ARCHIVES OF HELLENIC MEDICINE: ISSN 11-05-3992

CONTINUING MEDICAL EDUCATION
ΣΥΝΕΧΙΖΟΜΕΝΗ ΙΑΤΡΙΚΗ ΕΚΠΑΙΔΕΥΣΗ

# Internal Medicine Quiz – Case 18

ARCHIVES OF HELLENIC MEDICINE 2012, 29(1):136–137
ΑΡΧΕΙΑ ΕΛΛΗΝΙΚΗΣ ΙΑΤΡΙΚΗΣ 2012, 29(1):136–137

**Th. Ntalagiorgos,**
**G. Gainarou,**
**E. Koutsi,**
**K. Petevi,**
**G. Boutsikas,**
**L. Papageorgiou,**
**A. Kanellopoulos,**
**P. Flevari,**
**V. Telonis,**
**Z. Galani,**
**A. Bilalis,**
**E. Sinni,**
**G. Georgiou,**
**M.K. Angelopoulou,**
**T.P. Vassilakopoulos,**
**J. Meletis**

*Department of Hematology and Bone Marrow Transplantation Unit, National and Kapodistrian University of Athens, School of Medicine, "Laiko" General Hospital, Athens, Greece*

A 42-year-old Egyptian immigrant male was admitted to the hematology department after presenting with multiple bruises, especially on his legs, and hematuria for approximately two days. He had been a farmer for 13 years and his occupation involved spraying insecticides. He also complained of easy fatigability and reported having episodes of left lumbar pain for several years. He did not report any other symptoms and had no significant past medical history. His physical exam was normal apart from bruises and small puncture hemorrhages in his mouth. His CBC was as follows: Ht: 32.0%, Hb: 10.0 g/dL, RBC: $4.45\times10^{12}$/L, normochromic, normocytic, WBC: $1.98\times10^{9}$/L (60% neutrophils-mostly dysplastic, 20% lymphocytes, 2% myelocytes) and PLTs: $3\times10^{9}$/L, reticulocyte count: 0%. Serum chemistries revealed abnormal AST 234 IU/L, ALT 145 IU/L, LDH 697 IU/L and CPK 272 IU/L. An extensive workup for autoimmune and infectious diseases was negative and there was no sign of hemolysis or coagulopathy. The patient had a bone marrow aspiration and biopsy that showed lipocytes 80%, very depressed erythroid and megacaryocyte line. The bone marrow flow cytometry did not show any clonal proliferation and the cytogenetic analysis reported no metaphases.

The patient was diagnosed with aplastic anemia and was started on a 5-day course of antithymocyte globulin, followed by cyclosporine. He became neutropenic and was supported with blood products as needed. Cyclosporine was administered continuously for approximately 2.5 months. Trough blood levels ranged from 150 to 220 mg/dL. The patient was also supported with antibiotics targeted against bacteria isolated from his blood during febrile episodes.

After a 3 month hospitalization, and while the patient was afebrile, his neutrophil count was recovering and he was starting to ambulate, a chest X-ray (fig. 1) and thorax CT scan were done (figures 2–4) that showed cavitary lesions in the lung parenchyma.

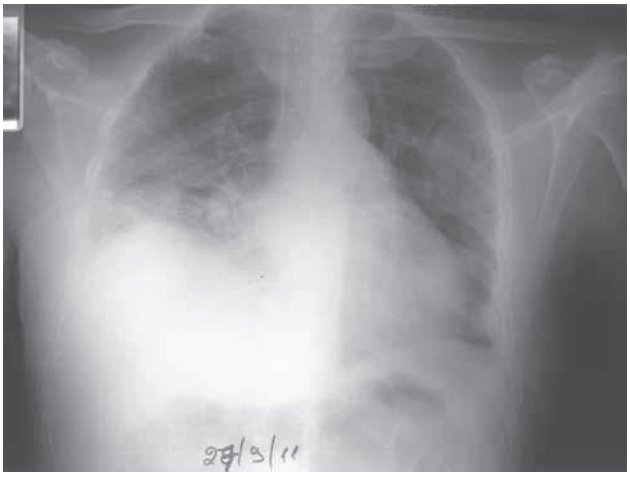

**Figure 1**

## Comment

*Aspergillus organisms are ubiquitous in nature and exposure to them must be a frequent event. However, disease due to tissue invasion is uncommon and occurs primarily in the setting of immunosuppression. Pulmonary infection is the most common presentation in this setting. The presenting symptom is fever unresponsive to antibiotics. Chest pain, hemoptysis and cough can also be seen. CT imaging can be very useful early in the course of the disease when nodules surrounded by a ground-glass appearance (halo-sign) may be seen. This reflects hemorrhage into the tissue surrounding the area of infection. With antifungal therapy and recovery of the neutrophil count, the infection can be controlled. At this stage the area may cavitate and bacterial superinfection of*

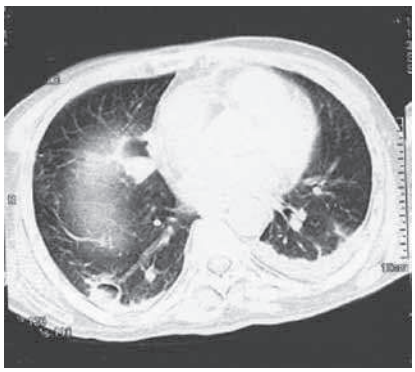

**Figure 2**

**Figure 3**

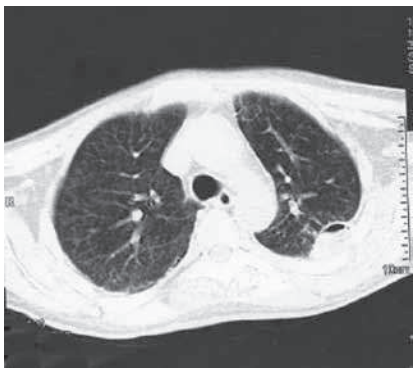

**Figure 4**

*the cavity can occur. The cavitation can generate the crescent sign on X-ray or CT imaging caused by necrosis of lung tissue.*

## References


1. CHAI LY, HSU LY. Recent advances in invasive pulmonary aspergillosis. *Curr Opin Pulm Med* 2011, 17:160–166
2. BOND R, WALTER A, TRIGG ME. Severe aplastic anemia associated with hepatitis and complicated by pulmonary aspergillosis: Response to immune suppression and antifungal therapy. *Del Med J* 2002, 74:339–343
3. SAGHROUNI F, BEN YOUSSEF Y, GHEITH S, BOUABID Z, BEN ABDELJELIL J, KHAMMARI I ET AL. Twenty-nine cases of invasive aspergillosis in neutropenic patients. *Med Mal Infect* 2011, 41:657–662
4. YOON SH, PARK CM, GOO JM, LEE HJ. Pulmonary aspergillosis in immunocompetent patients without air-meniscus sign and underlying lung disease: CT findings and histopathologic features. *Acta Radiol* 2011, 52:756–761



*Corresponding author:*

J. Meletis, Department of Hematology and Bone Marrow Transplantation Unit, National and Kapodistrian University of Athens, School of Medicine, "Laiko" General Hospital, Athens, Greece, tel.: +30 210 74 66 902, fax: +30 210 7456698, e-mail: imeletis@med.uoa.gr


***Diagnosis:*** *Aplastic anemia complicated with pulmonary aspergillosis*