When There Isn't a Fungus Among Us:

A Case of Cutaneous T-Cell Lymphoma presenting as Mycosis Fungoides

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Introduction

Atopic dermatitis is a commonly encountered problem in the primary care clinic that can easily be confused with diseases that mimic its presentation. This case highlights a patient who presented with what was thought to be atopic dermatitis but turned out to be mycosis fungoides, a skin limited form of Cutaneous T-cell Lymphoma (CTCL).

Case Presentation

- 45-year-old white man with a 20-year history of the atopic triad:
  - Seasonal allergies
  - Allergy-induced asthma
  - Atopic dermatitis
- Atopic dermatitis previously treated with topical steroids and tacrolimus
- Biopsy 20 years ago negative for malignancy
- Exam: tender, multi-focal, erythematous plaques (hips, thighs, groin, scrotum)

Clinical Course

- Topical corticosteroids improved the rash.
- Dermatology concerned for CTCL based on distribution and duration
- Skin biopsies confirmed the diagnosis (figure)
- Flow cytometry without Sezary cells, monoclonal B-cell or T-cell population, or blasts. T-cell gene rearrangement testing without clonal population of T-cells.
- Treated with topical steroids and phototherapy for skin limited CTCL

The Disease

Cutaneous T-cell Lymphoma is a non-Hodgkin lymphoma that is divided into two categories. The first is mycosis fungoides which involves only the skin and represents 50-70% of cases. The second is Sezary syndrome which involves the skin, blood, and lymph nodes and represents 1-3% of cases. Mycosis fungoides can be present for years without progression to Sezary syndrome. Sezary syndrome often presents de novo, absent preceding mycosis fungoides.

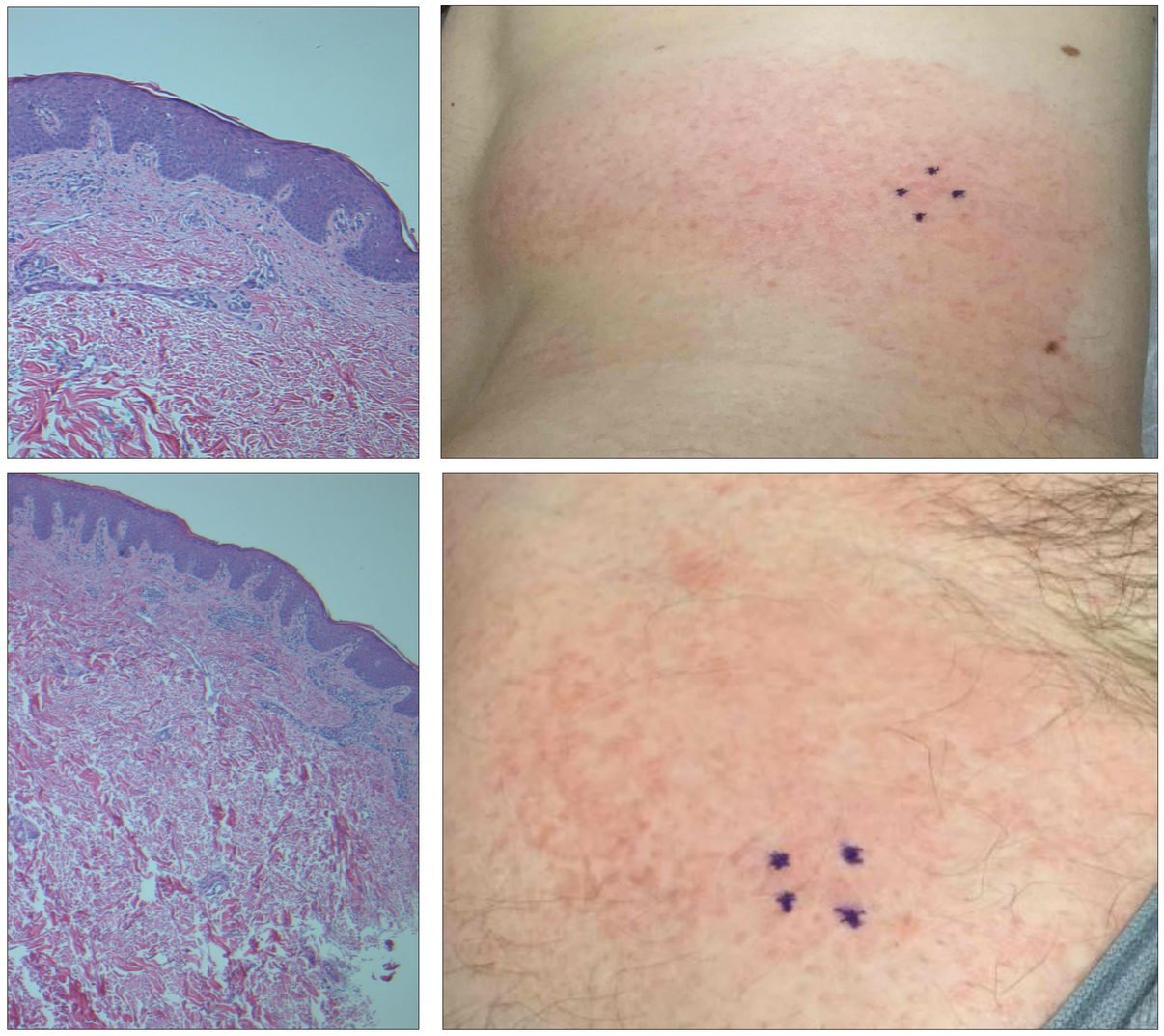
The Differential

Atopic dermatitis, CTCL, contact dermatitis, and psoriasis can all have similar appearances. CTCL lesions can become super-infected which can complicate diagnosis.

The Dangers

CTCL is incurable. However, mycosis fungoides has a good prognosis with well tolerated treatments including topical steroids, topical chemotherapy, and phototherapy. Sezary syndrome is more difficult to treat requiring systemic chemotherapy and consideration of bone marrow transplant.

The Differences	Atopic dermatitis	Cutaneous T-Cell Lymphoma
Demographic	Younger individuals with atopic history.	Older individuals, more prevalent in the black population.
Distribution	Sun-exposed areas, flexural areas.	Sun-protected areas - trunk, thighs, buttocks, groin.
Characteristics	Pruritic, erythematous plaques. Tend to be more transient.	Pruritic, tender, erythematous plaques. Can be stable for years.



Left: skin biopsies showing band-like atypical lymphocytes infiltrating into the papillary dermis with some extension into the epidermis.
Right: Top – left hip plaque. Bottom – right hip plaque

Conclusions

- Cutaneous T-Cell Lymphoma can present similarly to atopic dermatitis, contact dermatitis, and psoriasis
- Plaques can become super-infected complicating diagnosis
- Characteristic lesions are erythematous pruritic plaques that are **stable over time** and in **sun-protected areas.**
- CTCL is incurable, but mycosis fungoides has a good prognosis with well tolerated treatments