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Upsurge of Cases of Lichen Planus in Iraqi Population in Baghdad City with Frequency of Hepatitis Viruses

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Abstract:
Background*: Lichen planus (LP) is a common skin problem with a characteristic clinical picture and its etiopathogenesis is supposed to be an autoimmune .Infectious agents like hepatitis viruses have been incriminated to be a triggering factors .*
Objective: *In the recent years there is an increase in the frequency of cases of lichen planus with different clinical picture and behavior. So,the aim of present work is to record the upsurge in cases of lichen planus in Iraqi population and to study the clinical behavior and to record any associated infections like hepatitis viruses.*
Patients and Methods: *This is a case-series study conducted in Department of Dermatology of Baghdad Teaching Hospital, Baghdad, Iraq during the period from December 2014 to October 2015. One hundred and six patients with typical diagnosis of LP that was made by clinical observations and confirmed by biopsy in suspicious cases. Patients suspected of drug-induced lichenoid eruptions, were excluded. After patient consent a protocolized clinical history was prepared and data were collected .Lichen planus was classified according to different clinical presentations. All patient were investigated for hepatitis viruses C and B.*
Results: *Fifty four (50.9%) males and 53(49. 1 %) females; male to female ratio 1.03: 1, their ages ranged from 10-75 (45.09+14. 1) years. The mean+ SD duration of disease was 10.04+ 12.7 weeks. The following clinical subtypes had been recorded: 44 (41.5 %)patients had classical papular LP, 24(22.6%) actinic LP, 18 (16.9%) generalized pigmented LP, 10 (9.4%) hypertrophic LP in the lower extremities ,6(3.8%) classical follicular LP .Four(3.8%) patients had only oral LP without cutaneous involvement. Oral lesion was seen in 44 (41.5 %) patients with cutaneous involvement , mostly reticulated pattern in forty(90.9%) patients and four(9.09%)patients with erosive pattern .Genital involvement was seen in 16(15%) patients. There was no history of drug intake. Serological result was negative in all patients for hepatitis B virus and hepatitis C virus.*
Conclusion: *There is an upsurge of cases of LP in Baghdad area with change in the pattern of this disease as it is eruptive and more pigmented, widely distributed, more severe with flexural involvement. All cases had negative serology for hepatitis B virus and hepatitis C virus*
Keywords: *LP, hepatitis viruses ,clinical presentation.*

I. Introduction

Lichen planus (LP) is a chronic inflammatory and immune mediated disease that affects the skin, nails, hair, and mucous membranes. Cutaneous lichen planus (CLP) most commonly involves the flexor surfaces of the extremities and presents as small itchy violaceous papules in middle-aged adults. "Pruritic, Purple, Polygonal, Planar, Papules, and Plaques" are the traditional 6 "P's" of LP [(1)].The lesions are typically bilateral and relatively symmetric. Oral LP (OLP) can be the sole clinical presentation of the disease or accompanied by cutaneous or other mucosal manifestations. The exact prevalence of LP is unknown. Nevertheless, the estimated prevalence of LP is in the range of 0.22% to 5 % worldwide [(2-6),] in Iraq incidence of LP patients was 1.4 in 1995[(7)]. LP typically affects middle-aged adults of both genders .No sexual predilection is evident but some reports indicate a slight predominance in women up to a ratio of 2:1.[(8)]

Clinical Subtypes: CLP has different clinical subtypes based on the morphology of the lesions and the site of involvement. Subtypes based on configuration or morphology of the lesions include papular (classic), hypertrophic, vesiculobullous, actinic, annular, atrophic, linear, follicular, LP pigmentosus .Lesions may also have a thin, transparent, and adherent scale. Wickham's striae, which are defined as fine whitish points or lacy

lines, may be seen on the surface of well-developed papules [9].Lichen planus tends to be quite pruritic, although some patients are completely asymptomatic. The degree of pruritus is generally related to the extent of involvement, with more intense pruritus in generalized form. An exception is hypertrophic lichen planus, which is more localized but extremely pruritic. Oral involvement is generally asymptomatic unless erosions or ulcers developed, after which it becomes extremely painful. OLP has several clinical subtypes including reticular, erosive, atrophic, papular, plaque-like, and bullous subtypes. The buccal mucosa is typically involved in 80–90% of OLP cases. Vulvar LP can affect peri- or postmenopausal women ([10]. Vulvovaginal LP has a similar pattern to OLP, and has three major subtypes: erosive, papulosquamous, and hypertrophic [11].

Etiology and pathogenesis :It is evident that specific immunologic mechanisms control the development of lichen planus. T-cell mediated pathologic alterations involving proinflammatory and counter regulatory mechanisms function in the pathogenesis of lichen planus. Cell-mediated immunity plays the major role in triggering the clinical expression of the disease. Both CD4+ and CD8+ T cells are found in lesional skin of lichen planus [12]. Progression of disease may lead to preferential accumulation of CD8+ cells. The majority of lymphocytes in the infiltrate of lichen planus are CD8+ and CD45RO (memory) positive cells and express the α–β T-cell receptor (TCR), and in a minority, the γ–δ receptor. This later cell subtype is not normally found in healthy skin. Activated T-cells stimulate the T helper type1 (Th1) response ,thus resulting in keratinocyte removal by immune cells[13].Associated factors and disease conditions seen in LP include but are not limited to stress/anxiety, hepatitis C virus (HCV), autoimmune diseases, internal malignancies, dyslipidemia, and viral infections[14].

Hepatitis viruses in correlation with Lichen planus: In recent years, several authors have reported a relationship between LP and chronic liver disease, especially hepatitis C. The prevalence of HCV infection in patients with LP varies considerably from one geographic area to another, ranging from 4 % in Northern France to 62 % in Japan. On the other hand, British study of 180 cases of oral LP did not show an association with hepatic disease.[15] Also other studies conducted in Britain and in the Netherlands, France ,Turkish s did not show a significant association.[16-22] .

A meta-analysis based on data pooling of 64 studies, LP patients have 5.58 times the odds of having concurrent HCV infection than the control population. [23]

Another interesting and controversial point is the influence of the treatment of hepatitis C with alpha Inferferon in the development of lichen planus. This drug has an antiviral and immunomodulating activity. In some patients, it may exacerbate inflammatory skin conditions that were at a low activity level prior to initiation of treatment. This reaction would be triggered by the production of lymphokines and by the expression of adhesion molecules in the skin, induced by the drug[21,24,25].In other patients, however, lichen planus may improve or even resolve after alpha interferon therapy.[21,24,26]

This discrepancy may be justified by variability in prevalence of hepatitis C in the world population, which, in the literature, ranges from 0.3% to 1.5%, depending on the country.[24]

Iraq is of low prevalence with HBsAg and hepatitis C was found to be of very low prevalence. The national prevalence rate of HBs Ag in 2009 was 3.5% and correlated positively with age. The seroprevalence of anti-HBc was 1.5% while the prevalence of hepatitis C in apparently healthy individuals was 2.4%.[27] Therefore the aim of present study is to record the upsurge in cases of lichen planus in Iraqi population and to study the clinical behavior and to record any associated infections like hepatitis viruses .

II. Patients and Methods

In this case-series descriptive , investigative study, 106 cases of LP were enrolled. The study was conducted in Baghdad Teaching Hospital, Department of Dermatology, during December 2014 to October 2015. Diagnosis of LP was made by clinical observation and in suspicious cases, diagnosis was confirmed by biopsy. Patients suspected of drug-induced lichenoid eruptions, were excluded. protocolized clinical history was prepared in which data corresponding to the following variables were collected: (i) sex and age and disease duration; (ii) localization of LP lesions in the oral cavity, wrists, feet and ankles, back, upper extremities, genitalia, axillae, abdomen, nails, scalp, facial area and other localizations; (iii) determination of the clinical form of LP, such as classical LP, hypertrophic LP, generalized pigmented LP, hypertrophic LP, actinic LP , follicular LP and oral LP after the patients' consent and full explanation about the nature of their disease ,treatment and prognosis beside the goal and nature of the present study .Also, ethical approval was given by the scientific committee of the Scientific Council of Dermatology and Venereology- Iraqi Board for Medical Specializations. A Hepatitis C antibody titer and Hepatitis B Ag was measured in Educational laboratories of Baghdad Teaching Hospital by third generation Enzyme-Linked Immunosorbent Assay (Siemens® 3.0 ELISA Test System) and then miniVIDAS® a compact automated immuneoassay system was used to provide accuracy for test results .The collected data were analyzed using SPSS (ver.20) software .

III. Results

Fifty four (50.9%) males and 53(49. 1%) females were enrolled ,with male to female ratio(1.03: 1), their ages ranged from 10 to 75 years with a mean + SD 45.09+14. 1 years. The mean+ SD duration of disease was 10.04+ 12.7 weeks.The following varieties were recorded:

1) Classical papular LP in 44 (41.5 %)patients ;with typical shiny erythematous to violecious polygonal papules and plaques some were dark brown ,mostly overlaid by Wickham Striae involving extremities , also umblicated papules were noticed on trunk . Pruritus was reported in 32(72.7%) patients.

3) Actinic LP; 24 (22.6%) patients ,lesions distributed on sun exposed areas like ;(face ,neck and dorsal arms) .This variant was presented in different morphological pictures on the face as ;melasma like LP actinius ,butterfly LP actinicus, noticed by patients as facial melanosis ,the pigmentation were dark brown to gray brown in color and mostly pruritic .

2) Generalized pigmented flexural type: 18 (16.9%) patients had generalized wide spread pigmented LP. distributed on limbs, trunk,with tendency to involve the axillae, groins,post auricular area and submammary region in females ,with no scalp or nail involvement ,the lesions were characterized by oval or irregularly shaped pigmented to gray ,non shiny ,non atrophic macules , patches and plaques, sometimes papules that's not umblicated and lack the characteristic Wickham Striae , pruritus was reported in 9(50%) patients.

4) Hypertrophic LP : 10 (9.4%) patients ,this variant was characterized by hyperkeratotic thick pruritic red-brown to purple-gray plaques that localized on the lower extremities,especially the anterior legs ,all with severe pruritus and all had classical papular LP elsewhere in their bodies.

5)Follicular LP :6 (3.8%) patients had classical lichen planopilaris ranged from 1-3 patches on scalp and was involved by pigmented patchy , moth eaten scarring hair loss with hyperkeratotic follicular papules ,mainly parietal and fronto-vertical areas of scalp. Symptom was mainly hair loss noticed by the patient.

6) Oral LP : 4 (3.8%) patients had only oral LP without cutaneous involvement, presented as burning and stinging sensations ,clinically 3 of them had reticular pattern on the buccal area and lateral tongue , and one patient had erosive oral type involving the the buccal and gingival area .

While oral lesions in association with cutaneous involvement was seen in 44 (41.5 %) patients, mostly reticulated pattern in forty(90.9%) patients and only four(9.09%)patients had erosive pattern ,distributed mainly on the buccal mucosa in 39(88.6%) patients and only 5(11.4%) patients had lesions on the tongue . Genital involvement was seen in 16(15%) patients. There was no history of drug intake. Serological result was negative in all patients for HBV surface antigens and for HCV antibody.

IV. Discussion

Over the past 35 years we had seen typical cases of LP with typical clinical picture and distribution ,but over the last 5 years we noticed increased frequency of LP cases with atypical clinical picture mostly large pigmented papules and plaques with few and small polygonal papules with wickham striae .The disease distribution was much wider spread with diffuse flexural pigmentation of groins and axillae and submammary in females ,still the histopathology was that of lichen planus .Also follicular lichen planus typically causing moth eaten scarring alopecia was a rare problem few years ago ,but now these cases are increasing in their frequency [(28)] .In the last decade there was change in the behavior and frequency of specific skin diseases like Kaposi s sarcoma and T cell lymphoma, malignant melanoma ,epidermodysplasia verruciformis ,Xeroderma pigmentosum, where Gulf war was incriminated as a result of depleted Uranium exposure . But the increase in the frequency of cases of lichen planus could not be explained as all cases had negative serology for both hepatitis B and hepatitis C viruses.

Possibly there are unknown triggering factors like other infectious agents such as cytomegalovirus or others which need to be screened .Also, change in the immunity as a result of Uranium exposure might be another suggested triggering factor .Further studies are thus highly recommended in this field.

In conclusion,the present work showed a change in the behavior of LP in Iraqi population as patients with generalized pigmented LP with flexural involvement is a well recognized form of LP which was almost negligible before .Serological tests for hepatitis viruses was surprisingly negative although viral hepatitis of different forms is not uncommon problem.

References

[1]. Kumar V ,Abbas A,Aster J, Robbins& Cotran Pathologic Basis of Disease ,Saunders,Philadelphia,Pa,USA,8th ed,2009.
[2]. Shiohara T, Kano Y,"Lichen Planus and lichenoid dermatoses ," Dermatology ,J.L.Bolognia ,J.Jorizzo,andR.P. Rapini, Eds.,pp.159–180 ,Mosby Elsevier,NewYork ,NY,USA, 2008.
[3]. Miller C.S, Epstein J.B , Hall E.H , Sirois D,"Changing oral care needs in the United States :the continuing need for oral medicine,"Oral Surgery,Oral Medicine,Oral Pathology,Oral Radiology, and Endodontics,91,1,34–44,2001.
[4]. Bouquot J.E , Gorlin R.J,"Leukoplakia,LichenPlanus, and other oral keratoses in23 ,616white Americansovertheageof 35years,"Oral Surgery Oral Medicine and Oral Pathology, 61,.4,373–381,1986.
[5]. Ax´ell T, Rundquist L,"OralLichenPlanus—a demographicstudy ,"Community Dentistry and Oral Epidemiology,15,1,52–56,1987.
[6]. Alabi G.O,Akinsanya J.B,"Lichen Planus in tropical Africa,"Tropical and Geographical Medicine,33,2, 143–147,1981.

[7]. Al- Waiz M, Lichen planus among Iraqi patients,A clinico-Epidemoligical study ,Iraqi.J.Comm.Med ,12 (1),1999.
[8]. Eisen D,"The clinical features ,malignant potential, and systemic associations of oral Lichen Planus: astudy of 723patients," Journal of the American Academy of Dermatology,46,2, 207–214,2000.
[9]. Gorouhi F., Firooz A. , Khatamietal A.,"Interventions for cutaneous Lichen Planus,"Cochrane Database of Systematic Reviews,no.4,Article IDCD008038,2009.
[10]. McPherson T , Cooper S,"Vulval lichen sclerosus and Lichen Planus, "Dermatologic Therapy,23,5,523-532,2010.
[11]. Schorge J , Schaffer J, Halvorson L,Williams Gynecology ,McGraw Hill, Philadelphia ,Pa,USA,1 st ed,2008.
[12]. Wenzel J, Tuting T :An INF –associated cytototoxic cellular immune response against viral ,self –or tumor antigens is a common pathogenic feature in "interface dermatitis" .J Invest Dermatol 128:2392,2008 .
[13]. Iijima W, Ohtani H, Nakayama T, "Infiltrating CD8+ T cells in oral Lichen Planus predominantly express CCR5 and CXCR3 and carry respective chemokine ligands RANTES/CCL5 and IP-10/CXCL10 in their cytolytic granules: a potential self-recruiting mechanism," American Journal of Pathology, 163, 1, 261–268, 2003.
[14]. Girardi C, Luz C, Cherubini K, Figueiredo M. A. Z. D. , Nunes M. L. T., Salum F.G, "Salivary cortisol and dehydroepiandrosterone (DHEA) levels, psychological factors in patients with oral Lichen Planus," Archives of Oral Biology, 56, 9, 864–868, 2011.
[15]. Ingafou M, Porter SR, Scully C, Teo CG. No evidence of HCV infection or liver disease in British patients with local lichen planus. Int J Oral Maxillofac Surg. 1998; 27: 65-6.
[16]. Van der Meij EH, Van der Waal I. Hepatitis C virus infection and oral lichen planus: a report from the Netherlands. J Oral Pathol Med. 2000;29:255-8.
[17]. Tucker SC, Coulson IH. Lichen Planus is Not Associated with Hepatitis C virus Infection in Patients from North West England. Acta Derm Venereol. 1999;79:378-9.
[18]. Cribier B, Garnier C, Laustriat D, Heid E. Lichen planus and hepatitis C virus infection: an epidemiologic study. J Am Acad Dermatol 1994; 31: 1070–1072.
[19]. Dupin N, Chosidow O, Lunel F et al. Oral lichen planus and hepatitis C virus infection: a fortuitous association? Arch Dermatol 1997; 133: 1052–1053.
[20]. Ilter N, Senol E, Gürer MA, Altay Ö. Lichen planus and hepatitis C-virus infection in Turkish patients. J Eur Acad Dermatol Venereol 1998; 10: 192–193.
[21]. Tucker SC, Coulson IH. Lichen planus is not associated with hepatitis C virus infection in patients from North West England. Acta Derm Venereol 1999; 79: 378–379.
[22]. El Kabir M, Scully C, Porter S, Porter K, Macnamara E. Liver function in UK patients with oral lichen planus. Clin Exp Dermatol 1993; 18: 12–16.
[23]. Gorouhi F , Davari P, Fazel N ,Cutaneous and Mucosal Lichen Planus: A Comprehensive Review of Clinical Subtypes, Risk Factors, Diagnosis, and Prognosis .the Scientific World Journal .2014, Article ID 742826, 22 .
[24]. Cribier B, Garnier C, Laustriat D, Heid E. Liquen planus and hepatites C infecton: An epidemiologic study. J Am Acad Dermatol. 1994;31:1070-2.
[25]. Lunel F, Cacoub P. Treatment of autoimmne and extra hepatic manifestarions of hepatitis C virus infection. J Hepatol. 1999; 31: 210-16.
[26]. Nagao Y, Sata M, Suzuki H, Kameyama T, Ueno T. Histological Improvement of Oral Lichen Planus in Patients with chronic hepatitis C treated with Interferon. Gastroenterology. 1999; 177: 283-4.
[27]. Al-Hamadani A.H , Al-Rawy S.K , Khamees H.A ,Retrospective seroprevalence study of Hepatitis B and C in Iraqi population at Baghdad : A Hospital based study ,Iraqi Journal of Community Medicine ISSN,16845382 ,2012, 25,3:186-190.
[28]. Sharquie KE, Noaimi A.A., Hameed AF, Lichen Planopilaris is a Common Scarring Alopecia among Iraqi Population , JCDSA.2013 :3 , 35-39 .