

Chronic Histoplasmosis and Lymphoma: A Possible Association?

Devika Patel*, Ashika Odhav*, John Hall**, Garth Fraga**, Sunil Abhyankar**
University of Missouri Kansas City * University Physicians Associates, Kansas City MO**

Background:

- *Histoplasma capsulatum* is a dimorphic fungus that can cause pulmonary, mediastinal, pericardial, mucocutaneous, and disseminated infections.
- There have been sporadic reports of chronic histoplasmosis infections subsequently developing into reticulo-endothelial tumors, including lymphoma, in the same anatomic location [1].
- Murray and Brandt in 1951 postulated that either the fungal infection of the reticulo-endothelial system or a cellular reaction of the reticulo-endothelial system caused the formation of lymphoma [1].
- As shown by our case and also with the increasing incidence of histoplasmosis infection and lymphoma in patients treated with anti-tumor necrosis factor therapy, one has to be aware of a possible common etiological association [2].

Case:

- A 48 year old female, presented with painful erythematous nodular skin lesions.
- Skin biopsy showed fungal organisms compatible with histoplasmosis.
- Patient also had positive urine histoplasmosis antigen titer.
- Skin biopsy was negative for malignancy.
- Patient was successfully treated with Itraconazole 100mg BID.
- The following year, the patient returned with non-tender nodules in the skin.
- This time, the skin biopsy showed an atypical cutaneous lymphoid infiltrate highly suspicious for a large B cell lymphoma.
- Immunoperoxidase studies were positive for CD20, CD 68, and CD 30.
- PET scan showed that these nodules were compatible with metabolically active tumors.
- The patient was started on rituximab, cyclophosphamide, doxorubicin, vincristine, and prednisone.
- The patient has been in remission since treatment and no new nodules have been seen.

Methods:

- Review of the literature included a database search at Pubmed and Ovid.
- Search terms used: lymphoma, *Histoplasma capsulatum*, *Histoplasma* associated with malignancy
- Limited to English literature

Conclusion:

- This is the first documented case since 1960 to illustrate a possible association between a cutaneous histoplasmosis infection and B cell lymphoma.
- We hypothesized that this may relate to altered immunity affecting immune surveillance secondary to chronic inflammation in predisposed individuals.
- We recommend further studies to investigate this association.
- Clinicians should have increasing vigilance and long-term monitoring of patients with chronic histoplasmosis infection.
- It is important to be aware of a possible association between histoplasmosis and lymphoma, as early investigation will establish a diagnosis at an earlier stage with improved prognosis.

References:

1. Goodman HL, Nelson NA, Oster HL. The association of histoplasmosis and lymphoma. *Am J Med Sci.* 1957; 233: 56-6
2. Murray JF, Brandt FA. Histoplasmosis and malignant lymphoma. *Am J Pathol.* 1951; 27: 783-99.
3. US Food and Drug Administration Black Box Warning, Tumor Necrosis Factor (TNF) Blockers. August 2009

Figure 1: Histoplasmosis: Initial Diagnosis. 10/08.

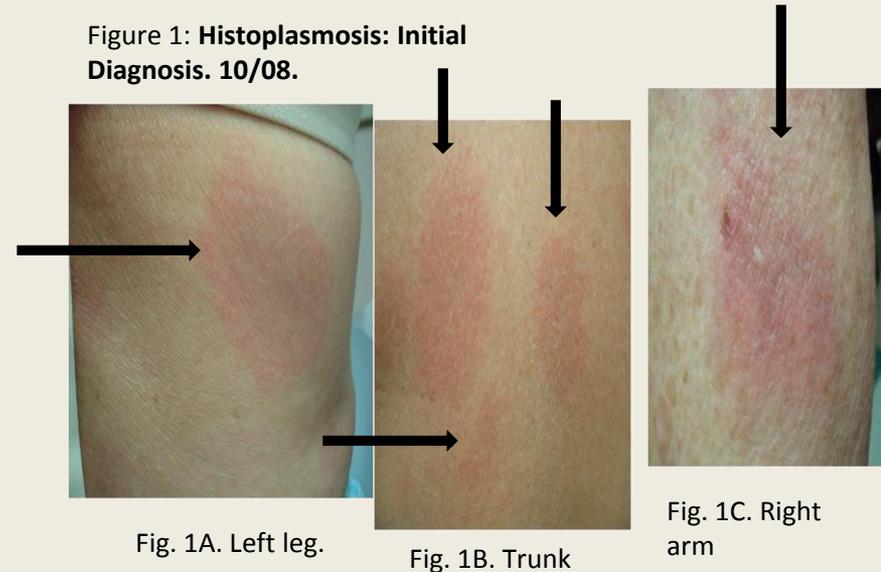


Figure 2: 1 year later with Lymphoma: 8/10

