

Pathology Page

Cryptococcal Granuloma

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A 46-year-old man suffered from productive cough for 1 month. Chest computed tomography revealed a solitary nodule measuring 1.0 cm in diameter under the subpleural area of the right middle lobe. On open biopsy, a foreign body granuloma with numerous translucent yeast particles embedded in it, diagnostic of cryptococcal granuloma, was found (Fig. 1). The yeast was determined to be *Cryptococcus neoformans*.

Cryptococcal granulomas are occasionally found in immunocompetent (healthy) individuals, and clinically present as a solitary coin lesion in the peripheral lung. These must be distinguished from lung cancer. Yeast-type pathogens are phagocytosed by macrophages to form foreign body granulomas. Capsule formation as evidenced by rounded yeast particles is poor in the cytoplasm of macrophages. The yeast particles are translucent and unstained by hematoxylin and eosin. Mucin staining can identify the capsules, which differ from other types of fungus. Spontaneous regression may occur. In a typical cryptococcal granuloma, extracellular growth of the fungi is not observed. The lung lesion, however, may become a source of meningeal dissemination of the fungi. In an immunosuppressed state, it may disseminate into the menix, resulting in cryptococcal meningitis, and prominent extracellular growth of the fungi can then be observed. (*Tzu Chi Med J* 2008;20(3):237)

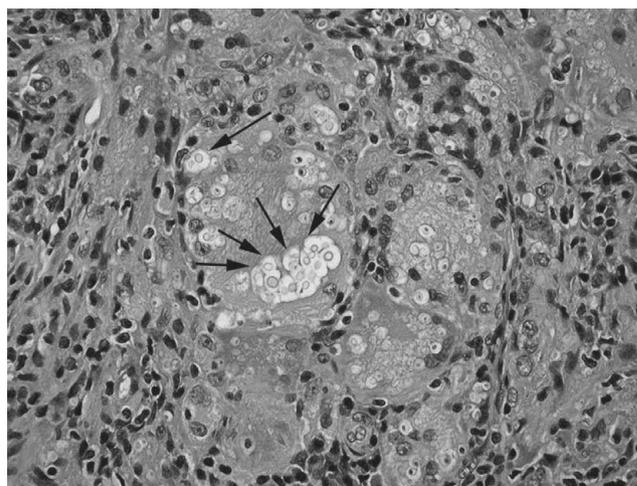


Fig. 1 — Multinuclear giant cells containing numerous haloed, unstained yeast particles (arrows) containing *Cryptococcus neoformans* (hematoxylin & eosin, 200×).

References

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