Chapter 6. Histoplasmosis

Fig.6.1. Map of the histoplasmosis endemic areas in the U.S.A. The principal histoplasmosis endemic areas are the states of Missouri, Arkansas, Kentucky, Tennessee, Oklahoma, Illinois, Indiana, Ohio, Texas, Louisiana, Mississippi, Alabama, West Virginia (W. Va) and Maryland. States where histoplasmin skin test sensitivity levels meet or exceed 50% of the population in rural and urban areas are shaded 75% gray: Missouri, Kentucky, Tennessee, and Arkansas. States with histoplasmin skin test sensitivity of 50% or more in rural areas only are shaded 50% gray: Oklahoma, Illinois, Indiana, and Ohio. States with histoplasmin skin test sensitivity of 50% or ore in one or more counties only are shaded 25% gray: Kansas, Texas, Louisiana, Mississippi, Alabama, West Virginia, and Maryland. States with peripheral endemic areas identified based on soil isolations of *Histoplasma capsulatum* are shown in light cross hatch shading: New Mexico, Nebraska, Minnesota, Iowa, Wisconsin, Michigan, New York, Pennsylvania, Virginia, South Carolina, Georgia and Florida. Source: Data are from Ajello (1971).

Fig 6.2. Diffuse plaques with fine scale on the leg of an AIDS patient with disseminated histoplasmosis. Similar lesions were present on the patient’s back, chest, and arms. Source: Fig 8.16 of the HIVpro Image Library and Mildvan, 2008. Used with permission from Dr. Donna Mildvan and with kind permission of Springer Science and Business Media.

Fig.6.3.a. Histoplasmosis in South America. The most prevalent areas for histoplasmosis in Latin America are in Venezuela, Ecuador, Brazil, Paraguay, Uruguay, and Argentina. In Brazil, endemic areas are located in the Midwest and SE portions of the country. Data are from Guimarães et al., 2006.

Fig 6.3.b. African histoplasmosis (*Histoplasma capsulatum var. duboisii*) is endemic in Central and West Africa between the latitudes 15°N and 10°S and in the island of Madagascar (Gugnani and Muotoe-Okafor, 1997). Cases have been reported from Congo (Brazzaville), Democratic Republic of Congo, Niger, Nigeria, Senegal, and Uganda.

Fig 6.4. Panel a. CT scan chest, acute pulmonary histoplasmosis. Panel b. Chronic cavitary histoplasmosis. Used with permission from Dr. Chadi A. Hage, Pulmonary-Critical Care and Infectious Diseases, Roudebush VA Medical Center and Indiana University, Indianapolis, IN.

Fig. 6.5. (Color Plate 5) Intracellular *H. capsulatum* yeast forms within macrophages, bone marrow, Wright's stain. Source: E Reiss

Fig . 6.6. CT scan of multiple nodules in both lung fields in a Japanese tourist after visiting a cave inhabited by bats in Manaus, Brazil. Arrows point to lesions in both lung fields. Reproduced from Suzaki et al., 1995 with permission from Kansenshogaku Zaschi Publishers.

Fig. 6.7. CT scan of solitary pulmonary nodule (arrow). Source: Scully et al., 1988. Copyright © 1988 Massachusetts Medical Society, all rights reserved.

Fig. 6.8 Solitary pulmonary nodule, histopathology, silver stain shows yeast forms (arrows) Source: Scully et al., 1988. Copyright © 1988 Massachusetts Medical Society, all rights reserved.

Fig. 6.9. Histopathology of a tissue section showing yeast forms of *Histoplasma capsulatum* stained with GMS stain. Yeast forms are 2-4 µm in diam with a narrow connection between mother and daughter cells (Chandler and Watts, 1987). Used with permissions from Dr. John C. Watts and from the American Society for Clinical Pathology, ©ASCP.
Fig 6.10. *Histoplasma capsulatum* colonies. "M", mycelial form, SDA; "Y", Yeast form, BHI. Used with permission from Dr. Rosely M. Zancopé-Oliveira, Fundação Oswaldo Cruz, Rio de Janeiro, Brazil.

Fig. 6.11. *Histoplasma capsulatum* microscopic morphology illustrates: a. tuberculate macroconidium, and b. microconidium. Source: E Reiss, CDC.

Fig. 6.12. Tuberculate macroconidia are produced by look-alike *Chrysosporium* species. (no microconidia are produced); 400x, lactofuchsin stain. Source: E. Reiss, CDC.

Fig. 6.13. Diagnosis of histoplasmosis with or without a culture. E Reiss, CDC.