of oral lichen planus. We recommend routine thyroid profile should be done in patients with oral lichen planus. Further studies need to be conducted to evaluate the cause of hypothyroidism also common immune mechanism might be involved in the progression of the both disorders. But sample size used was very small and further studies with increase sample size are required.

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Prenika Sharma. "Hypothyroidism And Oral Lichen Planus: Is There Any Association: An Original Research." *IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)*, vol. 18, no. 6, 2019, pp 45-47.