Classic or American histoplasmosis

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Histoplasmosis is also known as "**Cave disease**", "**Darling's disease**", "**Ohio valley disease**", "**reticuloendotheliosis**," **'spelunker's lung**" or "**caver's disease**". This mycosis occurs primarily in the southeast of the USA, but is not exclusively North American. Native cases also occur in South America, Africa and Asia. Apart from a handful of Romanian and Italian cases those found in Europe have been imported.

Causative agent

The causative agent *Histoplasma capsulatum* var. *capsulatum*, is an exosaprophytic mould that is isolated in the USA from various biotopes such as chicken manure, soil under starling roosts, seagull breeding sites and bat guano in caves (cave disease or speleologist's disease).

The filamentous phase is found in the environment or in culture at 25°C characterised by round spores with a thick wall, surrounded by protrusions (chlamydospores) and small round spores with a smooth wall. In vivo, in the parasitic phase; small, ovoid yeasts of 3-4 µm are found in the cells of the RES (histiocytes, monocytes).

Clinical aspects

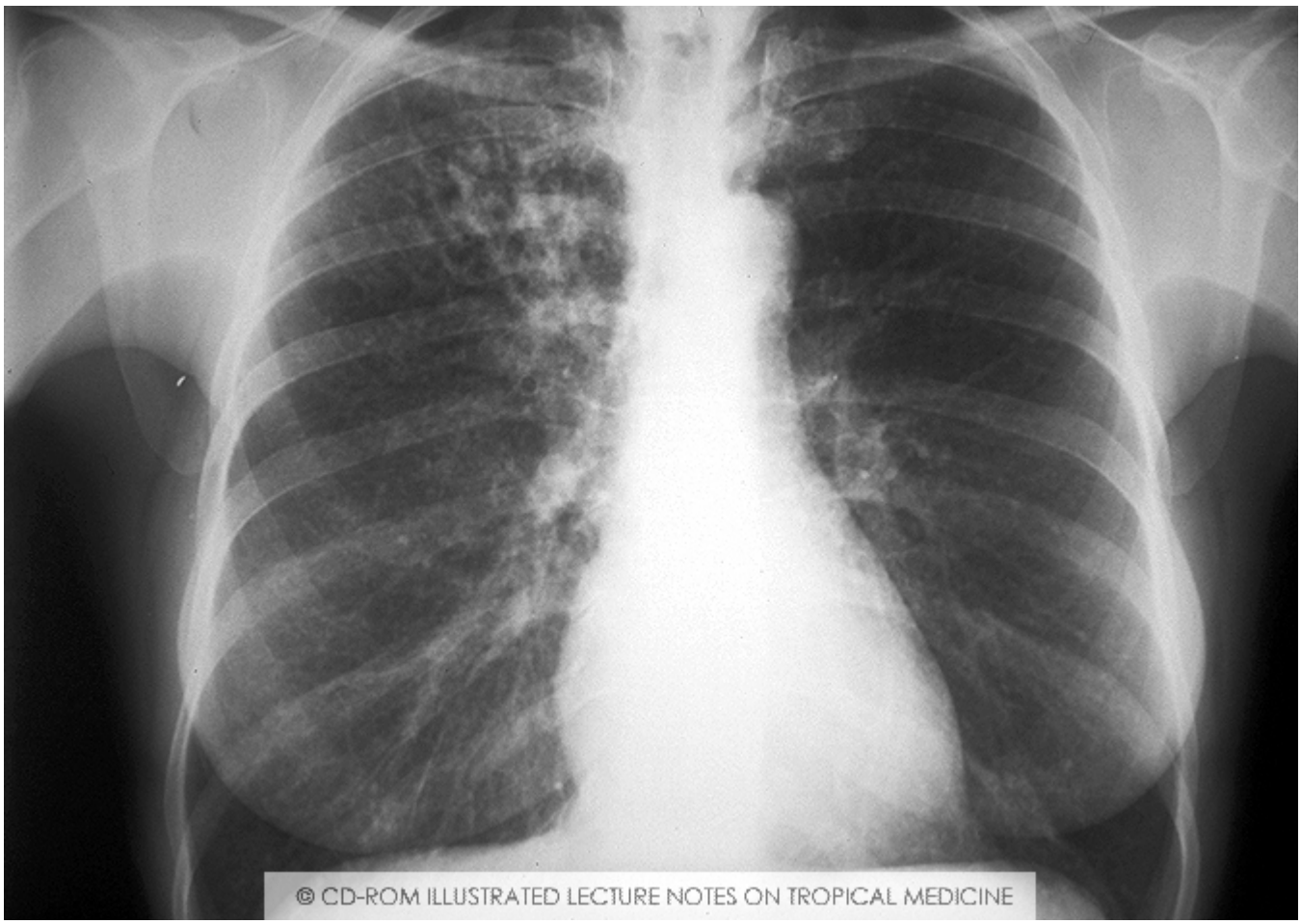
'The syphilis of the fungus world', meaning that histoplasmosis is one of the "Great Imitators". Histoplasmosis has been described as an illustration of the large variety of clinical forms.

In most cases, after contact with a low dose, an asymptomatic infection (99%) is seen or a self-limiting flu syndrome occurs (1%). At high inoculum or with temporary suppression of immunity an acute pulmonary disease can occur. After recovery calcifications in the lung and lymph nodes are seen in 1/3 of cases after 1-2 years.

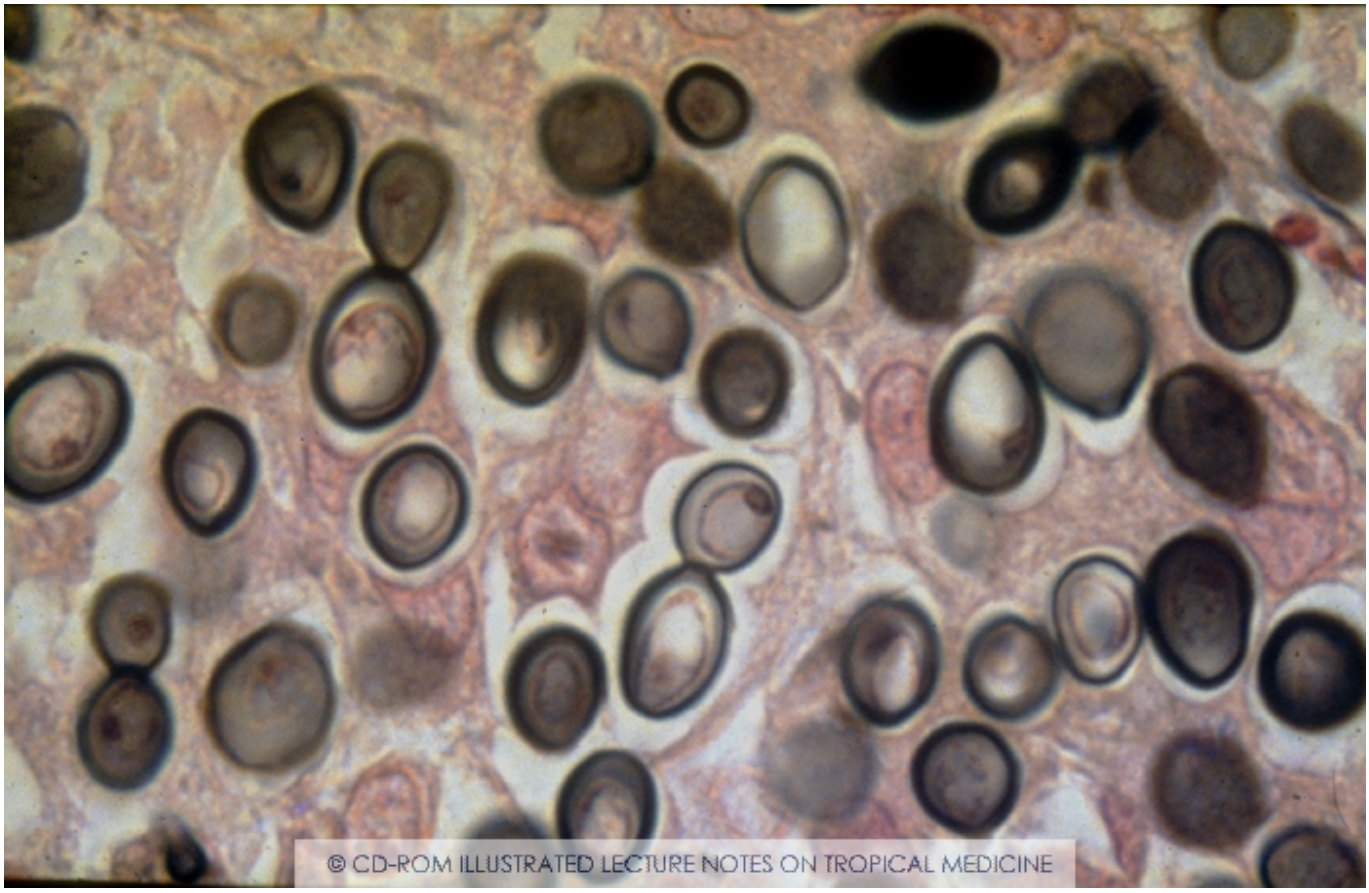
A chronic mild form is described in adults in the event of a temporary suppression of cellular immunity. This involves an endogenous re-activation, as in ex-colonial soldiers, 10-20 years after they have returned from Africa, South America or Asia, or a re-infection in people still living in endemic areas.

Oropharyngeal and nasal lesions and lesions of the vocal chords closely resembling malignant cells (nodules, ulcerations) and which may be associated with dysphagia and dysphonia are seen. In 50%

of cases the adrenal glands are also involved. Systemic histoplasmosis is described in AIDS patients, sometimes with very severe cutaneous and mucosal lesions, as well as a possible cerebral involvement (meningitis). It results in a systemic granulomatous disease with preferential lesions on lips and in the adrenals.



Chest X-ray, pulmonary histoplasmosis. Copyright ITM



Histoplasma duboisii, histoplasmosis. Microscopic smear. With special thanks to Mr De Vroey. Copyright ITM

Diagnosis

The diagnosis of histoplasmosis is made by direct examination of the parasitic phase (yeast) in sputum, bone marrow or blood. *Histoplasma* can also be found in histological preparations in RES cells. The intradermal reaction with histoplasmin is of no diagnostic value. The serological tests (immunodiffusion and complement fixation) are based on the detection of specific antibodies or on the detection of specific antigens (RIA). Both variants of *H. capsulatum* are level 3 pathogens and should only be cultured in a laboratory with the appropriate security procedures.

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