



Disseminated Histoplasmosis mimicking widespread Molluscum Contagiosum

Songhee Han, BS; Sabrina Newman, MD; Shyam Raghavan, MD



Department of Pathology, University of Colorado Anschutz Medical Campus, Aurora, Colorado, USA

BACKGROUND

- *Histoplasma capsulatum* is a dimorphic fungi
- Epidemiology: found worldwide, particularly in the Ohio and Mississippi River valleys within the United States; found in birds as well as bats and transmitted by inhaling its spores
- 3 forms of histoplasmosis: acute pulmonary (presents with influenza-like illness), chronic cavitary, and disseminated
- Disseminated Histoplasmosis is most commonly seen in immunocompromised (transplants, HIV, etc.); worst prognosis of the three
- Cutaneous lesions can have a variety of presentations

CASE REPORT

- 63yo M presents with 10-day progressive diarrhea, fatigue, cough, dyspnea on exertion, decreased appetite, and multiple small skin-colored papules
- MHx: renal transplant (2.5 years prior)
- MedHx: tacrolimus, mycophenolate mofetil, prednisone
- SHx: Patient traveled to Minnesota one month ago
- Physical Exam: Numerous skin-colored papules over face, neck, trunk, and upper extremities without drainage. Many of these lesions were umbilicated and appeared like molluscum.



Fig 2. Flesh colored papules present on the face



Fig 3. Lesion on arm where punch biopsies were taken from.

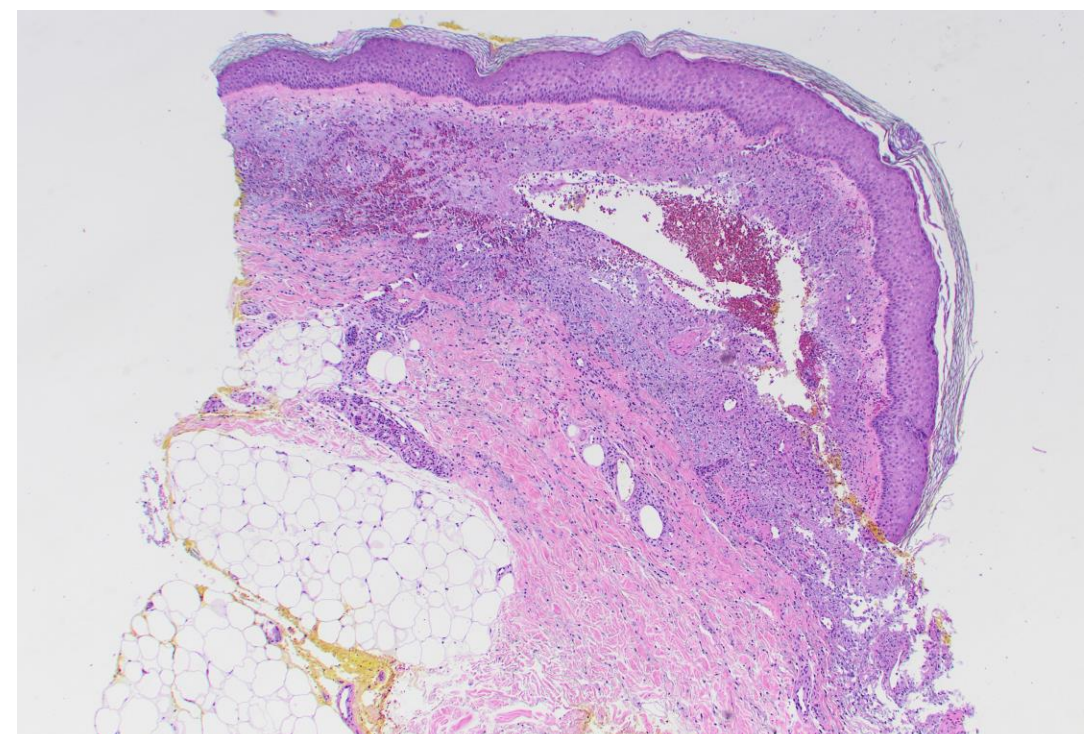


Fig 4. HE (40X magnification). biopsy specimen revealed large aggregates of yeast forms both intracellularly (in histiocytes) and extracellularly that were uniform in size with eccentric nuclei and perinuclear clearing.

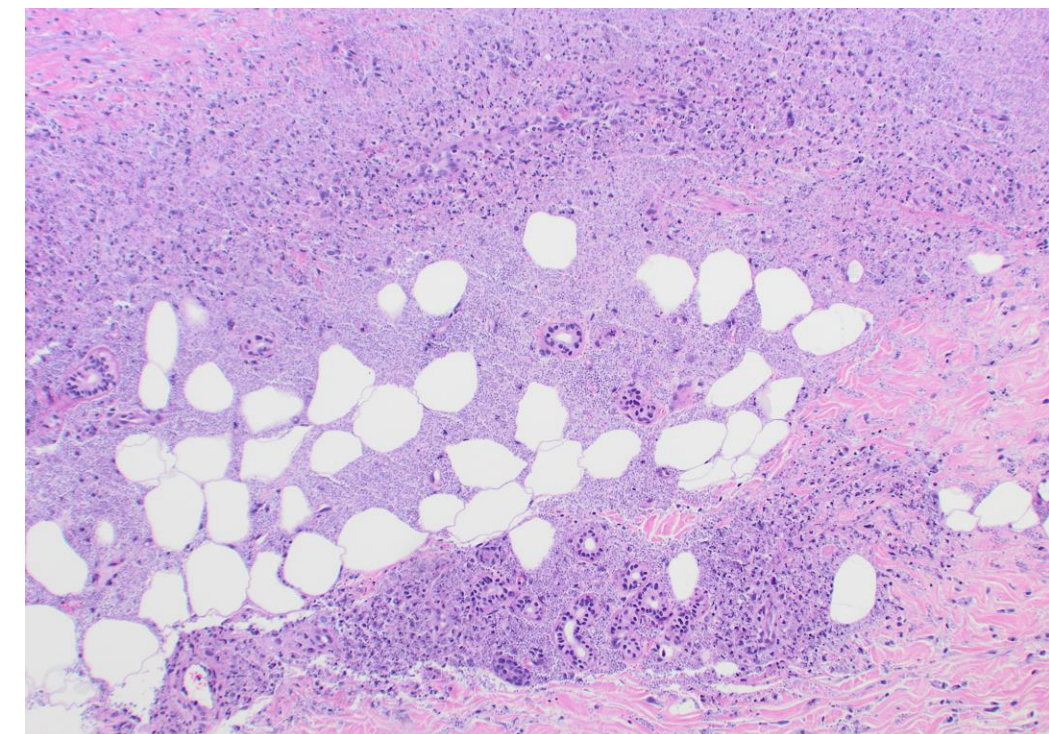


Fig 5. HE (200X magnification)

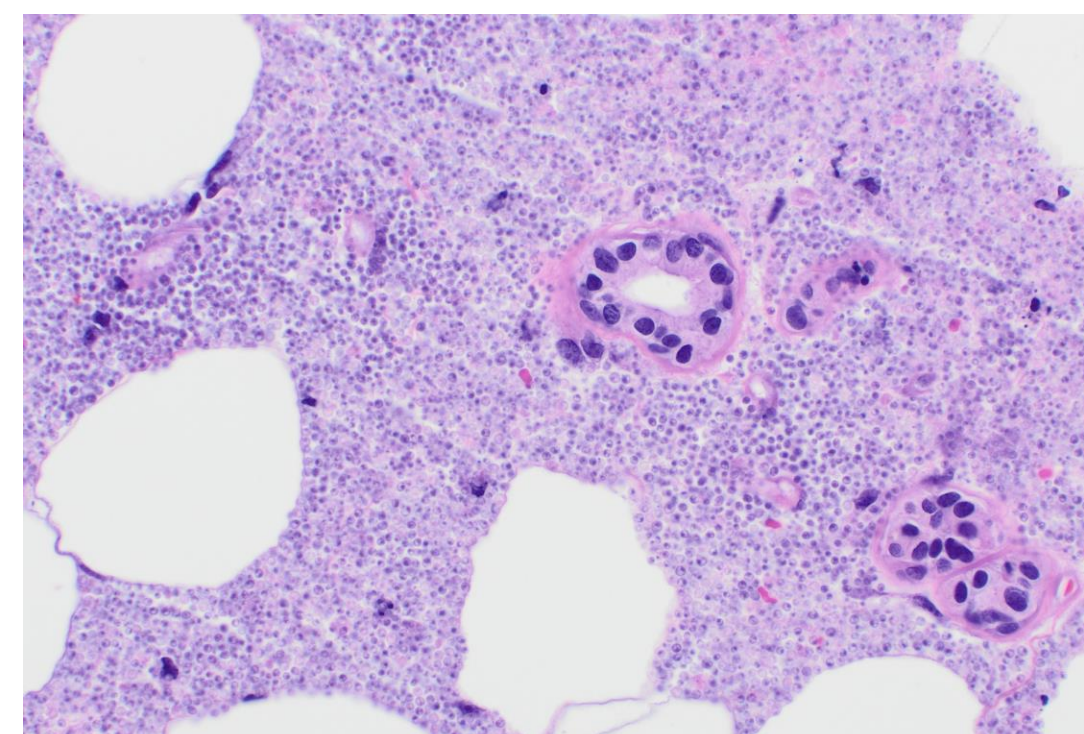


Fig 6. HE (400X magnification)

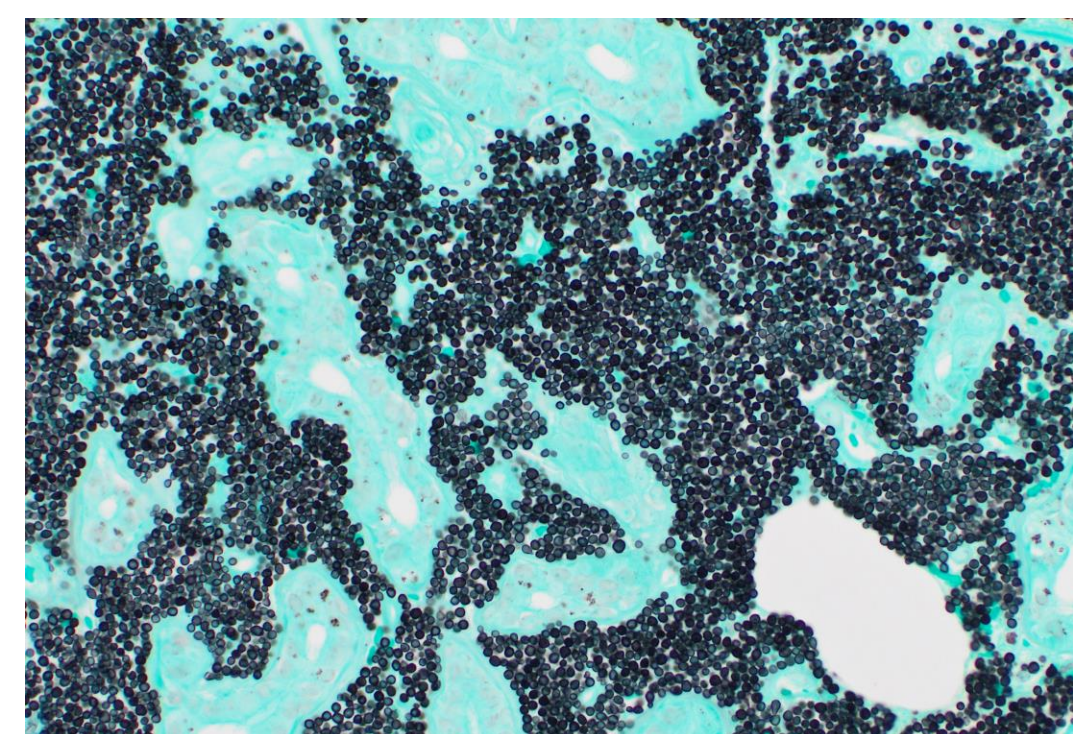


Fig 7. GMS 400x showed yeast forms

CLINICAL COURSE

- Serologies: Histoplasma Antigen Serum and Histoplasma Galactomannan Antigen Urine were **positive**
- Amphotericin B was initiated
- Despite efforts, the patient gradually displayed altered mental status and displayed multisystem organ failure
- After discussion with family, code status was updated to DNR and patient expired soon after

DISCUSSION

- Atypical dermatological presentation of histoplasmosis in non-endemic region (although the patient had recently traveled to Minnesota)
- Only 6% of histoplasmosis cases present with cutaneous lesions
- Primary lesions vary in size and locations; most commonly hyperpigmentation as well as erythematous papules and nodules
- Molluscum contagiosum-like umbilical lesions are unusual clinical manifestations of histoplasmosis that have been sparsely reported in the literature
- This case highlights the importance of including Histoplasmosis on the differential diagnosis of molluscum like lesions in an immunocompromised patient
- Other entities on the differential diagnosis: *Pneumocystis jirovecii*, endospores of *Coccidioides* spp., *Leishmania*, and *Candida glabrata*
 - *Leishmani* contains kinetoplasts
 - *Candida glabrata* primarily affects the superficial mucosa
 - *P. jirovecii* rarely causes skin lesions
 - *Coccidioides* are histologically characterized by necrotizing granuloma rimmed by epithelioid histiocytes and ruptured spherules releasing non-budding endospores

REFERENCES

1. Azar MM, Hage CA. Laboratory Diagnostics for Histoplasmosis. Kraft CS, ed. *J Clin Microbiol.* 2017;55:1612–1620.
2. Tobón AM, Gómez BL. Pulmonary Histoplasmosis. *Mycopathologia.* 2021;186:697–705.
3. Chang P, Rodas C. Skin lesions in histoplasmosis. *Clinics in Dermatology.* 2012;30:592–598.
4. Gupta P, Bhardwaj M. Cytodiagnosis of disseminated histoplasmosis in an immunocompetent individual with molluscum contagiosum-like skin lesions and lymphadenopathy. *J Cytol.* 2016;33:163.
5. Roden AC, Schuetz AN. Histopathology of fungal diseases of the lung. *Seminars in Diagnostic Pathology.* 2017;34:530–549.



Fig 1. Patient's non-erythematous non-dermatomal umbilical papules and 2cm-diameter erythematous macule was seen on the left side.