



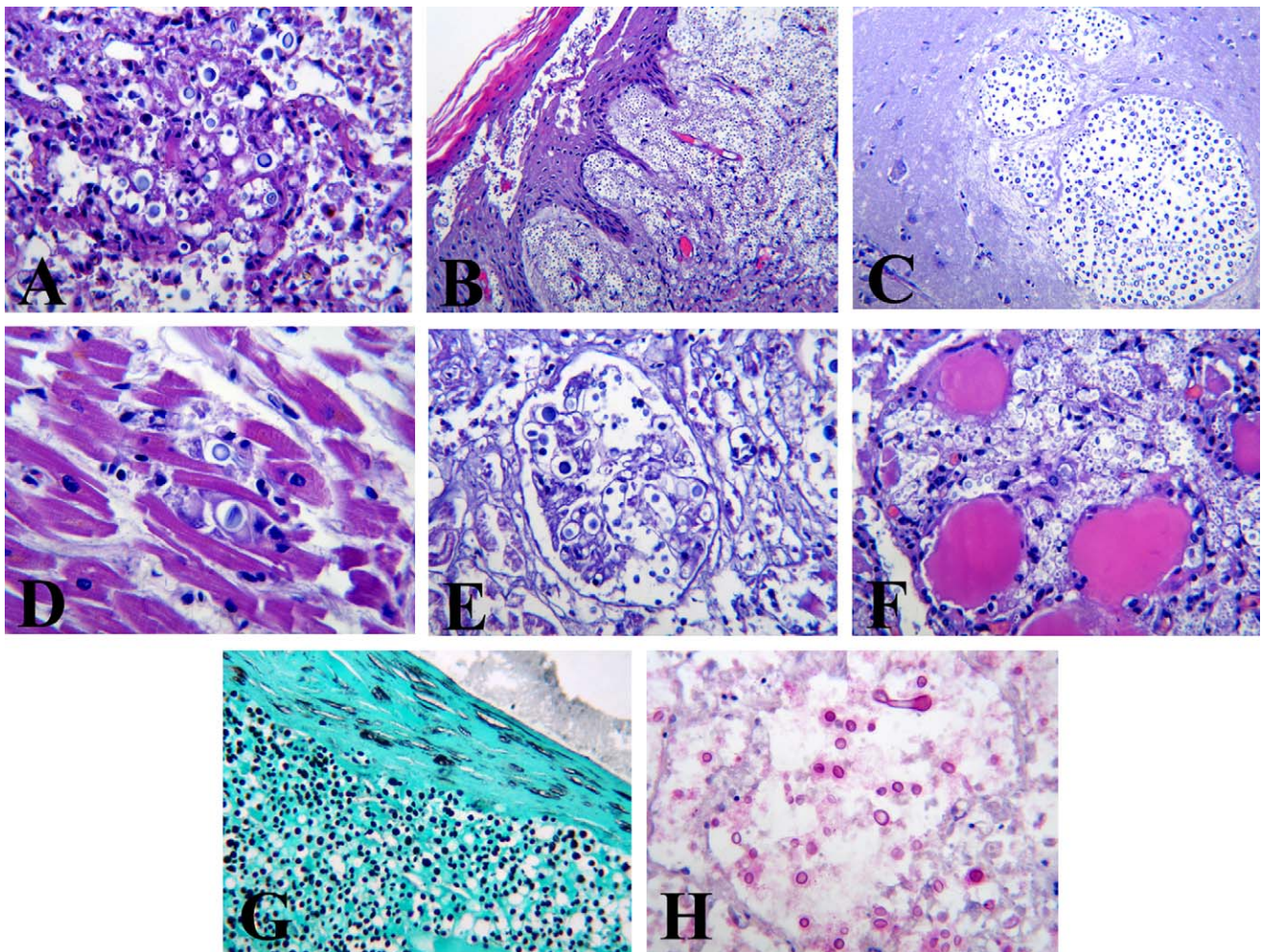
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MEDICAL IMAGERY

## Disseminated cryptococcosis in an HIV-negative patient



**Figure 1** (A) Lung: intra-alveolar mycotic microorganisms (MMs) (hematoxylin-eosin stain, 400X). (B) Skin: dermal accumulation of MMs (hematoxylin-eosin stain, 400X). (C) Brain: large cysts containing MMs (hematoxylin-eosin stain, 200X). (D) Heart: MMs in the interstitium (hematoxylin-eosin stain, 630X). (E) Kidney: intraglomerular and interstitial MMs (hematoxylin-eosin stain, 400X). (F) Thyroid: diffuse accumulation of MMs among residual follicles (hematoxylin-eosin stain, 200X). (G) Gomori methenamine silver staining of skin (630X). (H) Mucicarmine staining of lung (400X).

A 34-year-old female was admitted to our institute with a recent history of cough, fever, progressive dyspnea and weight loss. Preliminary investigations showed diffuse maculo-papular lesions of the skin on her limbs, anemia and bilateral diffuse pneumonia. HIV serology was negative. Laboratory examination and a bone marrow biopsy were planned for suspected infectious disease, but the patient died of respiratory failure. The autopsy revealed a disseminated fungal infection, involving the lungs (Figure 1A), skin (Figure 1B), brain (Figure 1C), heart (Figure 1D), kidneys (Figure 1E), liver, spleen, thoraco-abdominal lymph nodes, bone marrow and thyroid (Figure 1F).

The fungal microorganisms were budding yeast cells with demarcated capsules (Figure 1A–F), highlighted by Gomori methenamine silver (Figure 1G) and mucicarmine (Figure 1H) stains, and were morphologically consistent with *Cryptococcus*. A post-mortem diagnosis of disseminated cryptococcosis in an HIV-negative patient was made and subsequently confirmed by a positive cryptococcal antigen test that was in progress before the patient died.

Cryptococcosis is a disease caused by *Cryptococcus neoformans*, an encapsulated yeast-like organism. In most cases, cryptococcosis is known to be associated with AIDS,<sup>1</sup> although it has been found in other immunocompromised patients and sometimes in immunocompetent HIV-negative patients.<sup>2,3</sup> In such patients, it should be recognized as a possible cause of meningitis, pulmonary infection or infectious skin lesions. Early diagnosis of cryptococcosis and introduction of appropriate antifungal therapy might improve the clinical outcome for these patients.

*Conflict of interest:* No conflict of interest to declare.

## References

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