

# Lichenoid dermatosis

## *A clinical and histopathological study*

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### ABSTRACT

**Objectives:** A distinctive skin problem has been observed for the last 10 years that appeared on the neck of a young adult. This encouraged us to conduct this study, to evaluate its clinical and histopathological picture.

**Method:** Thirty patients were studied in the Department of Dermatology, Baghdad Teaching Hospital, Iraq during a one-year period from November 1998 through to November 1999. There were 29 males and a female, their ages ranged from 11-50 years (mean 25 years). Patients complained of rash on the back and sides of the neck, they were fully interrogated and examined and skin biopsy was carried out in 10 patients.

**Results:** The study showed that this disease has well defined clinical pictures, which affect young males mainly

and appeared in summer time. The rash was located mostly on the back of the neck; it had dark-red to red-violeceous, rounded to oval, single or multiple plaques. The rash was mainly asymptomatic a part from appearance. The histopathological picture has many similarities with that of lichen planus actinicus, but with striking increased vascularity of the dermis.

**Conclusion:** From the clinical and histopathological study, this skin problem deserve its own name lichenoid dermatosis, which was induced by solar radiation and has many similarities with lichen planus actinicus and could be confused with lichen simplex chronicus.

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Lichen simplex chronicus is not a rare condition, seen among males in Iraqi population. The lesions were seen on sites which are accessible to hands, especially the back of the neck.<sup>1-3</sup> For the last 10 years a similar skin problem has been recognized also on the back of the neck in males, but usually has seasonal variations mainly in summer time, and usually not associated with itching, but unfortunately we did not publish it before. These features attracted our attention that this could be a new condition that has not been recognized before. So the aim of present work is to delineate this condition by doing a clinical and histopathological study.

**Methods.** Thirty patients were examined in the Department of Dermatology in Baghdad Teaching Hospital, for the period November 1998 through to November 1999. There were 29 males and one female. Their ages ranged from 11-50 years, with a mean age of 25-years. They complained of rash on the back of the neck. All patients were fully interrogated regarding age, onset and duration of the disease, associated symptoms, previous similar attack, occupation, outdoor working, drug intake, aggravating factors and family history of the same condition. Also present and past medical and dermatological history was taken. They were fully

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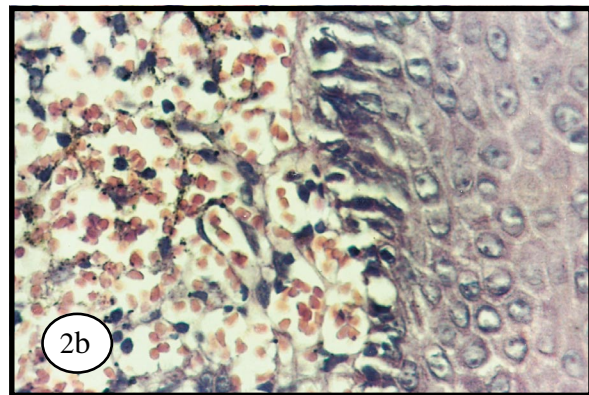
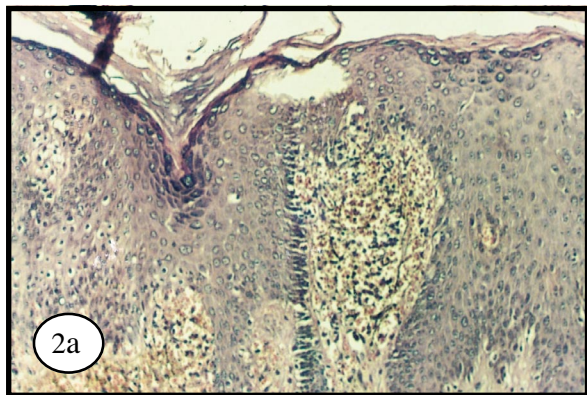
assessed and examined regarding any skin or systemic diseases. A skin biopsy was carried out on 10 patients, tissues were processed and stained by routine sectioning method (hematoxylin & eosin Stain).

**Results.** The results of this work had shown that it was a disease of dark-brown skinned young people. Their ages ranged from 11-50 years, and the mean age was 25 years. It was the disease of males; they were 29 out of 30 patients (96.6%) while only one female was seen in this study (3.4%). The back of the neck was the site of predilection of lesions in all patients and 2 patients also had lesions on the dorsal surface of both hands. All patients had an outdoor functions and activities, and in this study they were presented in summer time. Ten patients (33.3%) out of 30 gave a history of similar episode during the last summer. It was the disease of brown to dark-brown people (similar to skin type IV), characterized by well defined, dry, round or oval, dark-red or red-violeceous, scaly plaques with slight oozing in some patients, their size ranged from 0.5-3 cms in diameter, they were single in 17 patients (56.6%),

and multiple in 13 (43.3%), with duration of 10-days to 3-months. In 36% of cases the lesions were surrounded by a minute lichen nitidus like papules (**Figure 1**). Only one patient had annular lesion of lichen planus actinicus on the forehead of 3-months duration. In most of the patients the lesions were asymptomatic a part from their appearance, in few patients mild itching or slight burning sensation could be occasionally noticed. The histopathological findings of this disease were mainly: Hyperkeratosis, with occasional parakeratosis, focal hypergranulosis, and epidermal hyperplasia which was usually irregular, but sometimes extensive forming pseudoepitheliomatous picture, some times spongiosis, exocytosis of lymphocytes and focal liquefaction degeneration of the basal cell layer (**Figure 2**), (**Table 1**). The dermal changes in most of the patients were a band like lymphocytic infiltrate, hugging the basal layer of the epidermis, and sometimes pigmentary incontinence. The striking dermal changes were the increased vascularity of the superficial dermis with dilatation of capillaries, which were full of red blood cells.



**Figure 1** - Showing red-violeceous lesion of lichenoid dermatoses surrounded by lichen nitidus like papules.



**Figure 2** - Section showing (a) hyperkeratosis, focal hypergranulosis, epidermal hyperplasia and exocytosis (Hematoxylin & Eosin x 100). (b) Liquefaction degeneration of the basal cell layer with increased vascularity and dilatation of superficial dermal capillaries (Hematoxylin & Eosin x 400).

**Table 1** - Showing the histopathological findings of the skin biopsies taken from the patients with lichenoid dermatoses (LD).

Histopathological findings	n (%)
Hyperkeratosis	10 (100)
Focal hypergranulosis	4 (40)
Parakeratosis	5 (50)
Epidermal hyperplasia	10 (100)
Pseudoepitheliomatous hyperplasia	6 (60)
Mild spongiosis	5 (50)
Exocytosis	5 (50)
Focal liquefaction degeneration	7 (70)
Pigmentary incontinence	7 (70)
Band inflammatory infiltrate	10 (100)
Increased vascularity	5 (50)
Dilatation of blood vessels	9 (90)

**Discussion.** The present study described a relatively common skin problem in Iraqi people, and this condition has not been reported in literature. The study showed that this disease was of outdoor, young people, mainly among dark-brown skinned males (skin type IV), and had a seasonal variations mainly in summer time. Females were rarely affected as the back of their necks was shielded by hair and head cap. The rash was noticed on the back of the neck, which might be surrounded by lichen nitidus like papules and may be aggravated by sunlight exposure. All these features favor that the disease was a variant of photodermatosis and with some features similar to lichen planus actinicus. The histopathology of this disease was mainly similar to that of lichen planus actinicus,<sup>6,7</sup> which, include mainly hyperplasia with or without hypergranulosis, lichenoid band of lymphocytic infiltrate of the superficial dermis. The peculiar features of the histopathology was the presence of pseudoepitheliomatous hyperplasia in many patients, and the increased vascularity of superficial dermis, which were constant and

**Table 2** - Showing comparison between lichen simplex chronicus, lichenplanus actinicus and lichenoid dermatoses.

Item	Lichen simplex chronicus	Lichenplanus actinicus	Lichenoid dermatoses
Age distribution	Adults	Young adults & the older children	Young
Sex distribution	Both sex, but lichen simplex nuchae occurs almost exclusively in women	Both sexes equally affected, or predominantly in women with woman/ men ratio of 2.5/1	Predominantly in men
Site of predilection	Outer lower portion of the legs, wrists ankles, back of the neck, extensor forearms, scalp, scrotum, vulva, anal area, pubis, upper eyelids, orifice of the ear and fold behind the ear	Sun exposed areas, mainly the face	Predominantly on the back of the neck
Seasonal variation	No relation	Most commonly seen in those with outdoor activities, in spring and early summer	Most commonly seen in summer, in those with outdoor activities
Clinical features	All skin types affected, the disease is characterized by insidious onset of well defined, localized, single plaque, with little tendency to enlarge with accentuation of skin lines (lichenification). There is a severe itching with habitual scratching and excoriation, to derive great pleasure in relief itching. No relation to sunlight exposure. It follows a chronic course	Most commonly seen in those with dark-brown skin. The disease is characterized by insidious onset of well defined bluish-brown, nonscaly, nummular patches, with deeply hyper pigmented center surrounded by a striking hypopigmented zone, later on raised margin and depressed center, which give rise to annular configuration. Most of the patients had mild to severe itching, which is aggravated by sunlight exposure, sometimes burning sensation was reported. It follows a long course with remission and exacerbation	It is the disease of brown to dark-brown people (skin type IV and V). It is characterized by rapidly onset well defined, round or oval, dark-red or red-violeceous, single or multiple plaques, which may be scaly and with slight oozing surface. In about one-third of the cases, the ordinary lesion is surrounded by lichen nitidus like papules. In most of the patients the lesions are asymptomatic a part from their appearance, and sometimes there is mild itching or burning sensation, which is aggravated by sun light exposure. Usually it follows a short course and recurrence occurs in about one-third of the cases
Histopathology	Chronic dermatitis	It represents a spectrum, at one end it is similar to classical lichen planus and at the other end it is eczematous, and there is an intermediate stage with lichenoid features, spongiosis and parakeratosis	Mixture of both lichenoid reaction and chronic dermatitis, with greatly increased vascularity and dilatation of superficial dermal capillaries

distinguishing features of this disease, and not seen in lichen planus actinicus.<sup>4,5</sup> On clinical background, this condition might simulate lichen simplex chronicus,<sup>1-3</sup> but lichen simplex chronicus was associated with severe itching and chronic in nature without remission. (**Table 2**) The histopathology of lichen simplex chronicus has some similarity with that of this new condition mainly the hyperkeratosis, epidermal hyperplasia, slight spongiosis, exocytosis of lymphocytes and chronic inflammatory infiltrate in the upper dermis but without increased vascularity.

We think that this new entity had not been described in literature and had many features similar to that of lichen planus actinicus and lichen simplex chronicus. This new condition of photodermatitis should deserve a name "Lichenoid Dermatitis". This entity needs more patients and more study to be differentiated from lichen planus actinicus.

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