

Case Report

Actinic Lichen Nitidus with Dermoscopic Features, and Response to Hydroxychloroquine

Smriti Shrestha, MD*; Aditi Mishra, MD

Department of Dermatology, School of Medical Sciences, Kathmandu University, Dhulikhel, Kavrepalanchok, Nepal

*Corresponding author

Smriti Shrestha, MD

Department of Dermatology, School of Medical Sciences, Kathmandu University, Dhulikhel, Kavrepalanchok, Nepal; Tel. 9841327568; E-mail: smiaaliyah@gmail.com

Article information

Received: December 16th, 2018; Accepted: January 22nd, 2019; Published: February 1st, 2019

Cite this article

Shrestha S, Mishra A. Actinic lichen nitidus with dermoscopic features, and response to hydroxychloroquine. *Trichol Cosmetol Open J.* 2019; 3(1): 11-14. doi: [10.17140/TCOJ-3-112](https://doi.org/10.17140/TCOJ-3-112)

ABSTRACT

Lichen nitidus (LN) is an entity of unknown etiology, with typical morphology and histology. Actinic lichen nitidus (ALN) is rare. It presents as typical lesions of LN in photodistribution, with classical histology. Dermoscopic findings in LN has been documented in very few cases in literature. We present a case of ALN with koebnerization, characteristic histology and dermoscopic features. Dermoscopy revealed round, bluish white streaks in “fern leaf” pattern in the background of brownish reticular network. Our patient responded well to hydroxychloroquine and photoprotection.

Keywords

Actinic; Dermoscopy; Histopathology; Hydroxychloroquine; Lichen nitidus.

INTRODUCTION

Lichen nitidus (LN) is rare disorder, with minute, shiny, flat-topped papules, usually on trunk and genitalia.¹ Actinic lichen nitidus is a photo-induced eruption, with clinical and histologic features of lichen nitidus.² It is seen commonly in dark skinned patients. It has been termed “summertime lichenoid eruption” previously.^{3,4} Dermoscopic features of palmoplantar and non-palmoplantar LN have been described scantily in the past. Cutaneous LN showed round, elevated, shiny, smooth surface without scales with reddish vascular network, while palmoplantar LN showed pits with thin scales as well as punctate hemorrhagic variants.^{5,6}

CASE REPORT

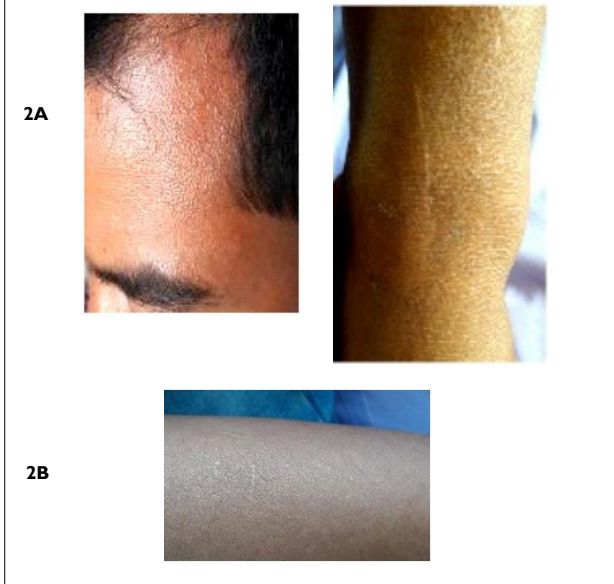
A 27-years-old male with type V skin type presented to dermatology out patient department (OPD) with complaints of asymptomatic minute grouped and discrete, skin colored, flat topped papules on dorsal aspect of fingers, knuckles, wrists, forearms, dorsal aspect of legs and face of 3 months duration (Figures 1A, 1B, 1C). Lesions appeared at the onset of summer. Lesions initially started from dorsal aspect of the fingers, with gradual involvement of the forearms and legs. Patient also had a few discrete lesions on his forehead, but oral cavity, palms, soles, nails and genitalia were spared. There is history of appearance of lesions at sites of scratching, with evidence of koebnerization (Figures 2A, 2B).

Figure 1. Multiple Skin Colored, Flat-Topped Papules On Dorsal Aspect Of Fingers And Knuckles



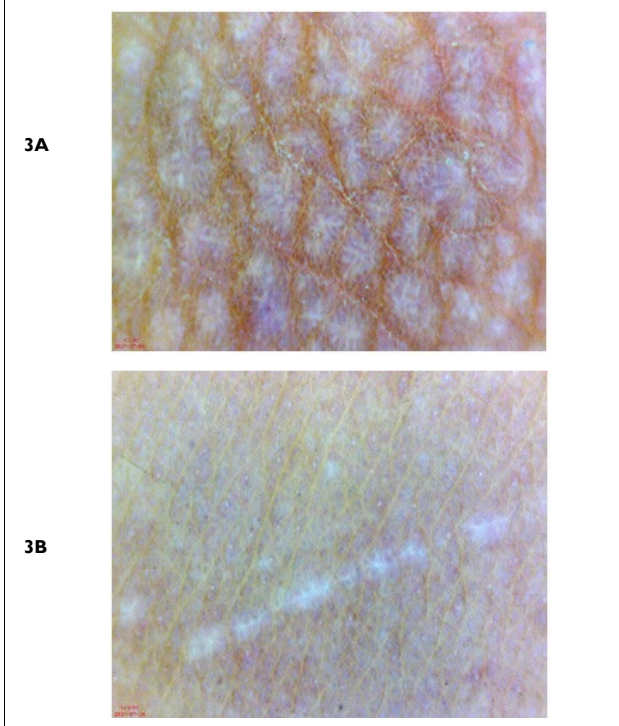
There is no history of itching or oozing from the lesions. There is no significant family history or similar history in the past.

Figure 2. Discrete Minute Flat Topped Skin Colored Papules on Forehead and Koebnerization on the Leg and Forearm



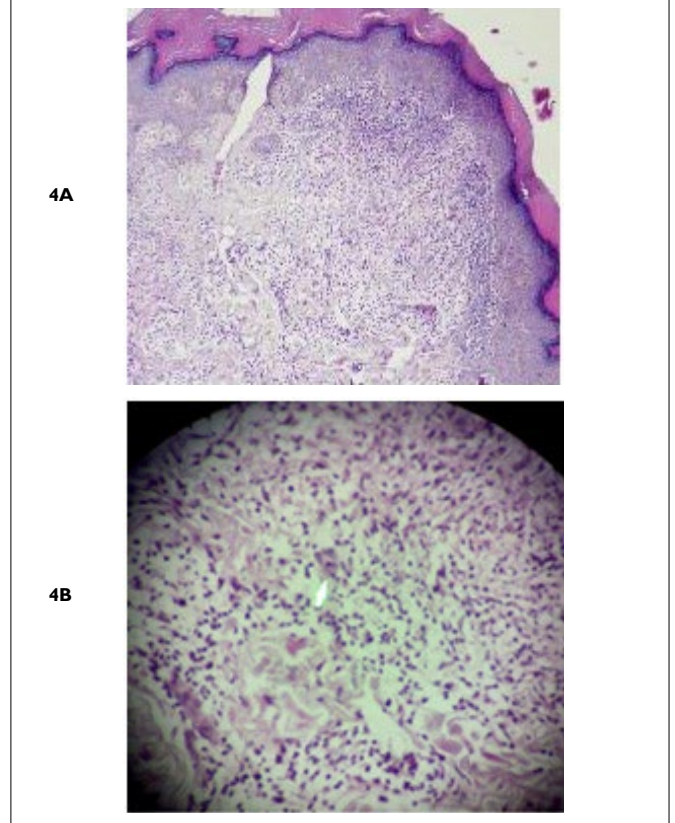
On dermoscopy, we observed shiny, round, bluish white streaks with “fern leaf” appearance, interspersed between brownish reticular networks (Figure 3A). Areas of koebnerization appeared as shiny linear streaks mimicking “shooting stars” (Figure 3B).

Figure 3. Dermoscopy of Skin Lesion Shows Shiny, Rounded, and Bluish White “Fern Leaf” Patterns, Interspersed between Brownish Reticular Networks



Histopathology was consistent with lichen nitidus. In epidermis, hyperkeratosis, parakeratosis and irregular acanthosis were noted. In the dermis, there was dense lymphohistiocytic infiltrate in an expanded dermal papilla with thinning of the overlying epidermis and downward extension of the rete ridges at the lateral margin of the infiltrate. Few multinucleate giant cells were seen in the infiltrate. There was no wedge-shaped hypergranulosis or basal vacuolar degeneration (Figures 4A, 4B).

Figure 4. Low Power Magnification Demonstrates Lymphohistiocytic Infiltrate in Papillary Dermis with Thinning of Overlying Epidermis, Giving a Typical “Claw Clutching A Ball” Appearance



DISCUSSION

Lichen nitidus was first described in 1907 by Pinkus.⁷ It occurs mostly in children and young adults, but elderly individuals can also be affected. Clinically, lichen nitidus appears as asymptomatic, discrete, 1-2 mm, flat-topped, shiny, skin colored to brown papules, on trunk, extremities and genitalia.¹ Koebner’s phenomenon is frequently seen and some authors regard koebnerization as a “constitutive” feature of lichen nitidus.⁸ Clinical variants of lichen nitidus include confluent, vesicular, haemorrhagic, palmoplantar, follicular, perforating, linear and generalized.⁹

Actinic lichen nitidus (ALN) was first reported by Bedi in 1978, as “summer time actinic lichenoid eruptions (SALE)”.³ Later, cases of actinic lichen nitidus with typical histology were described.^{4,10} Summer time lichenoid eruptions with histologic characteristic of lichen planus (LP) have also been reported. There are interesting reports of subsequent appearance of actinic LP and

lichen nitidus in the same patient. However, based on clinical and histopathological differences, ALN and actinic lichen planus (ALP) are distinct entities. Clinically, ALP appear as itchy, erythematous to violaceous annular plaques with surrounding hyperpigmentation, while ALN is asymptomatic, minute, 1-2 mm, skin colored to violaceous discrete papules appearing on sun-exposed sites.⁹ Histologically, LP has hyperkeratosis without parakeratosis, wedge-shaped hypergranulosis, and basal vacuolar degeneration with dense upper dermal infiltrates. Histopathology of lichen nitidus demonstrates classical granulomatous lymphohistiocytic infiltrates in the dermis, imparting a distinctive pattern of “claw clutching a ball” appearance.^{9,13}

In our patient, typical lesions on sun exposed sites, classical morphology and koebner's phenomenon, along with histopathological evidence favored the diagnosis of actinic lichen nitidus.

There is paucity of dermoscopic findings of lichen nitidus in literature, although dermoscopy of LP and lichenoid eruptions are abundant. In our case, we noted “fern-like” appearance of lacy whitish streaks among brownish reticular network. Qian G et al⁵ reported dermoscopy of cutaneous lichen nitidus showed round, elevated, shiny, and smooth appearance surrounded by radial rete ridges and reddish vascular network, while palmoplantar LN have shown pitted and punctuate hemorrhagic patterns.^{5,6}

Interestingly, during dermoscopy of LP, Tan et al¹⁴ and Friedman et al¹⁵ observed leaf venation or “fern leaf” pattern in dermoscopy of wickham's striae (WS).^{14,15} However, larger studies have not noted “fern leaf” pattern in WS of LP.^{16,17} Structures resembling this pattern have been described as arboriform or starburst patterns in lichenoid eruptions.¹⁸ Hence, we conclude that “fern-leaf” pattern may be seen in LP as well as lichen nitidus, and more importantly hints towards lichenoid eruptions in general.

Lichen nitidus may not always require treatment. Generalized and actinic variants have been treated with sun avoidance, topical and oral steroids, tacrolimus, phototherapy, acetrein, hydroxychloroquine, etc.^{1,2,19} Our patient showed significant improvement of lesions with hydroxychloroquine and sunscreen in 6 weeks duration.

CONCLUSION

Actinic lichen nitidus is a rare variant of LN, appearing in summer months. Dermoscopic findings of “fern-like” pattern may aid in the diagnosis of lichen nitidus or lichenoid eruptions in general. ALN responds well to short course oral hydroxychloroquine, along with photoprotection.

CONSENT INFROM STATEMENT

The authors have received written informed consent from the patient.

CONFLICT OF INTERESTS

The authors declare that there is no conflict of interests regarding

the publication of this paper.

REFERENCES

1. Synakiewicz J, Polańska A, Monika BD, et al. Generalized lichen nitidus: A case report and review of the literature. *Postępy Dermatol Alergol.* 2016; 33(6): 488-490. doi: 10.5114/ada.2016.63890
2. Summey BT, Cusack CA. Actinic lichen nitidus. *Cutis.* 2008; 81(3): 266-268.
3. Bedi TR. Summertime actinic lichenoid eruption. *Dermatologica.* 1978; 157(2): 115-125. doi: 10.1159/000250816
4. Hussain K. Summertime actinic lichenoid eruption, a distinct entity, should be termed actinic lichen nitidus. *Arch Dermatol.* 1998; 134(10): 1302-1303. doi: 10.1001/archderm.134.10.1302
5. Qian G, Wang H, Wu L, Meng Z, Xiao C. Different dermoscopic patterns of palmoplantar and nonpalmoplantar lichen nitidus. *J Am Acad Dermatol.* 2015; 73(3): e101-e103. doi: 10.1016/j.jaad.2015.06.024
6. Cheng CY, Chiu CS, Huang YH. Palmar purpuric lichen nitidus—clinicopathological and dermoscopic findings. *Dermatologica Sinica.* 2013; 31(3): e137-e139. doi: 10.1016/j.dsi.2012.09.006
7. Pinkus F. Über eine neue knötchenförmige haueruption: Lichen nitidus. *Arch Dermatol Syph.* 1907; 85: 11-36. doi: 10.1007/BF01835934
8. Chen W, Schramm M, Zouboulis CC. Generalized lichen nitidus. *J Am Acad Dermatol.* 1997; 36(4): 630-631.
9. Black MM. Lichen planus and lichenoid disorders. In: Champion RH, Burton JL, Ebling FJG (eds) *Textbook of Dermatology* 5th Ed. New Jersey, USA: Blackwell Scientific Publication. 1992.
10. Glorioso S, Jackson S, Kopel A, Lewis V, Nicotri T. Actinic Lichen Nitidus in 3 African American Patients. *J Am Acad Dermatol.* 2006; 54(2): S48-S49. doi: 10.1016/j.jaad.2005.06.018
11. Isaacson D, Turner ML, Elgart ML. Summertime actinic lichenoid eruption (lichen planus actinicus). *J Am Acad Dermatol.* 1981; 4(4): 404-411. doi: 10.1016/S0190-9622(81)70038-0
12. Blalock T, Kannan S, Davis LS. Actinic lichen nitidus. *Dermatol Reports.* 2010; 3(2): e10. doi: 10.4081/dr.2010.e10
13. Al-Mutairi N, Hassanein A, Nour-Eldin O, Arun J. Generalized lichen nitidus. *Pediatr Dermatol.* 2005; 22(2): 158-160. doi: 10.1111/j.1525-1470.2005.22215.x
14. Tan C, Min ZS, Xue Y, Zhu WY. Spectrum of dermoscopic patterns in lichen planus: A case series from China. *J Cutan Med Surg.* 2014; 18(1): 28-32. doi: 10.2310/7750.2013.13049
15. Friedman P, Sabban EC, Marcucci C, Peralta R, Cabo H. Der-

- moscopic findings in different clinical variants of lichen planus. Is dermoscopy useful? *Dermatol Pract Concept*. 2015; 5(4): 51-55. doi: [10.5826/dpc.0504a13](https://doi.org/10.5826/dpc.0504a13)
16. Vázquez-López F, Gómez-Díez S, Sánchez J, Pérez-Oliva N. Dermoscopy of active lichen planus. *Arch Dermatol*. 2007; 143(8): 1092. doi: [10.1001/archderm.143.8.1092](https://doi.org/10.1001/archderm.143.8.1092)
17. Güngör Ş, Topal IO, Göncü EK. Dermoscopic patterns in active and regressive lichen planus and lichen planus variants: a morphological study. *Dermatol Pract Concept*. 2015; 5(2): 45-53. doi: [10.5826/dpc.0502a06](https://doi.org/10.5826/dpc.0502a06)
18. Garg P, Kaur T, Malhotra SK, Singh A. Study of the dermoscopic findings and their correlation with histopathological findings in various lichenoid dermatoses. *J Clin Exp Dermatol*. 2015; Res 6:308. doi: [10.4172/2155-9554.10000308](https://doi.org/10.4172/2155-9554.10000308)
19. Bouras M, Benchikhi H, Ouakkadi A, Zamiaty S. Facial actinic lichen nitidus successfully treated with hydroxychloroquin: A case report. *Dermatol Online J*. 2013; 19(11): 20406.