

Abstracts of current literature on epidemiology, diagnosis, and treatment

Series Editor: Jihad Slim, MD

TUBERCULOSIS IN PERSONS WITH HIV INFECTION

A retrospective cohort study was conducted to determine the incidence of tuberculosis relapse among a cohort of 4571 patients with *Mycobacterium tuberculosis* infection who had been treated with 2 to 4 antituberculosis medications (isoniazid, rifampin, pyrazinamide, ethambutol) for at least 6 months. The patients were either positive (n = 1530) or negative (n = 1413) for HIV infection, or their HIV serostatus was unknown (n = 1628). Recurrence of tuberculosis was defined as a patient having a culture positive for *M. tuberculosis* within 30 days after the last treatment date. Relapse of tuberculosis was defined as a patient having a culture positive for *M. tuberculosis* 30 or more days after the last treatment date. Patients infected with HIV were more likely than those who were uninfected to have recurrence or relapse (2.0 vs 0.4 per 100 person-years). Recurrence was significantly more likely in patients infected with HIV who received 36 weeks or less of treatment compared with patients infected with HIV who received greater than 36 weeks of treatment (7.9% vs 1.4%). The researchers concluded that clinicians should be aware of the possibility of the recurrence of positive cultures for *M. tuberculosis* 6 to 9 months after the start of treatment among patients coinfecting with HIV.

Driver CR, Munsiff SS, Li J, et al. Relapse in persons treated for drug-susceptible tuberculosis in a population with high coinfection with human immunodeficiency virus in New York City. Clin Infect Dis 2001;33:1762-9.

COMPUTED TOMOGRAPHY OF THE HEAD BEFORE LUMBAR PUNCTURE FOR SUSPECTED MENINGITIS

A prospective study was conducted to determine whether the absence of certain clinical features at baseline could be used to identify adults (age > 16 years) with suspected meningitis who were unlikely to have abnormal findings on computed tomography (CT) of the head. An abnormal finding on CT of the head was associated with the following baseline clinical and neurologic features: age of at least 60 years, immunocompromised state, history of a central nervous system disease, seizure within 1 week before presentation, abnormal level of consciousness, inability to answer 2 consecutive questions correctly, inability to follow 2 consecutive commands correctly, gaze palsy, abnormal visual fields, facial palsy, arm drift, leg drift, and abnormal language. Ninety-six (41%) of the 235 patients who underwent CT scanning of the head had none of these characteristics at baseline; among these patients, the results of CT were normal in 93 (97%). Of the 3 patients who had none of the baseline charac-

teristics but did have abnormal results on CT, only 1 had a mass effect (which was mild), and all 3 underwent lumbar puncture, with no evidence of brain herniation 1 week later. The researchers concluded that in adults with suspected meningitis, clinical features can be used to identify those who are unlikely to have abnormal findings on CT of the head.

Hasbun R, Abrahams J, Jekel J, Quagliarello VJ. Computed tomography of the head before lumbar puncture in adults with suspected meningitis. N Engl J Med 2001;345:1727-33.

SENSITIVITY AND SPECTRUM BIAS OF A STREPTOCOCCAL RAPID ANTIGEN TEST

A chart review-based study was conducted to determine the sensitivity of a rapid antigen test for detecting group A β -hemolytic streptococcal (GABHS) pharyngitis and to evaluate the antigen test for spectrum bias. Adult patients (n = 498) who underwent a rapid antigen test in the emergency department or urgent care clinic of an urban teaching hospital between August 1999 and December 1999 were studied. The patients were grouped according to the following clinical criteria for GABH pharyngitis: (1) history of fever, (2) absence of cough, (3) presence of pharyngeal or tonsillar exudates, and (4) presence of tender anterior cervical lymphadenopathy. The sensitivity of the rapid antigen test was defined as the number of patients with positive rapid antigen test results divided by the number of patients with either positive rapid antigen test results or negative rapid antigen test results and positive throat culture results. The overall prevalence of GABHS pharyngitis was 28%. Patients with 3 or 4 of the criteria had an increased likelihood of GABHS recovery (43% and 52%, respectively). An increase in the number of criteria (0 or 1, 2, 3, 4) was associated with increased rapid antigen test sensitivity (61%, 76%, 90%, 97%, respectively). The researchers concluded that the sensitivity of the rapid antigen test for GABHS is not a fixed value but one that varies across the clinical spectrum of the disease.

DiMatteo LA, Lowenstein SR, Brimhall B, et al. The relationship between the clinical features of pharyngitis and the sensitivity of a rapid antigen test: evidence of spectrum bias. Ann Emerg Med 2001;38:648-52.

Dr. Slim is an Assistant Professor of Medicine, Seton Hall University, South Orange, NJ, and an Infectious Disease Specialist, St. Michael's Medical Center, Newark, NJ. Abstracts written by Lamont Williams and Jennifer M. Vander Bush, Hospital Physician.