



# When Patterns Mislead

## A case of Sporotrichoid Bowen's Disease

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### Introduction

Many infectious, inflammatory, neoplastic conditions occur in **sporotrichoid** pattern

Bowen's disease (BD) or squamous cell carcinoma-in-situ

- Solitary lesion
- Sun-exposed sites
- 3-5% risk of progression
- 10-20% : Multiple lesions
- Uncommon in dark-skinned individuals

Immunocompromised patients may have multiple epithelial carcinomas

### Discussion

**Sporotrichoid pattern**

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| <ul style="list-style-type: none"> <li>■ Sporotrichosis, Nocardiosis</li> <li>■ Cryptococcosis</li> <li>■ M. abscessus, chelone</li> <li>■ Lupus vulgaris</li> <li>■ Pseudomonas, Yersinia</li> <li>■ Cutaneous leishmaniasis</li> <li>■ Cowpox</li> </ul> | <ul style="list-style-type: none"> <li>■ Lichen planus</li> <li>■ Psoriasis</li> <li>■ Rheumatoid nodules</li> <li>■ Granuloma annulare</li> <li>■ Pemphigus vulgaris</li> <li>■ Sweet's syndrome</li> <li>■ Lupus profundus</li> </ul> |
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10 reports of neoplastic lesions occurring in this pattern

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| <ul style="list-style-type: none"> <li>■ Keratoacanthomas</li> <li>■ Epithelioid sarcoma</li> <li>■ Langerhans cell histiocytosis</li> <li>■ Peripheral nerve sheath tumor</li> </ul> | <ul style="list-style-type: none"> <li>■ Melanoma</li> <li>■ SCC</li> <li>■ Lymphoma</li> </ul> | } | Metastatic |
|---|---|---|------------|

Linear variants of most disorders have a poorer response to treatment

### Conclusion

- This is the first reported case of multiple Bowen's disease in this distribution
- Response and clinical behaviour similar to non-linear Bowen's disease

### References

- Gahalaut P, Rastogi MK, Mishra N, Chauhan S. Multiple Pigmented Bowen's Disease: A Diagnostic and Therapeutic Dilemma. Case Rep Oncol Med. 2012;2012:1-5.
- Bargman H, Hochman J. Topical Treatment of Bowen's Disease with 5-Fluorouracil. J Cutan Med Surg. 2003 Mar 5;7(2):101-5.
- Happle R. Superimposed segmental manifestation of polygenic skin disorders. J Am Acad Dermatol. 2007;57(4):690-9.
- Abudu B, Cohen PR. Sporotrichoid Keratoacanthomas: Case Report and Review of Neoplasms Presenting in a Sporotrichoid Pattern. Cureus. 2018 Aug 23;10(8):e3196.

### Case Report

#### Clinical

58-year old man with CKD (stage 5), 11 years post-renal transplant, on immunosuppressants



3 asymptomatic, hyperpigmented, crusted tender indurated plaques over left leg in linear pattern

Appeared in distal to proximal direction

History of minor trauma over left foot during gardening

No regional lymphadenopathy

Poorly controlled diabetes mellitus, hypertension, ischemic heart disease

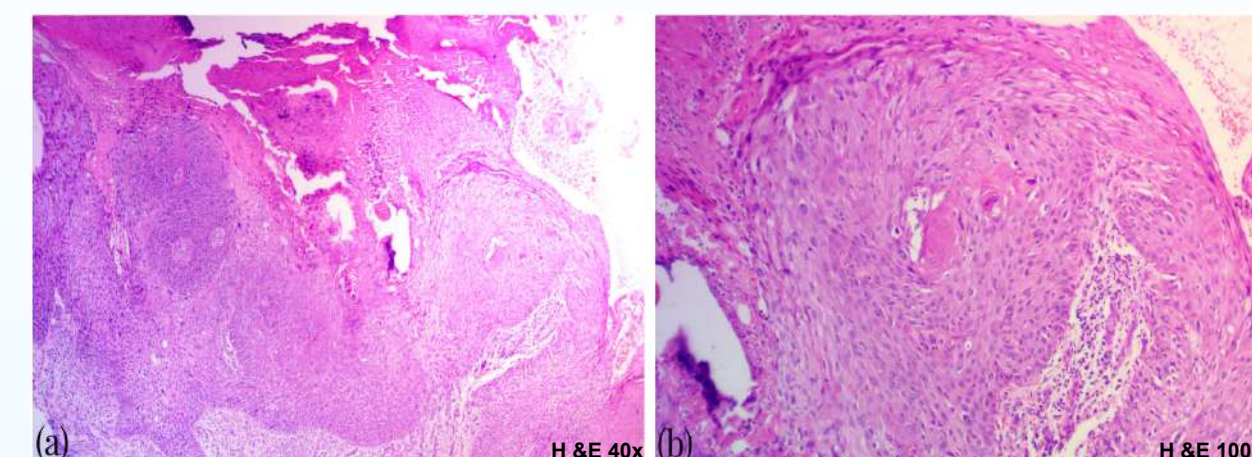
Differential diagnoses: Deep fungal infection, Atypical mycobacterial infection

#### Laboratory Investigations

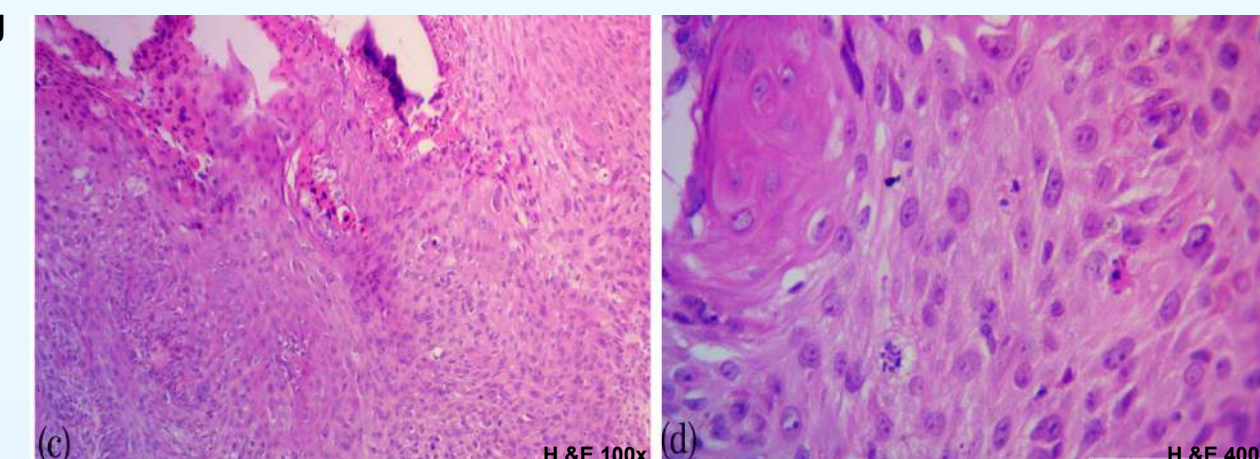
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| <ul style="list-style-type: none"> <li>■ Fungal Culture from tissue: Negative</li> <li>■ Mycobacterial culture from tissue : Negative</li> <li>■ CBC, LFT, RFT- normal</li> </ul> | <ul style="list-style-type: none"> <li>■ USG abdomen and pelvis- growth over upper pole of native left kidney</li> <li>■ PET scan –well-defined soft tissue nodule in left kidney</li> <li>■ Renal biopsy: Clear cell carcinoma: <u>Incidental, unrelated</u></li> </ul> |
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#### Histopathology

Characteristic features of Bowen's disease (squamous cell carcinoma in-situ)



Compact hyperkeratosis with a scale-crust composed of parakeratosis, neutrophils and fibrin. Epidermis is acanthotic, with full-thickness dysplasia. Dermis shows capillary proliferation and lympho-plasmacytic infiltrate



Atypical keratinocytes: loss of polarity, large size, hyperchromasia and dyskeratosis. Atypical mitoses seen in (d)

Multiple stepcuts examined: **No dermal invasion**

#### Treatment

Topical 5% 5-Fluorouracil cream, locally applied, twice daily  
10 weeks : Complete resolution with hyperpigmentation