Original Article:

A comparative study of Dermoscopic features in plaque psoriasis on the trunk and flexural areas (Inverse Psoriasis)

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Abstract

Objective: Dermoscope is a non-invasive tool used for the visualization of deeper structures in the skin. It is use for inflammatory, infectious, pigmentary disease of skin, hair, mucous membrane and nail. The objective of the study describes the dermoscopic features of chronic plaque psoriasis on the trunk and flexural areas. **Methods:** The study is an observational cross-sectional study performed over one year from January 2025 to December 2025 at Z.H. Sikder women's medical college hospital, Dhaka, Bangladesh. Dermoscopic features were noted and analyzed in classic plaque psoriasis on the trunk and folded area. Variable presentation was found of plaque psoriasis on the trunk and folded area. Dermoscopically studied were:1. The pattern of scale, 2. The pattern and shape of vessels distribution. 3. Background color. **Results:** Plaque psoriasis on the trunk had the most common regular vascular pattern and the shape of vessels was dots and globules (90.79%), the background were red (77.63%) and pink (22.37%), white thick scale (93.42%). In the folded area regular vessels were found and the shape was dots and globules (91.67%) and the background were pink (79.17%) and red (20.83%), fine scale (91.67%). **Conclusion:** Plaque psoriasis had white scale, red background. Pink background, fine scales were found in the folded area. Regularly distributed dots and globules were in trunk and folded area almost equally.

Key word: Dermoscopy, Scale, Red dots and globules; plaque psoriasis; trunk, folded area (Inverse Psoriasis).

Introduction

Dermoscopy is a safe, non-invasive skin exam using a special magnifying lens and light called a dermatoscope or dermascope. A dermoscope is a sophisticated and complex optical device, allowing the visualization of the epidermis, dermo-epidermal junction and papillary dermis that are invisible to the naked eye. It helps the clinician to diagnose multiple skin disease.[1] Dermoscopy light can be non-polarized, polarized which reduces the surface-reflected light, UV light.[2] Dermoscopy was originally used to study pigmented lesions to differentiate malignant from benign lesions. Now it is use for diagnosis of skin, mucous membrane, hair and nail diseases, infections and inflammatory cutaneous diseases.[3] Plaque psoriasis and inverse psoriasis are two different forms of a chronic, immune-mediated skin condition, distinguished mainly by where they appear on the body and how the skin looks. Plaque psoriasis, also known as psoriasis vulgaris, characterized by well-demarcated, erythematous plaques covered with silvery-white scales. Plaque psoriasis is the most common form of psoriasis. About 80 to 90 percent of people living with psoriasis experience plaque psoriasis. Plaque psoriasis generally appear bilateral, symmetrically anywhere on the body, most often on the scalp, knees, elbows, and torso[4]. Inverse psoriasis is also called intertriginous psoriasis or flexural psoriasis that involves the body folds, most often

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the axillary, groin, anogenital, and inframammary area. Between 21-30 percent of people living with psoriasis develop inverse psoriasis[5]. Inverse psoriasis appears on skin of color as lesions of purplish, brown, or darker than the surrounding skin, in body folds. On Caucasian skin, it appears as red lesions in body folds. It may appear smooth and shiny. It usually does not have the scale that comes with plaque psoriasis because of the moist environment[6].

In our study the inflammatory dermatoses dermoscopically three parameters were studied [1]. The pattern of scale[2]. The pattern and shape of vessels distribution. [3]. Background color. The aim of the present study is to describe dermoscopic features of chronic plaque psoriasis on the trunk and folded area.

Methods

This study is an observational cross-sectional study performed over one year (January 2025 to December 2025) at Z.H. Sikder Women's Medical College, Dhaka. A total of 100 patients were included. Treated and non-treated lesions were included in the study. A total of 100 lesions were studied dermoscopically (76 plaque body psoriasis, 24 inverse psoriasis,). Clinical photos were taken by iPhone 13 pro max camera with 12 megapixels. Dermoscopic study was performed by dermaLite DL5, USA with an iPhone 13 pro max. Autofocus images with 20x magnification with non-polarized and polarized mode of light. Variables dermoscopically studied were [1]. The pattern of scale,[2]. The pattern and shape of vessels distribution. [3]. Background color.

Table 1 Pattern of scale distribution

Scale	Trunk n (%)	Folded area n (%)
Thick	71(93.42)	-
Fine	-	19(79.16)
Total-100	76	24

Result: The Thick scale distribution mainly over trunk plaque psoriasis (93.42) and fine scale present over folded area psoriasis (79.16) as table 1.

Table 2 Pattern and shape of vessels distribution in the body and folded area psoriasis.

Vessel distribution	Vessel type	Trunk n (%)	Folded area plaque n (%)
Regular	Dots and globules	69(90.79)	22 (91.67)
Total	100	76	24

Results: Regular pattern of dots and globules vessels distribution was higher in folded area psoriasis in comparison to trunk psoriasis with 19 (91.67%) folded psoriasis lesions as in table 2, 69 (90.79%) of trunk psoriasis lesions.

Table 3 Background color

Variables	Trunk n (%)	Folded area n (%)
Pink	17 (22.37)	19 (79.17)
Red	59 (77.63)	5 (20.83)
Total-100	76	24

Result: The background color was mainly red in trunk psoriasis (77.63%) and in folded area (20.83%) while in folded area pink (79.17%) is more than trunk psoriasis (22.37) as Table 3.



Figure:1 Plaque Psoriasis

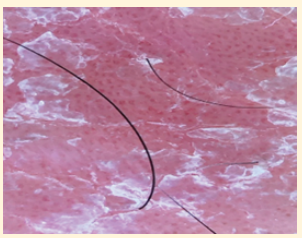


Figure: 2 Dermoscopic picture with Thick scale, Regular red dosts with violaceous background



Figure:3 Inverse psoriasis

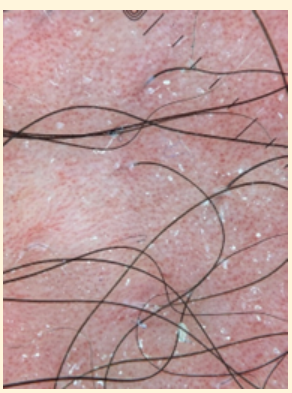


Figure: 4 Dermoscopic Feature of inverse psoriasis with few scale, regular red dots with light violaceous back ground

Discussion

In this study the pattern of vascular distribution in the trunk psoriasis was regular dots and globules in 90.79%. This pattern of distribution was also the most common in other studies with different percentages, it was less than Gavvala et al. (100%)[7], while it was more than Nwako-Mohamad et al. (46%)[8]. In our study vascular pattern in inverse psoriasis was regular dots and globules in 91.67%. On the other hand, Lallas A et al showed is study in the

intertriginous areas (axilla, sub mammary, and groin), dotted vessels with regular distribution were more common and dotted vessels were the commonest dermoscopic criterion (97.1%)[9]. In this article white thick scale of plaque psoriasis on the trunk found 93.42% and on the intertriginous area fine scale found 91.67%. Xu C et al found their study the diagnostic specificity of white scales for psoriasis vulgaris was observed to be 83.8% on the body.[10] Wu Y et al described their study were found to be the most common fine scales on intertriginous areas 77.8%[11]. Aya M et al found their study background color were red 77.37%, pink 22.37% in body and pink 79.17%, red 20.83% in inverse psoriasis. the background as on the trunk was mainly pink in color in (79.4%) the background was pink and red equally on the folded area.[12] Many factors influence the dermoscopic findings of plaque psoriasis. Darker skin might affect the visibility of the blood vessels, vascular structures reflect dilated loops in the dermis; however, they are affected by factors such as epidermal hyperplasia and changes due to treatment received. These differences in results may be due to the differences in magnifications used, some of these studies used up to 70 folds while others used 10 or 20 folds. And it may also be due to choosing non-treated lesions only by some authors while others examined treated and no treated lesions.

References

1. Chen X, Lu Q, Chen C, Jiang G. Recent developments in dermoscopy for dermatology. J Cosmet Dermatol. 2021;20(6):1611–7.
2. Ankad, Balachandra S., et al. Basic science of dermoscopy. Clin Dermatol Rev. 2020;4.2:69.
3. Sonthalia S, Yumeen S, Kaliyadan F. Dermoscopy Overview and Extradiagnostic Applications. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2022 [cited 2022 Mar 11]. Available from: http://www.ncbi.nlm.nih.gov/books/NBK537131/
4. Reviewed: April 23, 2026 Medical Review: G. Michael Lewitt, M.D., Illinois Dermatology Institute, LLC, and Tina Bhutani, M.D., MAS, FAAD, University of California, San Francisco, Synergy Dermatology.
5. Merola, J. F., Li., T., Li., W. Q., Cho. E., & Qureshi, A. A. (2016). Prevalence of psoriasis phenotypes among men and women in the USA. Clin Exp Dermatol, 41(5), 486-489.doi: 10.1111/ced.12805.
6. Khosravi H, Siegel MP, Van Voorhees AS, Merola JF. Treatment of Inverse/Intertriginous Psoriasis: Updated guidelines from the Medical Board of the National psoriasis Foundation. J Drugs Dermatol. 2017;16(8):760-766.PMID:28809991.
7. Gavvala, Manmohan; GAVVALA, Madhulika. Dermoscopy as a diagnostic tool in Psoriasis. J Med Allied Sci. 2021;11.1.
8. Nwako-Mohamadi MK, Masenga JE, Mavura D, Jahanpour OF, Mbwilo E, Blum A. Dermoscopic Features of Psoriasis, Lichen Planus, and Pityriasis Rosea in Patients With Skin Type IV and Darker Attending the Regional Dermatology Training Centre in Northern Tanzania. Dermatol Pract Concept. 2019;9(1):44–51.
9. Lallas A, Apalla Z, Argenziano G, et al, Dermoscopic pattern of psoriatic lesions on specific body sites. Dermatology. 2014; 228(3): 250-254. Doi:10,1159/000357914
10. Xu C, Liu J, Chen D, Liu Y, Sun Q. Roles of dermoscopy in differential diagnosis of psoriasis and eczema. Zhonghua Yi Xue Za Zhi. 2014; 94(36): 2833-2837.
11. Wu Y, Sun L. Clinical value of dermoscopy in psoriasis. J Cosmet Dermatol. 2024; 23: 370-381. doi:10.1111/jocd.15926
12. Aya Massoud, Hayder Al-Hamamy. Regional dermoscopic features of plaque psoriasis vulgaris on (the body, face and scalp). 'Journal of Pakistan Association of Dermatologists Vol. 33 No. 3 (2023): July-September, DOI: https://doi.org/10.66344/jpad.v33i3.2215.