

Assuming Consumption:

Cough, night sweats and weight loss do not always equal TB

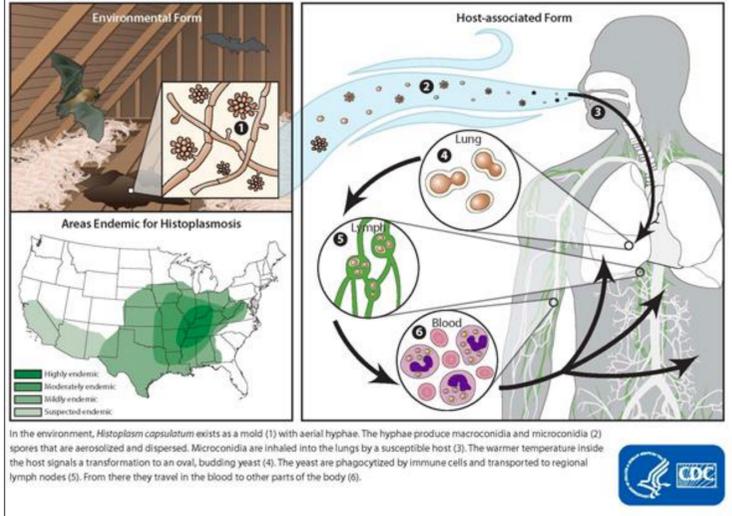
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Background

- Histoplasma capsulatum* is a common endemic mycosis found worldwide that is especially endemic in the Ohio and Mississippi River valleys.

Biology of Histoplasmosis



- The infection is typically asymptomatic but can be associated with pulmonary or disseminated disease.
- Clinical manifestations of pulmonary disease include: pneumonia, pulmonary nodules, cavitations, mediastinal or hilar lymphadenopathy, pericarditis, mediastinal granuloma, fibrosing mediastinitis, SVC syndrome, dysphagia, arthralgias, and erythema nodosum.

Case Presentation

- A 22-year-old Hispanic male presented with a 2-month history of progressive dyspnea, dry cough, pleuritic chest pain, night sweats, fatigue, 20-lb weight loss, and diarrhea.
- Exposure history included prior incarceration, remote inhaled cocaine use, work in a tire warehouse, and exposure to mold and bird droppings in his home.

Diagnosis

- Definitive diagnosis is made by histopathology or cultures.
- Antibody and antigen detection are noninvasive means of diagnosis
- Diagnosis is often complicated by delay in seroconversion and low sensitivity in nonsystemic disease.

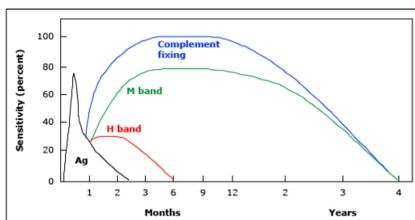
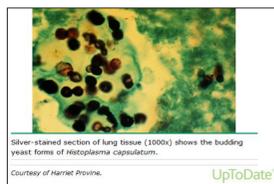


Table 1 Sensitivity of diagnostic studies in different histoplasmosis syndromes^{28,a}

Method	Disseminated	Acute pulmonary	Subacute pulmonary	Chronic pulmonary
Antigen	92% (158) ^b	83% (29)	30% (46)	88% (9)
Antibody	75% (80)	64% (28)	95% (41)	83% (6)
Pathology	76% (76)	20% (10) ^c	42% (19)	75% (4)
Culture	74% (132)	42% (19) ^c	54% (26)	67% (6)

^aReference from which the data were derived for disseminated, subacute, and chronic pulmonary histoplasmosis. Data for acute pulmonary histoplasmosis were derived from a different publication.²⁷

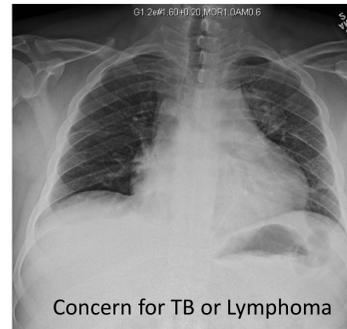
^bThe number in parenthesis represents the number of patients for whom the test was performed.

^cBased on literature review described in Swartzentruber et al.²⁷

Evaluation and Hospital Course

22 y/o M with B-symptoms, cough, SOB, weight loss

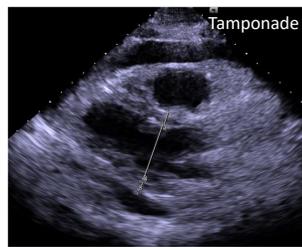
CXR



CTA chest



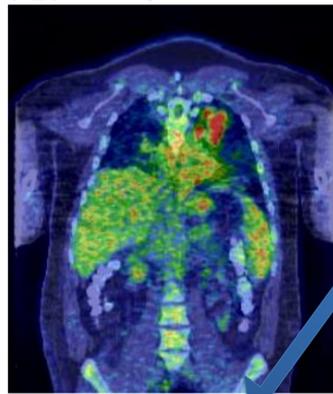
Echo



Pericardiocentesis

- 750 cc serosanguinous fluid drained.
- Cytology w/ acute on chronic inflammation.
- Gram stain and culture negative.
- No malignant cells.

PET



Mediastinoscopy

- Biopsy w **caseating granulomas**

Rheumatologic workup:

- Negative for ANA, Anti-Sm, RNP, Anti-CCP, SSA & SSB Ab

Malignancy workup:

- Flow cytometry negative
- No malignant cells on biopsy

Infectious workup:

- HIV, cryptococcus, beta-D glucan, blastomycosis, TB IFN-γ release assay negative
- AFB stain of bx negative
- GMS stain of bx with **rare yeast forms** consistent with Histoplasmosis
- Histo urine and serum antigen negative
- Histo immunodiffusion with negative M and H band
- **Histo Complement fixation titers 1:16 for mycelial phase and 1:256 for yeast**

Discussion

- Variable presentations and limitation of testing in non-disseminated disease can delay the diagnosis of pulmonary histoplasmosis.
- Pulmonary histoplasmosis may be complicated by enlarging, encapsulated, caseous mediastinal lymph nodes.
- Pericarditis occurs in 5-10% of symptomatic cases and is caused by an immunologic reaction to histoplasmosis in the adjacent mediastinal lymph nodes rather than disseminated disease.
- Mild-moderate acute pulmonary disease, including mediastinal granuloma and lymphadenitis w pericarditis, is treated with Itraconazole for 6-12 weeks.

References

- Hage, C.A., Azar, M.M., et al. Histoplasmosis: Up-to-Date Evidence-Based Approach to Diagnosis and Management. *Semin Respir Crit Care Med* 2015;36:729-745.
Histoplasmosis: Sources of Histoplasmosis. (2015). CDC. <http://www.cdc.gov/fungal/diseases/histoplasmosis/causes.html>
Wheat, J., Kauffman, C.A. (2016). Diagnosis and treatment of pulmonary histoplasmosis. *UpToDate*.