

BARONE'S CRYPTOCOCCUS CHEAT SHEET

CHARACTERISTICS

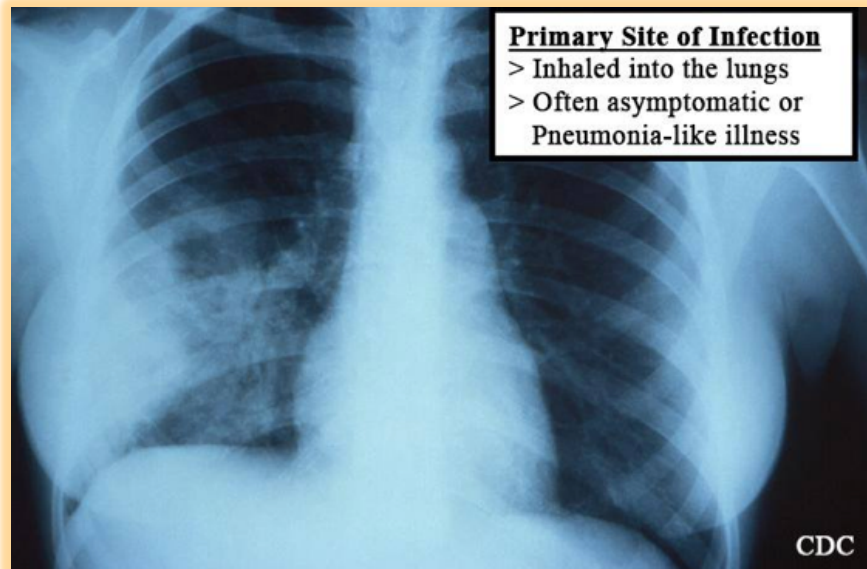
- ◇ Encapsulated Yeast with a Thick Gelatinous Capsule
- ◇ Urease (+)

SOURCE

- ◇ Soil
- ◇ Pigeon and Bat Droppings

VIRULENCE FACTORS

- (1) **Capsular Polysaccharide (Glucuronoxylomannin)**
 - a. Inhibits Phagocytosis, Leukocyte Migration, and Recruitment of Inflammatory Cells
 - b. Uses Phenotypic Switching to Evade Immune Response
- (2) Production of Melanin (Possible Antioxidant Properties)
- (3) Enzymes (Serine Protease – Helps invade by cleaving connective tissues)



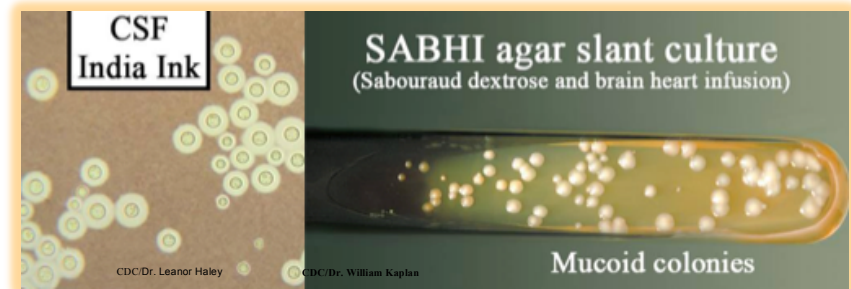
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DISSEMINATION TO THE CNS

- ◇ Causes Meningoencephalitis
- ◇ MCC of Meningitis in AIDS
- ◇ Invasion into brain along perivascular **Virchow-Robin Spaces** creating **"Soap bubble" lesions** (gelatinous masses of perivascular yeast)

DETECTION IN CSF

- ◇ **India Ink** ~ 75% Sensitivity
- ◇ CSF Cryptococcal Antigen by **Latex Agglutination** ~ 94%
- ◇ CSF **Cultures** (Sabouraud's agar) ~ 100%



DETECTION IN TISSUE SECTIONS

- ◇ **Mucicarmine & PAS (+)** = Capsular Polysaccharide stains intense Red
- ◇ Gomori Methenamine Silver (GMS) Stain (+)

TREATMENT

- ◇ **Amphotericin B + Flucytosine, followed by Fluconazole**

