

Hepatitis B Virus in Nigerians with Lichen planus

*O. O. M. Daramola¹, A. O. George¹, A. O. Ogunbiyi¹ and J. A. Otegbayo²

¹Dermatology, ²Gastroenterology and Hepatology Division, Department of Medicine
University College Hospital, Ibadan, Nigeria.

*Dermatology Division, Department of Medicine, University of Ilorin Teaching Hospital, Ilorin.
E-mail: nikiem95@yahoo.com

Summary

Background: Lichen planus had been reported as one of the cutaneous manifestations of Hepatitis B virus (HBV) in the literature. The prevalence of HBV among Nigerians with lichen planus has not been documented in the literature despite the high prevalence of HBV in the community, and the reports of a possible relationship between lichen planus and HBV from this centre and from other regions. The aim of this study was to determine the prevalence of HBsAg amongst Nigerians with lichen planus.

Method: Sixty Nigerians with lichen planus (LP group) and 30 patients with other dermatoses not reportedly associated with HBV (control group A) and 30 apparently normal subjects (control group B) were screened for the presence of HBsAg by second generation ELISA.

Results: Nine (15%) of the 60 LP group, 2 (6.2%) of the 30 control group A and 2 (6.2%) of the 30 control group B were HBsAg seropositive.

Conclusion: This study found a higher prevalence of HBsAg in patients with lichen planus when compared with patients with other cutaneous dermatoses and apparently normal individuals. Although a causal relationship between HBV has not been established from this study, this report reiterates the importance of screening patients with lichen planus for the presence of HBV and instituting therapy in those found positive.

Keywords: Lichen planus, HBV, Prevalence, Nigerians.

Résumé

Introduction: Lichen planus a été portée comme l'une des manifestations cutanées de l'hépatite virale B (HBV) dans la littérature. La fréquence des cas de HBV chez les Nigeriens atteints du lichen planus ne sont pas encore documentés dans la littérature en depit de la fréquence élevée de HBV dans la région et des rapports d'un rapport éventue entre le lichen planus et HBV dans ce centre et dans d'autre régions. L'objet de cette étude était de déteminer la fréquence de HbsAg parmi les Nigeriens atteints du lichen planus.

Méthode: On a fait passer un test de dépistage chez soixante Nigeriens atteints du lichen planus (groupe de LP) et 30 patients atteints d'autre dermatites pas notees étant associées avec HBV (groupe de contrôle A) et 30 sujets apparemment en bonne santé (groupe de contrôle B) pour des symptômes d'HbsAg à travers la seconde génération ELISA.

Resultats:- Neuf soit 15% du groupe de 60 LP, 2 soit 6,2% du 30 groupe de contrôle A et 2 soit 6,2% du groupe de contrôle B étaient HbsAg séropositif.

Conclusion: À travers cette étude on a noté une fréquence très élevée d'HbsAg chez des patients atteints du lichen planus par rapport avec des malades atteints d'autres dermatites cutanees et des individus apparemment en bonne santé. Quoique un rapport causal entre HBV ne soit pas encore établi à partir de cette étude, ce rapport tâche de réitérer l'importance de faire le test de dépistage pour des malades atteints du lichen planus pour des symptômes d'HBV et essaie de donner une thérapie pour ceux trouvés positifs.

Introduction

Lichen planus is a papulosquamous disorder of the skin and mucous membrane with distinctive clinical and histological features. Clinically, it presents as flat topped glistening hexagonal violaceous papules with whitish streaks known as Wickham's striae. In blacks, the papules are rather bluish-grey with thicker scales. The presence of a band-like lymphocytic infiltration of the papillary dermis, liquefactive degeneration of the basal cells and the saw-tooth appearance of the rete ridges are the hallmark of its histological features.

Lichen planus is worldwide in its distribution with the incidence varying from one place to another¹. In Nigeria, the incidence from available publications is between 1.15 percent and 6.2 percent amongst patients attending dermatology clinics²⁻⁵. At Ibadan, in particular, the highest incidence reported to date is 6.2 percent amongst patients attending the dermatology clinic². Efforts made over the years in search of its possible aetiology have not been too rewarding. Although the cause of lichen planus has remained largely unknown, the hypothesis of a viral aetiological agent has gained prominence with the observed notable association of the hepatotropic viruses namely Hepatitis B and C viruses with lichen planus in the past one decade⁶⁻¹⁵. This association had also given credence to the immunopathogenic basis of lichen planus where it is thought that an antigen possibly a virus triggers off the lichen planus reaction. Other theories advanced as to its aetiopathogenesis include metabolic disorders, autonomic disorders, immunological process, psychological and emotional stresses¹⁶.

The prevalence of Hepatitis B virus in the general population in Nigeria is between 6 and 11 percent¹⁷. Vari-

*Correspondence

ous dermatological conditions among which is lichen planus had been found in association with these viruses¹⁸. Although the association with lichen planus had been documented in other places, this is not so among Nigerians. This paper aims to document the prevalence of hepatitis B virus in Nigerian lichen planus.

Patients and methods

Sixty Nigerians with mucocutaneous lichen planus were studied after obtaining a verbal consent. Diagnosis of lichen planus was confirmed by histology. These subjects comprised of 39 consecutive patients who presented at the Dermatology Clinic of the University College Hospital (UCH) Ibadan. Another 17 consecutive patients from the Dermatology clinic of the Lagos University Teaching Hospital (LUTH) and 4 patients from the Obafemi Awolowo University Teaching Hospital Complex Ile-Ife were recruited into the study.

Two groups of controls were selected, control group A consisting of 30 age and sex matched patients with HBV unrelated dermatoses (Table 1) and control group B consisting of 30 age and sex matched apparently normal individuals selected randomly from patients relatives and staff of UCH. Using a structured questionnaire, information regarding risk factors for the presence of HBsAg using second generation ELISA kit. The statistical computer package EPI-info version 6.0 was used for data analysis. All test of significance were two tailed labelled and carried out at 5 percent level of significance.

Result

Lichen planus patients had a mean age of 37.13 ± 12.8 years with the range of 10- 68 years. The mean age for control group A was 35.33 ± 13.67 years with a range of 13- 64 years. In control group B, the mean age was 34.41 ± 11.69 years with a range of 12 to 57 years. The male female ratio in patients with lichen planus was 1:1.4. Scarification was the most common risk factor identified in the LP patients (38 percent) and control group A (33 percent), while a history of contact (83.3 percent) with someone jaundice was more common in control group B. Nine (15 percent) out of the 60 patients with lichen planus were seroposi-

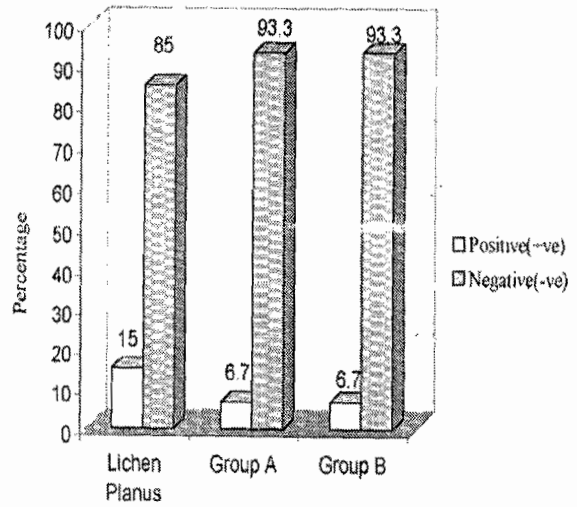


Fig. 1 Prevalence of Hepatitis B in subjects

tive for HBsAg; while 2(6.7percent) out of 30 subjects in control group A and 2(6.7 percent) out of 30 subjects in control group B were seropositive for HBsAg (figure 1). The odds ratio for risk of developing lichen planus from exposure to HBV is 1.27 and the confident interval was 0.92 – 1.7, P>0.5.

Discussion

The age group affected and a slight female preponderance obtained in this study depict what had been documented in previous study on lichen planus in Nigerians³⁻⁵. However our patients being relatively younger than Caucasians with lichen planus is also not unusual as this have been noted to be one of the peculiarities of lichen planus in the Negroid⁴.

In this study, the prevalence of HBV in patients with lichen planus was 15 percent while in patients with other cutaneous dermatoses the prevalence of HBV was 6.2 percent and in normal individuals the prevalence of HBV was 6.2 percent. This prevalence of HBV among patients with lichen planus is also higher than that found among blood donors (6-11 percent) from various centres in Nigeria¹⁷. As argued in our report on the relationship of HCV and lichen planus¹⁹, lower specificities of screening method such as the agglutination method for HBV employed in these previous studies may account for a relatively greater proportion of HBsAg positive individuals reported when compared with results obtained where second generation ELISA method known to be more specific is employed. Therefore based on this argument, the prevalence of 15 percent of HBV documented in patients with lichen planus as compared to the 6.2 percent found in each group of controls though not statistically significant might be an important finding (P>0.0.5). A hospital -based study in Italians also found a higher prevalence of HBV in lichen planus compared to normal individual¹⁴, however, Korkji et al found that the prevalence of HBV in their patients

Table 1 Dermatoses of subjects in group A

Dermatoses	Frequency	Percentage
Eczema	10	33.3
Fungi infections	2	6.7
Pigmentary disorder	4	13.3
Drug Eruption	2	6.7
Naevus	2	6.7
Darier's disease	1	3.3
Connective tissue disorders	3	10.0
Lymphedema	2	6.7
Neurofibromatosis	1	3.3
Keloid	2	6.7
Pityriasis rosea	1	3.3

with lichen planus was 4.1 percent²⁰. The higher prevalence of HBV among patients with lichen planus in this study and the Italian study compared to a much lower prevalence reported by Korkji et al in USA may be due to a lower prevalence of HBV in the general population in the USA.

Observation of lichen planus following a second dose of HBV vaccination documented from this centre and in other reports may support a possible relationship of lichen planus and HBV¹⁰⁻¹². However, since the prevalence of HBsAg in patients with lichen planus in this study was not statistically significant and since other serological markers of HBV was not assayed, it is difficult to conclude as regard any relationship between them. However the higher prevalence of HBsAg found in patients with lichen planus compared to patients with other dermatoses and normal individuals shows the importance of screening this group of patients for HBsAg.

Discovering these individuals early may provide the opportunity to undergo treatment for HBV thus preventing the development of chronic liver disease and hepatoma.

Conclusion

In conclusion, this study found a higher prevalence of HBsAg in patients with lichen planus when compared with patients with other cutaneous dermatoses and apparently normal individuals. Although a causal relationship between HBV has not been established from this study, this report reiterates the importance of screening patients with lichen planus for the prevalence of HBV and instituting therapy in those found positive.

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