MARC WILLIAMS, MD, EDITOR

ANSWERS ON VISIBLE SIGNS OF DISEASES

QUESTIONS &

OMAR A. MINAI, MD Department of Pulmonary and Critical Care Medicine, Cleveland Clinic **ATUL C. MEHTA, MD** Department of Pulmonary and Critical Care Medicine, Cleveland Clinic

The Clinical Picture A lung-transplant recipient with infiltrates

Q: A 56-YEAR-OLD MAN was admitted with fever, hypotension, bilateral infiltrates, and hypoxemia requiring mechanical ventilation. Six years previously he received a left single lung transplant for endstage chronic obstructive pulmonary disease, and he was receiving immunosuppression with FK 506, methotrexate, and prednisone. He also had a history of chronic renal insufficiency, bronchiolitis obliterans, and candidal esophagitis (for which he was taking fluconazole).

The patient initially improved with treatment with broad-spectrum antibiotics and amphotericin B, given empirically. However, his condition subsequently worsened and he died. An autopsy revealed multiple, angiocentric, well-circumscribed, irregular, firm, 4-to-5-cm lesions with central necrosis in the upper lobe of the left lung, and the tracheal lesions shown in **FIGURE 1**.

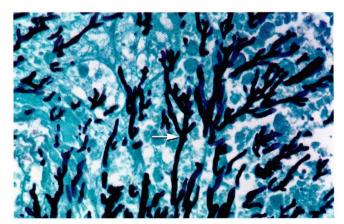
What is the most likely causative organism?

- Candida albicans
- Pneumocystis carinii
- □ Aspergillus fumigatus
- □ Mycobacterium tuberculosis
- □ Haemophilus influenzae

FIGURE 1. Top, gross specimen of the trachea, split in midline anteriorly. **Middle**, cross-section of the tracheal mucosa, hematoxylin and eosin stain. **Bottom,** Grocott-Gomori methenamine-silver nitrate stain.







A: Immunosuppressed patients are vulnerable to a variety of opportunistic infections. Infection with *Aspergillus fumigatus* is particularly lethal, although the mortality rate may be less if the infection is diagnosed earlier.

In the gross specimen (FIGURE 1), note the multiple whitish-tan, confluent, flat plaques (arrow) coating the tracheal mucosa. In the hematoxylin and eosin stain, a thick coat of blue-gray fungal hyphae can be seen (arrow) lying atop the tracheal cartilage. The Grocott-Gomori methenamine-silver nitrate (GMS) stain demonstrates septated hyphae (arrow) branching at an acute angle, with tissue invasion.

Cultures of lung tissue grew out Aspergillus fumigatus, consistent with invasive bronchopulmonary aspergillosis.

ADDRESS: Omar Minai, MD, Department of Pulmonary and Critical Care Medicine, A90, The Cleveland Clinic Foundation, 9500 Euclid Avenue, Cleveland, OH 44195.

> Visit the Cleveland Clinic Center for Continuing Education web site

www.clevelandclinicmeded.com

- A complete calendar of Cleveland Clinic CME courses
- CME course brochures
- AMA/PRA Category 1 CME credit online

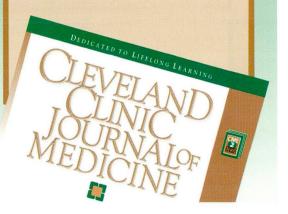
We Welcome Your Letters

WE ENCOURAGE YOU TO WRITE, either to respond to an article published in the *Journal* or to address a clinical issue of importance to you. You may submit letters by mail, fax, or e-mail.

MAILING ADDRESS

Letters to the Editor Cleveland Clinic Journal of Medicine 9500 Euclid Ave., NA32 Cleveland, OH 44195 FAX 216.444.9385 E-MAIL ccjm@ccf.org

Please be sure to include your full address, phone number, fax number, and e-mail address. Please write concisely, as space is limited. Letters may be edited for style and length. We cannot return materials sent. Submission of a letter constitutes permission for the *Cleveland Clinic Journal of Medicine* to publish it in various editions and forms.



CLEVELAND CLINIC JOURNAL OF MEDICINE VOLUME 68 • NUMBER 2 FEBRUARY 2001 173