

Invasive maxillary sinus mass in a renal transplant patient*

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A 61-year-old female received a living unrelated renal transplant 3 years ago, due to end-stage diabetic nephropathy requiring mycophenolate mofetil and cyclosporine, complicated by chronic graft rejection. The patient presented with 3 weeks of progressive headache, nasal congestion, right periorbital edema and diminished ipsilateral visual acuity. She was afebrile, without oral ulcerations, without significant leukocytosis and LDH level was 882 U/L (normal 313–618). Immediate computed tomography of the orbit and sinuses demonstrated complete opacification of the right maxillary sinus, right ethmoid sinus and sphenoid sinus with invasion and destruction through the lamina papyracea into the orbital fossa resulting in a compressive optic neuropathy (Figure 1). She underwent endoscopic debridement and had initial progressive visual acuity improvement on high-dose corticosteroids. Histopathology was negative for malignancy, but GMS (Gomori's methenamine silver) stain (Figure 2) showed septate fungal hyphae with branching at 45°. Gray-green mold forms subsequently grew on fungal culture; light microscopy of lactophenol blue preparation (Figure 3) confirmed *Aspergillus fumigatus*. Intravenous voriconazole was initiated for invasive sinonasal aspergillosis, mycophenolate mofetil was dose reduced, cyclosporine

was discontinued and the steroids were rapidly tapered. Repeat aggressive endoscopic debridement resulted in minimal residual anterior ethmoid disease; she was converted to oral voriconazole, and followed closely for radiographic resolution.

With an incidence of 0.4–2.4%, invasive aspergillosis is the most common cause of systemic fungal disease in renal transplant patients. Mortality in this population is 56–100% [1]. Furthermore, *Aspergillus* causes 29% of all invasive fungal infections amongst solid organ and hematopoietic stem cell transplant recipients [2]. Early diagnosis, aggressive debridement, month(s) of antifungal therapy and vigilance for signs of persistent disease are critical.

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Conflict of interest statement. None declared.

References

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Fig. 1. Non-contrast computed tomography of sinuses.

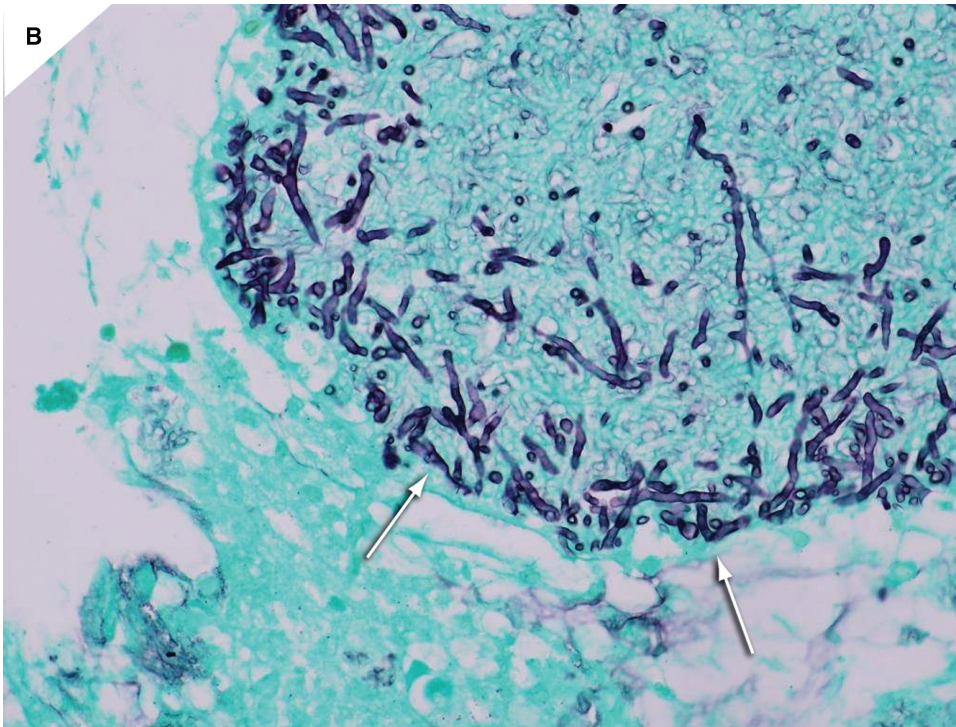


Fig. 2. Gomori's methenamine silver (GMS) stain at 40 \times magnification of maxillary sinus tissue. Aspergillus stains black, demonstrating acute angle branching and septations.

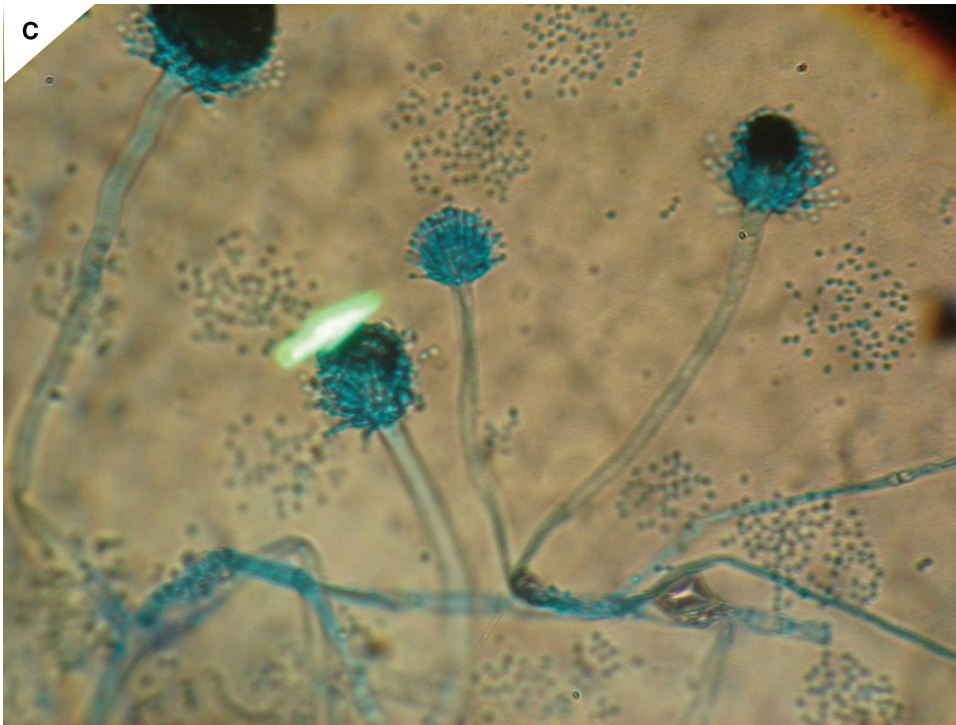


Fig. 3. Light microscopy at 100 \times oil immersion of a lactophenol blue preparation.