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SGPT,SGOT,Anti HCV Ab, Lichen planus(LP)

ORAL LICHEN PLANUS IN RELATION TO TRANSAMINASE LEVEL AND HEPATITIS C INFECTION

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ABSTRACT

Background: Lichen planus aetiology is still under investigation. A lot of postulations were made but nothing stood the test of time.Here in this study we tried to find correlation between altered LFT with Hepatitis C virus infection in relation to oral LP.

Materials and Methods: Our study was a well designed cohort study consisting of 30 histologically confirmed oral lichen planus and 30 healthy volunteers with age and sex matched with study group as control group. SGOT,SGPT and AntiHCV Ab were assessed.

Results: Statistically significant association were observed between study and control group in relation to transaminase level, no sample were positive for Anti HCV Ab in both groups.

I.Introduction

Lichen planus (LP) is a relatively common, chronic inflammatory mucocutaneous disease.[1]It is a common disorder of the stratified squamous epithelium that affects oral and genital mucous membranes, skin, nails and scalp.[2]A number of investigators had reported a correlation between lichen planus and certain liver diseases particularly primary biliary cirrhosis, active chronic hepatitis and cryptogenic liver cirrhosis and a common pathogenic basis has been suggested in a number of cases.[3]Altered liver function tests i.e. elevated serum glutamic oxaloacetic transaminase (SGOT)/ serum glutamic pyruvic transaminase (SGPT) has been detected especially in erosive type of OLP.[1]It is believed that HCV may trigger LP by altering epithelial antigenicity leading to direct activation of cytotoxic T cells or production of antibodies against epithelial cells.[4]

II.AIMS AND OBJECTIVES

1) To estimate the serum transaminase levels in patients with oral lichen planus and control group.
2) To detect the presence of anti HCV Ab in patients with oral lichen planus and control group.
3) To compare the transaminase levels and the presence of AntiHCV Ab in the study group with the control group.

III.MATERIALS AND METHODS

The study was performed on 30 patients with histologically confirmed different types of oral lichen planus as a study group and 30 healthy volunteers with age and sex matched with study group as control group at GOURI DEVI INSTITUTE OF MEDICAL SCIENCES,DURGAPUR. All patients were subjected to routine blood test for estimation of SGOT, SGPT and antibodies against hepatitis C virus. SGOT & SGPT were estimated using commercially available diagnostic kit (AgappeDiagnostics). The values of SGPT and SGOT levels <or =40 IU/I were considered within normal limits.

IV.RESULTS

The study population comprised 30 histologically diagnosed patients of oral lichen planus and 30 age and sex matched controls. They were in the age range from 20-67 years. Among 30 patients constituting the study group there were 14 males (46%) and 16 females (54%). Among 30 controls there were 11 males (37%) and 19 females (63%).

Table 1: Mean Sgot (iu/l) In Study And Control Group

Group	Mean	Std dev	SE of Mean	Mean difference	Z	P-Value
Study group	31.05	19.92	3.64	9.617	-2.560	0.010*
Control group	21.43	6.06	1.11			

*denotes significant difference

Table 2: Mean Sgpt (iu/l) In Study And Control Group

Group	Mean	Std dev	SE of Mean	Mean difference	Z	P-Value
Study group	37.35	28.78	5.25	16.743	-2.797	0.005*
Control group	20.60	8.74	1.60			

*denotes significant difference

Out of 30 OLP patients in study group, liver function tests were altered in 12 (40%) subjects while they were found to be altered only in 2 (7%) out of 30 subjects in the control group.

Statistically significant association was observed between the 2 groups i.e. study and control group with SGOT values (P<0.05). Control group was found to have more no. of samples with SGOT ≤40IU. (Table 3)

Table 3: Chi-square Test Showing Association Between The Study & Control Group With Sgot Values

Group	≤40 IU		>40 IU		Total	χ^2	P-Value
	n	%	n	%			
Study group	24	80%	6	20%	30	6.667	0.010*
Control group	30	100%	0	0%	30		
Total	**54**		**6**		**60**		

*denotes significant difference

Statistically significant association was observed between the 2 groups i.e. study and control group with SGPT values (P<0.05). Control group was found to have more no. of samples with SGOT ≤40IU. (Table 4)

Table 4: Chi-square Test Showing Association Between The Study & Control Group With Sgpt Values

Group	≤40 IU		>40 IU		Total	χ^2	P-Value
	n	%	n	%			
Study group	18	60%	12	40%	30	9.316	0.005*
Control group	28	93%	2	7%	30		
Total	**47**		**13**		**60**		

*denotes significant difference

Realtion Between Lichen Planus And Hcv Antibodies

No HCV antibodies were found in the serum of subjects in both the study group and control group.

In the present study higher mean SGOT (IU/l) and SGPT (IU/l) was recorded in study group compared to control group and the difference in mean SGOT and SGPT between the two groups was found to be statistically significant (P<0.05).

A.A. Ali, C.S. Suresh[1] reported elevated transaminase levels in 19 (47.5%) out of 40 lichen planus patients.This observation is in agreement with the results of our present study.

Bagan JV, Aguirre JM, del Olmo JA, Milian A, Penarrocha M, Rodrigo JM, Cardona F[3]in their study on 187 OLP patients observed alteration in liver function tests in 40 (21.39%) patients which is also similar to the results in our present study

L Naldi, P Sena, T Cainelli, A Rebora, F Parazzini, P Liati, Naldiin their multicentric case control study confirmed the association of lichen planus with liver diseases using elevated liver function tests and liver biopsy as the criteria. They found more number of patients with elevated SGOT and SGPT levels in the study group (70/577 and 36/577 respectively) than in the control group (69/1030 and 26/1030 respectively)[5]which correlates with the results found in the present study.

Relation Of OlpWith Hcv Antibodies Detection

In the present study, all patients in the study group and subjects in the control group were subjected to the estimation of anti HCV titre by the highly sensitive ELISA technique and all were found to be seronegative.

This result was in agreement with observation made by **A.A. Ali, C.S. Suresh**[1] in their study on 40 OLP patients in which they found no correlation between OLP and HCV infection although the transaminase levels were found to be significantly elevated.

Another study by **G. Campisi, O. Di Fede, A. Craxı`, R. Di Stefano, V. Margiotta** carried out to find the prevalence of OLP in Mediterranean patients with chronic hepatitis C showed very low prevalence of OLP in such patients although the study was carried out in a high hepatitis C virus endemicity.[6] The findings in this study also correlated with the results in our present study.

A study by **Lin LH, Lu SY and Lu SN** showed 22.1% prevalence of HCV infection in the study group of OLP patients in comparison to 2 % in the control group thus emphasizing the importance of routine HCV infection testing of patients with OLP. This result was in contrast to the present study.

VI.CONCLUSION

The percentage of patients with altered liver function tests i.e. elevated SGOT and SGPT values were higher among OLP patients in the study group (40%) than in the subjects in the control group (7%) suggesting an association between chronic liver diseases and OLP.The mean values of SGOT and SGPT were higher among OLP patients in the study group in comparison to subjects in the control group.The mean SGOT/SGPT values were higher (70.3 IU/l) in patients with erosive oral lesions compared to those with non-erosive lesions (51.4 IU/l). There was no association of OLP with Hepatitis C virus infection as all the serum samples in the study group were seronegative for HCV antibodies.

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