



# Palmoplantar Keratoderma Associated with Peripheral T-cell Lymphoma, Not Otherwise Specified

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## Introduction

Peripheral T-cell lymphoma, not otherwise specified (PTCL, NOS) is a rare heterogeneous group of T-cell lymphomas that often present with extranodal manifestations.

## Case Presentation

### HPI:

A 57-year old African American male presented to Dermatology clinic for follow-up of suspected palmoplantar atopic dermatitis and was noted to have extensive, severe lymphadenopathy not seen previously, as recently as one week prior. He first noticed the swollen lymph nodes a couple of weeks ago, first in groin, then neck and arm pits. His feet and hands were very painful, feet more so, hurting to walk. He had been to the ED multiple times in the past few months for pain and cellulitis. Also reported weight loss, chills and occasional night sweats over the past few weeks. Admitted for suspected refractory cellulitis and new rapidly growing, bulky lymphadenopathy.

### PMHx:

- Palmoplantar atopic dermatitis
- Recurrent skin infections
- Onychomycosis
- Bilateral adrenal adenomas
- Liver cysts
- Untreated H.pylori gastritis

### Medications:

- Betamethasone
- Cyclosporine
- Terbinafine
- Doxycycline
- Ciprofloxacin

### Social History:

- Current 30 pack year smoker
- Rare beer
- Smokes marijuana daily

### Physical Exam:

BP 140/83, HR 60, T 36.9 °C

Gen: African American male, appears older than stated age, alert and NAD

HEENT: Temporal wasting;

EOMI; PERRL; no oropharyngeal erythema; no scleral icterus

CV: RRR with normal S1 S2, soft systolic murmur

Lungs: clear bilaterally

Abd: normoactive bowel sounds, soft, non-tender, no masses

Ext: trace bilateral lower extremity edema

Lymph: diffuse bulky, immobile, firm, enlarged cervical, axillary, inguinal lymph nodes with largest ones in right groin

Skin: hyperkeratotic skin on palms and soles with multiple areas of fissuring

### Labs:

- WBC 15.3
- - PMNs 5.7, eos 3.1
- Hgb 13.5
- Plts 392
- BUN 9
- Creatinine 0.7
- LDH 408
- Albumin 2.4
- Total protein 6.0

**Biopsy:** (right palm)

Parakeratosis overlying epidermis with spongiosis and a superficial perivascular inflammatory infiltrate, composed of lymphocytes and eosinophils consistent with a primary spongiotic dermatitis



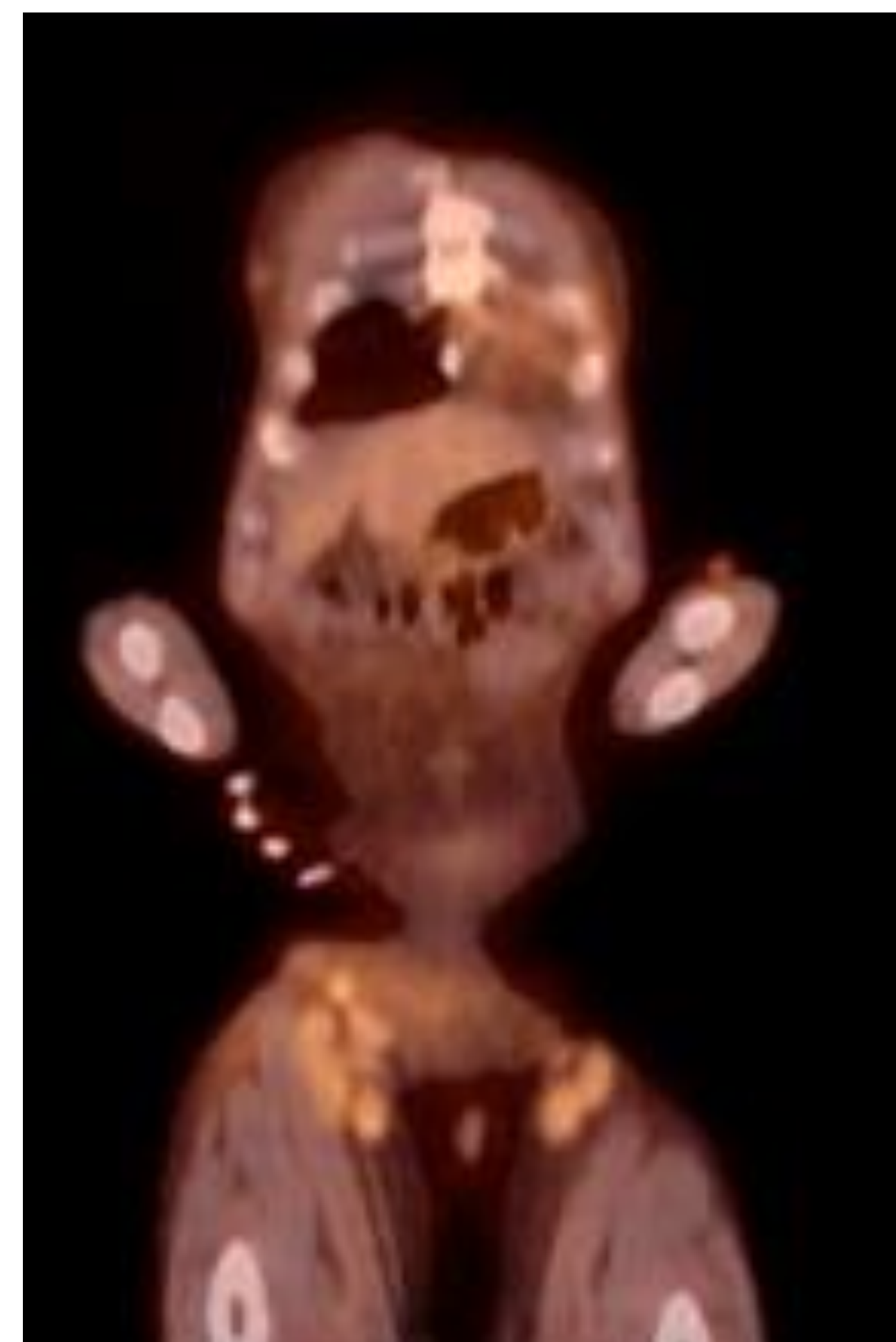
## Hospital Course & Clinical Follow-up

During the patient's one week admission his palm and sole rashes were treated with high potency steroid and antifungal creams, as well as whirlpool baths, with moderate improvement. Given the concern for hematologic malignancy he underwent PET CT which revealed hypermetabolic lymphadenopathy. Surgical excision of a right inguinal lymph node demonstrated PTCL, NOS. He was treated as an outpatient with one cycle of chemotherapy but unfortunately died of unknown causes.

## Imaging

### PET CT

Widespread hypermetabolic cervical, supraclavicular, mediastinal, hilar, axillary, mesenteric, and inguinal lymphadenopathy, consistent with lymphoma.



## Discussion

Extranodal sites of PTCL, NOS involvement include liver, spleen, lungs, gastrointestinal tract and bone marrow. Additionally, skin and subcutaneous tissues are involved in 20% of cases. Skin manifestations of PTCL, NOS are widely variable with palmoplantar keratoderma (PPK) being one of them. It can be a paraneoplastic finding or the result of direct involvement of the lymphoma (i.e Sezary Syndrome). There is a case report of PPK preceding the diagnosis of PTCL, NOS by 14 months. Risk factors for PTCL, NOS are unclear but smoking, immunosuppression and exposure to chemical substances such as solvents have been implicated. Not only did our patient have all of these exposures, his skin findings preceded his diagnosis by almost a year. Skin manifestations of PTCL, NOS are thought to represent a poor prognosis. Underlying malignancy should be considered in patients with PPK when the etiology is not clearly apparent.

## Teaching Points

- PTCL, NOS skin manifestations = direct tumor involvement vs paraneoplastic
- PPK can be an early sign of hematologic malignancy

## References

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2. Wallett, A., Ibbetson, J. S., Kearney, D., Newland, K. and Sidhu, S. (2015). Cutaneous manifestations of peripheral T-cell lymphoma, not otherwise specified: A case series highlighting the diagnostic challenges for this heterogeneous group. *Australasian Journal of Dermatology*, 56: 197–201. doi:10.1111/ajd.12307