Histoplasma capsulatum variant duboisii DIAGNOSED AT THE ANATOMICAL PATHOLOGY DEPARTMENT OF THE TEACHING HOSPITAL OF COCODY-ABIDJAN AND REVIEW OF THE LITERATURE

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INTRODUCTION

Histoplasmosis, caused by *Histoplasma capsulatum var. duboisii* or African large-form of histoplasmosis, is a rare infection with unknown prevalence. It is commonly found in tropical Africa and in Madagascar. It is less common than the var. capsulatum, which mainly affects young people. This variety is rarely correlated with HIV infection and is evoked by the triad of skin, lymph node and bone involvement in a so-called "cold" environment. We report the case within a 12-year-old child.

OBSERVATION

This was a 12-year-old male patient with no specific medical history who presented swelling of the proximal end of the tibia leading to suspect bone tumour. The biopsy sampling of the tumoral lesion was firm and hard and measured 1.5-3.5 cm with necrotic and haemorrhagic changes. The bone fragments were decalcified. After the standard histopathological techniques, the sectioning and the staining (haematein-eosin, periodic acid Schiff, and Gomori-Grocott), the slides were exanimated under the light microscope at various magnifications. Histological examination revealed a mycotic granuloma consisting of multi-nucleated giant cells, neutrophils, and lymphoplasmocytes associated with necrosis containing large, ovoid, inverted figure-eight or hourglass-shaped yeasts with a narrow base of budding.The diagnosis of granulomatous osteitis due to Histoplasma duboisii was made.

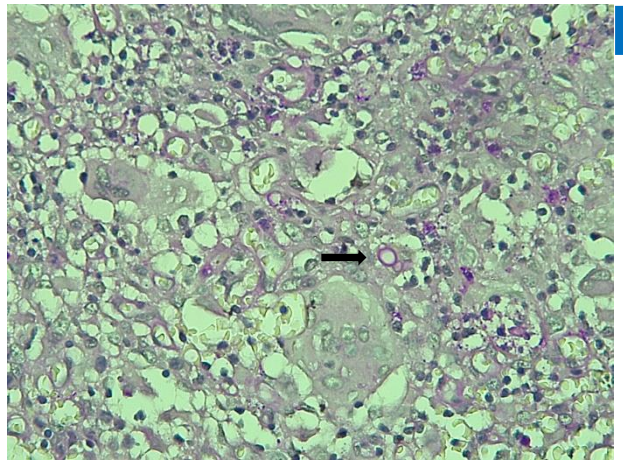

Figure 1: (PAS x 40) *Histoplasma capsulatum var. duboisii (black arrow)*

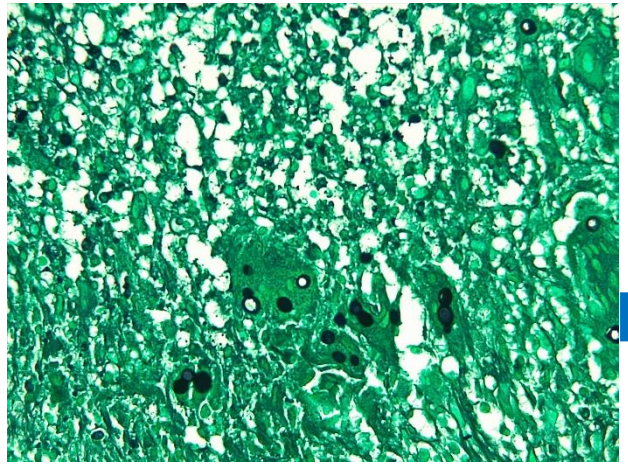

Figure 2: (Gomori Grocott x 40) *Histoplasma capsulatum var. duboisii isolated, hourglass or inverted eight*

COMMENTS

Histoplasmosis, caused by *Histoplasma capsulatum var. duboisii* or African large-form of histoplasmosis, is a rare saprophytic mycosis with a poorly understood prevalence. It is mainly found in tropical Africa and in Madagascar and less common than the var. capsulatum. It frequently affects young people. *The var. duboisii* is poorly correlated with HIV infection and affects both the young and the old. Its prevalence is underestimated. The contamination of var. *duboisii* is mainly by air and sometimes by transcutaneous route (injury) or digestive route, from soil infected by bird droppings or bat guano and from caving.

Clinically, Histoplasma capsulatum var. duboisii infection is evoked by the triad of chronic cutaneous, lymph node, and bone involvement in a "cold" environment. However, the clinical signs may vary from one patient to another.

Culture, antigenic detection, imaging, immunohistochemistry with anti Histoplasma capsulatum antibody, –hybridization test, antigenic tests by EIA, PCR, and internal sequencing of transcribed spacers (ITS) / 28S rRNA can be useful for diagnosis.

Like the clinical variety, this disease can present different macroscopic forms: a tumour (histoplasmoma), polipoid, ulcerative or stenosing lesions, etc.

The histologic examination shows acute lesions (oedema, haemorrhage, phagocytic influx) and chronic lesions (Gougerot's mycotic granuloma rich in epithelioid and multinucleated giant cells, sometimes hyaline fibrosis, and lymphohistiocytic infiltrate), and isolated ovoid or intracytoplasmic 8-15 µm yeasts having with a thick wall and buds that remain attached by to a narrow isthmus stuck to the mother cell in an hourglass or figure-of-eight shape (typical). A peri-cellular halo is often found. Calcifications are possible.

CONCLUSION

Histoplasma capsulatum var. duboisii infection is rare and usually occurs in the healthy young–with no medical history of infection. The diagnosis is based on the direct examination of the fungus. Prevention is essentially individual by avoiding the sources of contamination. The antifungal drugs are relevant for the treatment of the histoplasmosis; however, surgery is sometimes needed.

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