Dermatology Practical & Conceptual

Clinicopathological Characteristics of Bowen Disease: A 7-Year Study at a Referral Dermatology Hospital

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Introduction

Bowen disease (BD) is an epithelial squamous cell carcinoma (SCC) in situ, frequently diagnosed in the elderly with 3-5% risk of progression to SCC [1,2].

This retrospective study was conducted at a referral dermatology hospital for 7 years (March 2013 until March 2020) in a Middle Eastern population to elucidate the characteristics of BD. All patients diagnosed by histopathology with BD were included, and data was extracted from their medical records.

Case Presentation

A total of 211 patients were studied with a mean age of 66.2 (± 14.4) years, 149 cases (70.6%) were male. The average number of lesions was 1.4 ± 0.9. Among them, 9 cases (4.2%) had a history of arsenic toxicity, 12 cases (5.6%) had a history of immunodeficiency, and 23 cases (10.9%) manifested the pagetoid type of BD.

The findings indicated that 22 cases (10.4%) had a history of BCC, and 14 cases (6.6%) with a history of SCC. Meanwhile, 72 cases (34.1%) developed SCC on their Bowen lesions. The most common anatomical locations of lesions were head and neck, and trunk, both with an equal incidence of 30.8% (65 cases). Followed by lower limbs 26.5%, upper limbs 24.2%, and genitalia 1.4%.

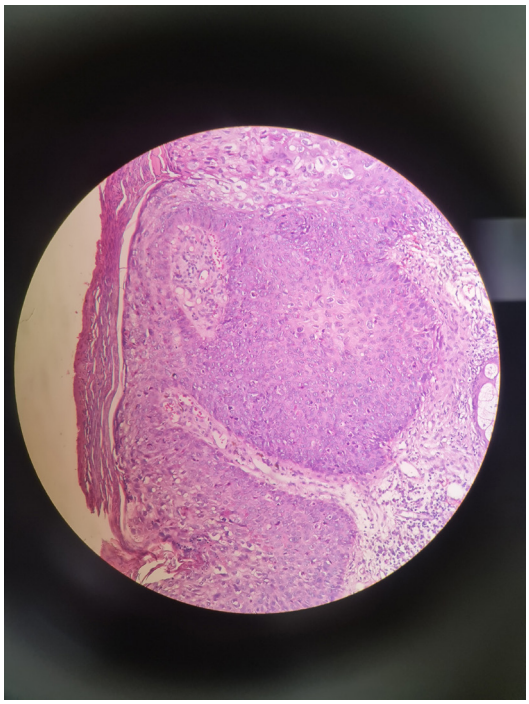

Figure 1. A full-thickness atypia of the epidermis which also shows multiple dyskeratotic cells, acanthosis and overlying parakeratosis (×200).

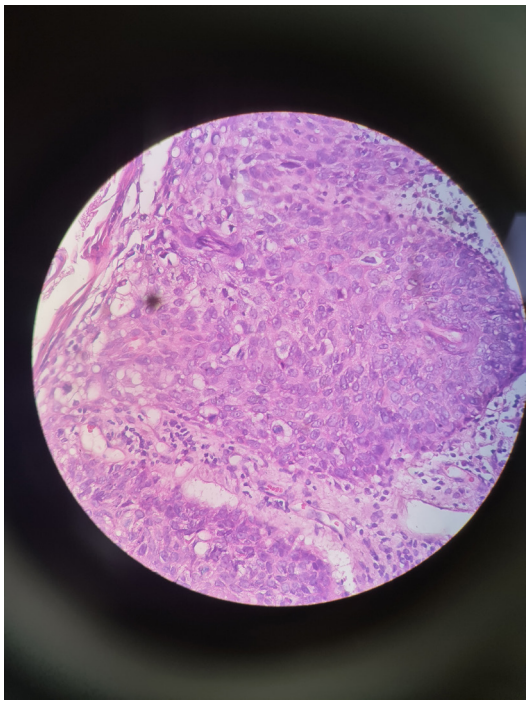

Figure 2. This high-power view shows complete loss of maturation; suprabasal mitosis is present (×400).

Associated actinic keratosis (Figures 1 and 2) was reported in 48 cases (22.7%), Seborrheic keratosis in 5 cases (2.4%), and epidermodysplasia verruciformis in 15 cases (7.1%). Granulation and ulcerations upon the lesions were observed in 0.9% and 7.1% of patients, respectively. Lichenoid reaction as the only dermal alterations in the lesions were recorded in 5 cases (2.4%). As for the different epidermal changes, psoriasiform hyperplasia, melanin pigmentation, clear cell, and epidermolytic hypergranolosis were reported in 4.7%, 2.4%, 1.4%, and 0.9% of patients, respectively.

Recurrence was reported in 9 (4.2%) cases with a mean time of 5.12 ± 1.38 years.

Only 12 patients had dermoscopic images taken by fotofinder systems based on their data records and were assessed by two dermatologists. Dermoscopic findings were as follows; white scaling in 11 patients (91.67%), yellow scaling in 9 patients (75%) and then clustered glomerular vessels in 8 patients (66.67%).

Table 1 shows there is a statistically meaningful association between sex and the anatomic site of lesions ($P < 0.05$). BD was more significantly observed on men head and neck (38.1%) while women had BD mainly on their

Table 1. Association analysis of correlation between different clinical features (the percentages are indicative of the portion of lesion sites in each gender).

		Anatomic Site of Lesions							
		Scalp	Face and Ear	Neck	Trunk	Genitalia	Upper Limbs	Lower Limbs	P
Sex	Male	19 (12.7%)	33 (22.1%)	5 (3.3%)	43 (28.8%)	2 (1.3%)	30 (20.1%)	40 (26.8%)	0.002*
	Female	1 (1.6%)	6 (9.7%)	1 (1.6%)	22 (35.5%)	1 (1.6%)	21 (33.9%)	16 (25.8%)	
SCC on Bowen Disease	With SCC	5 (6.9%)	12 (16.7%)	3 (4.2%)	18 (25.0%)	3 (4.2%)	20 (27.8%)	23 (31.9%)	0.187
	Without SCC	15 (10.8%)	27 (19.4%)	3 (2.2%)	47 (33.8%)	0 (0%)	31 (22.3%)	33 (23.7%)	

SCC = squamous cell carcinoma.

[a] P -values smaller than 0.05 which is indicative of statistical significance

trunk (35.5%). SCC development has no significant association with anatomic site of lesions (P = 0.186) or with sex (P = 0.960).

Conclusions

The results revealed a significantly higher prevalence of BD in men in sun-exposed areas. While women, despite having a lower incidence of the disease, the lesions were significantly less common in the head and covered areas of the face. This difference can be explained of wearing hijab in our country by women that protects the scalp and some areas of their faces such as ears. This study highlights the impact of geographic, cultural and ethnic issues in BD characteristics. The recurrence rate of BD was less than 5 % and also risk of SCC development on BD lesions were near 35% in this study.

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