CASE OF THE MONTH

LES HALL, MD

A 20 year old male was transferred to UMH for ongoing treatment of atypical pneumonia. One week before transfer, he had developed fever, chills, sweats, malaise, a minimally productive cough and shortness of breath. The CXR revealed a diffuse interstitial reticulonodular pattern. When he failed to respond to levofloxacin, he was placed on vancomycin and piperacillin-tazobactam and referred for further evaluation and management.

He denied past medical problems. Having emigrated from the Marshall Islands in 2008, he had been living in Missouri over the past year. He denied sick contacts, recent tick bites or significant exposure to animals. He reported smoking 5 cigarettes per day. Initial labs revealed a WBC of 4100, with normal Hgb, Hct and platelet count. Renal function was normal but the liver transaminases were mildly elevated: AST 136, ALT 123.

Azithromycin was added as a third antibiotic. Fever and subjective symptoms initially improved but his temperature spiked to 39 C one week after admission. Sputum was negative for common respiratory pathogens, AFB and fungi. PPD was nonreactive. Lab screens for Ehrlichia, Legionella and HIV were negative; fungal serologies were also negative. His LFTs normalized within days of admission and blood cultures remained negative.

Bronchoscopy revealed micronodular changes in his airways but bronchial washings were negative for AFB and fungi. However a transbronchial biopsy revealed caseating granulomas with AFB positive organisms, consistent with miliary TB. Eye exam revealed evidence of TB choroiditis and the patient was started on 4 drug therapy for TB. Over the next few days, his fever resolved and he was discharged to complete an outpatient course of anti-TB therapy, as recommended by our ID consultants.

Discussion: Relatively rare in the U.S., miliary TB is often not seriously considered in patients with a febrile illness until other infections are excluded. Although this patient's illness did not appear to be life threatening, those with more severe symptoms should be covered with empiric therapy until tissue diagnosis is obtained.

This case reminds us that, although TB continues to slowly decline in the U.S., it is still a prevalent disease worldwide, with a disproportionate share of illness in foreign-born individuals (1). Since the Marshall Islands have a current population of just over 60,000 individuals, most U.S. health care workers do not regularly encounter emigrants from that nation. However, the incidence of TB in the Marshall Islands has been increasing in recent years (2), with a prevalence of 281 cases/100,000 population (compared to a median U.S. prevalence of 3/100,000). This case also illustrates that a negative PPD does not exclude TB, even in patients presumed to be immunocompetent. Further investigation revealed that this patient had a positive PPD (30mm) one year ago, at the time of his emigration; even so, he did not receive treatment for latent TB. Finally, this case also raised significant infection control questions after the diagnosis was established; i.e. did hospital infection control personnel and public health officials need to complete a rigorous epidemiologic investigation of the patient's contacts? Miliary TB is considered a form of extrapulmonary TB (3); the CDC states that persons with extrapulmonary TB are usually not contagious unless they have concomitant pulmonary involvement, have disease located in the oral cavity or larynx or have disease that involves an open abcess or lesion (4).

1. Trends in tuberculosis—U.S. 2008, MMWR, March 20, 2009; 58(10): 249-253

2. WHO Report on TB in the Marshall Islands

http://apps.who.int/globalatlas/predifinedReports/TB/PDF_Files/mhl.pdf

(references continued on page 4)

3. Golden MP and Vikram HR, Extrapulmonary tuberculosis: An overview, Am Fam Phys, 2005; 72(9):1761-8

4. Guidelines for preventing the transmission of Mycobacterium tuberculosis in health care settings. MMWR, December 30, 2005; 54(RR17): 1-141

FROM THE JOURNALS — Robert Lancey MD

Yandiola et al., *Prospective Comparison of Severity Scores for Predicting Clinically Relevant Outcomes for Patients Hospitalized with Community-Acquired Pneumonia*, CHEST, June 2009; 135(6): 1572-1579

http:www.chestjournal.org/content/135/6/1572.abstract

A new severity score for hospitalized patients with CAP, the Severe Community-Acquired Pneumonia (SCAP) score, was found to be superior in multiple measures when compared with PSI and CURB-65.

Cantor et al., *Routine Early Angioplasty after Fibrinolysis for Acute Myocardial Infarction*, NEJM 2009, June 25; 360(26): 2705-18

http://content.nejm.org/cgi/content/abstract/360/26/2705

Over 1000 AMI patients who were treated with fibrinolysis were randomized to early PCI or standard treatment. Those who underwent early PCI had a significant reduction in major endpoints (death, reinfarction, CHF, cardiogenic shock) at 30 days (11% vs. 17.2% in the standard treatment group).

Zier et al., *Surrogate Decision Makers' Responses to Physicians' Predictions of Medical Futility*, CHEST, July 2009; 136(1): 110-117

http://www.chestjournal.org/content/136/1/110.abstract

This small but powerful study out of San Francisco gives an interesting perspective on the attitudes of surrogate decision makers toward physician recommendations about their critically ill family members.

ID CORNER — William Salzer MD

Management of Herpes Zoster:

Whitley, Richard, **A 70 year old woman with shingles. Review of Herpes Zoster**

JAMA series: Clinical Crossroads

JAMA 2009; 302: 73-80

Online version not currently available without subscription