Contamination of microscope slides with Aspergillus glaucus group A: a laboratory problem in the diagnosis of suspected mycotic infections

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Abstract

The microscopic examination of lesions of patients with suspected mycotic infections using slides purchased from foreign countries often showed hyphae. The slides and their wrappings were cultured successfully on Sabouraud dextrose-agar medium. A heavy growth of suspected aspergillus colonies was obtained. These colonies were investigated further by culturing them on both Czapek's solution agar and Malt extract agar. After macroscopic and microscopic examination the fungus was identified as Aspergillus chevalieri from the Aspergillus glaucus group.

Keywords: Aspergillus glaucus; contamination; microscope slides; mycotic infection

Aspergillus species are common airborne contaminants of all surfaces, including skin, mouth, lung, wounds, and so forth. There are about 900 species in the genus Aspergillus. They are among the most common of all environmental fungi. Members of the aspergillus genus are often identified as biodeteriogens. The large number of species comprising the genus represent a broad spectrum of various ecological types capable of using a wide variety of substrates. The isolation of aspergilli from soil, vegetation, and air has been related to their growth on various materials including cotton fabrics, paints, plastics, leather, and glass.

Microscopic examination of lesions of patients with suspected mycotic infections using slides purchased from foreign countries often revealed the presence of hyaline, septate, and branched hyphae (fig 1). We attempted to identify the cause of this suspected contamination.
Clear cell mammary malignant myoepithelioma with abundant glycogens

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Abstract
Malignant myoepithelioma (myoepithelial carcinoma) of the breast is extremely rare. A case is reported of a 46 year old female with clear cell mammary malignant myoepithelioma that, on histological examination, was glycogen abundant clear cell carcinoma. Immunohistochemically, the clear cells showed myoepithelial differentiation—that is, they were a smooth muscle actin and S100 protein positive. This case shows that glycogen abundant clear cell carcinoma is a variant of malignant myoepithelioma of the breast.

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Keywords: clear cell; glycogen; malignant myoepithelioma

Methods and results
Packaging paper for slides was stained with lactophenol cotton blue. This showed the presence of hyaline and septate hyphae. The slides and their wrappings were cultured on both Sabouraud dextrose-agar (S) medium containing chloramphenicol, and on S medium only. A heavy growth of suspected aspergillus colonies was obtained (figs 2 and 3). These colonies were investigated further by culturing them on both Czapek’s solution agar and malt extract agar. Macroscopic and microscopic examination of their vegetative and reproductive sexual and asexual structures, and measurement of blastoconidia and ascospores, identified the fungus as Aspergillus chevalier from the Aspergillus glaucus group.

Conclusions
The contamination we found could be due to extended journey times and to docking of cargoships in warm and equatorial tropical areas. It is thus important when doing microscopy for fungal infections to obtain slides which are of adequate quality and sterility, as otherwise false positive results will be reported.


Myoepithelial cells have characteristics of both epithelial and smooth muscle cells. They are mainly present in the salivary glands and mammary glands. Myoepithelial neoplasms of the breast are extremely uncommon and they are classified into benign myoepitheliomas, malignant myoepithelioma (myoepithelial carcinoma), and adenomyoepithelioma showing biphasic epithelial and myoepithelial growth. Malignant myoepithelioma cells of the breast consist of spindle or polygonal cells, which sometimes mimic leiomyosarcoma. The cytoplasm of these tumour cells is eosinophilic or clear. Clear cell mammary malignant myoepithelioma, which did not show significant amounts of glycogen, was first reported by Cartagena et al in 1988. We report a similar tumour that had abundant glycogens and

Figure 1 (A) Tumour showing infiltrative growth. (B) High power view of (A). Tumour comprised pleomorphic polygonal cells with a clear cytoplasm.