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DERMOSCOPY: A BOON IN DIAGNOSIS OF GENITAL BOWEN'S DISEASE

Dr. Priyadarshni Sahu*[1], Dr. Surabhi Dayal[2] and Dr. Saroj Lohchab[3]

[1]Assistant Professior, Department of Dermatology, Pt. B.D. Sharma, PGIMS, Rohtak, Haryana, India.
[2]Senior Professor and Head, Department of Dermatology, Pt. B.D. Sharma, PGIMS, Rohtak, Haryana, India.
[3]PG Resident Final Year, Pt. B.D. Sharma, PGIMS, Rohtak, Haryana, India.

***Corresponding Author: Dr. Priyadarshni Sahu**
Assistant Professior, Department of Dermatology, Pt. B.D. Sharma, PGIMS, Rohtak, Haryana, India.

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INTRODUCTION

Bowen's disease is a form of intra-epidermal squamous cell carcinoma (SCC), often occurring in elderly people usually presents as a slowly growing well-demarcated, erythematous plaque with scaling and crusting.[1]

CASE REPORT

A 67-year-old male, presented with complaints of an asymptomatic gradually increasing localized raised lesion over genital region for past 8 months. He had applied antifungal creams and topical steroids creams over the lesion with no response. No systemic features like weight loss, fever and malaise were present.

On cutaneous examination, a single well defined scaly, erythematous plaque of size 3×4 cm with hyperpigmented well-defined borders and central erythema and scaling was seen over pubic region (Figure 1). Skin lesions were not present elsewhere on the body. No regional lymphadenopathy was present.

Routine hematological examination and other investigations were normal. Dermoscopic examination using polarized mode of Dermlite DL4 showed sharp border, scaly surface, red homogenous area with glomerular vessels, cluster of brown dots, pinkish-white structure-less area and multiple pigmented area (Figure 2).

Skin biopsy was done for confirmation of diagnosis. It revealed an epidermal proliferation with thickening and irregular elongation of rete ridges. The keratinocytes showed moderate pleomorphism, loss of orientation and crowding. The nuclear atypia was present throughout the thickness of epidermis, resulting in a "windblown" appearance, which was consistent with the diagnosis of BD (Figure 3). A complete excision with 5 mm margins was performed.

DISCUSSION

Bowen's disease is a form of intra-epidermal squamous cell carcinoma (SCC), often occurring in elderly people usually presents as a slowly growing well-demarcated, erythematous plaque with scaling and crusting.[1] Etiological cause are chronic ultraviolet radiation exposure, human papillomavirus infection, arsenic exposure, previous radiation, immunsuppresion, trauma, and genetic factors. Its prognosis is usually favourable.

It is commonly located on the chronically sun-exposed area i.e. on the head and neck followed by extremities. But BD is also seen on peri-ungual, palmar, genital and perianal region.[2]

The risk of progression into an invasive carcinoma is 3 to 5% in extragenital lesion and about 10% in genital region.

Dermoscopic features of BD include atypical vascular pattern i.e. irregular, arborizing, tortuous or dotted vessels termed as glomerular vessels (90%) due to their particular particular morphology resemblance to vessels of the renal glomerulus, scaly surface, areas of hypopigmentation, squamous/verrucous surface, sharp borders pinkish-white network and pinkish-white structure-less area.[3] Zalaudek and colleagues[4] described scaly surface and glomerular vessels as specific criteria of BD on dermoscopy. They have also noted that in pigmented BD small brown globules and structure-less gray to brown pigmentation in pigmented BD. Kisttisak and Masaru[5] classify BD into three clinical subtypes and compared its dermoscopic features, which is as follows:

- Classical BD (CBD; non-pigmented): Erythematous patch or plaque with or without scaling.
- Partially pigmented BD (PPBD): It is characterized by patch or plaque with any dermoscopic black, brown, grey or blue pigmentation less than 50%.
- Pigmented BD (PBD): It is prominently hyperpigmented patch or plaque with more than 50% lesion being pigmented.

According to them, glomerular vessels, whitish scale and a pinkish-white network are often found in CBD. In PBD, scales, structure-less pigmentation and pigmented streaks are seen. Scales, glomerular vessels, pinkish-white network and structure-less pigmentation are commonly found in PPBD. Our's is a case of PPBD as dermoscopic pigmentation is less than 50%. Thus the dermoscopic findings favoured the diagnosis of bowen's disease. The skin biopsy confirmed the findings of dermoscopy.

Figure 1: A 3×4 cm multicoloured pigmented plaque with scaling and well-defined margins.

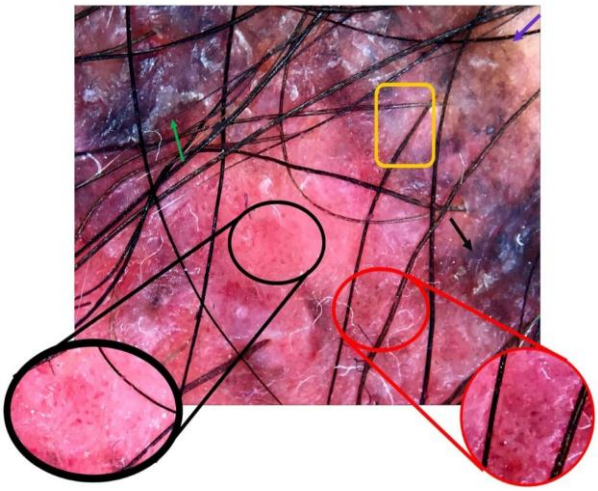

Figure 2: Dermoscopic examination of partially pigmented Bowen's disease revealed red homogenous areas with glomerular vessels (black circle), patchy distribution of brown dots (red circle), scaly surface (green arrow), sharp border (blue arrow), pigmented area (black arrow) and pinkish-white structure-less areas (yellow rectangle) (using DermLite 4; 3 Gen; Polarized mode, 10x).

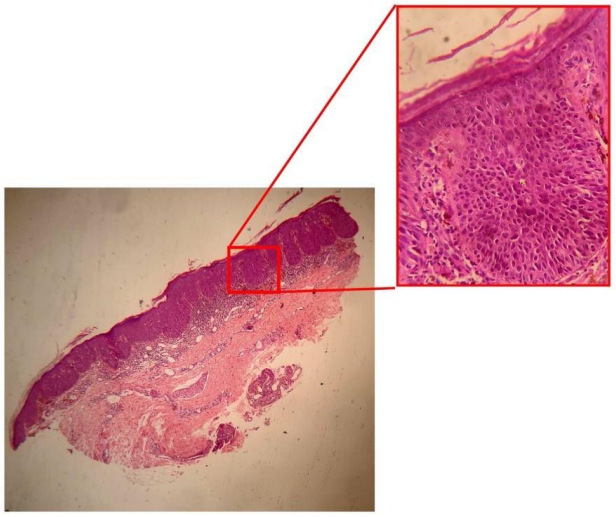

Figure 3: (a) Histopathological examination (H & E; 10x) showed hyperkeratosis with thickening and irregular elongation of rete ridges and moderately dense inflammatory infiltrate in upper dermis. (b) Photomicrograph (H & E; 40x) showing keratinocytes which are moderately pleomorphic with loss of orientation and nuclear atypia, present throughout the thickness of epidermis with intact basal cell layer.

CONCLUSION

The risk of progression into an invasive carcinoma is 10% in genital lesions. Thus, diagnosis and treatment as early as possible is very crucial part in management of Bowen's disease. Hence, detail knowledge about the dermoscopic features of BD may a pointer towards its early diagnosis and further management. Furthermore, dermoscopy may act as a substitute of skin biopsy for lesions of bowen's disease on difficult sites.

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