

# Infectious Diseases Update

Abstracts of current literature on epidemiology, diagnosis, and treatment

Series Editor: Jihad Slim, MD

## MYCOBACTERIUM TUBERCULOSIS INFECTION IN TRAVELERS

A multisite, prospective cohort study was conducted in the Netherlands to determine the risk of infection with *Mycobacterium tuberculosis* in BCG-naïve, immunocompetent Dutch long-term travelers (N = 1072) to countries of high tuberculosis endemicity. Associated risk factors were also assessed. The median travel time was 23 weeks. Posttravel skin tests were done simultaneously in the same forearm according to the Mantoux method with 0.1 mL of 1 tuberculin unit PPD (purified protein derivative) of *M. tuberculosis* in Tween-80 and 0.1 mL of 1 tuberculin unit PPD of *Mycobacterium scrofulaceum* (environmental mycobacterium) in Tween-80. *M. tuberculosis* infection was defined as any posttravel skin test with *M. tuberculosis* PPD of 10 mm or more that was 3 mm or more larger than that with *M. scrofulaceum* PPD. A posttravel *M. tuberculosis* PPD result was available for 656 subjects. *M. tuberculosis* infection was seen in 12 of the 656 individuals. The overall incidence rate of *M. tuberculosis* infection was 3.5 per 1000 person-months of travel. The only risk factor associated with *M. tuberculosis* infection was health care work involving direct contact with patients. The study concluded that international travelers to areas of high tuberculosis endemicity have an increased risk of *M. tuberculosis* infection. The study suggested that the risk is of similar magnitude to the average risk for the local population even if the traveler is not engaged in health care work. It further suggested that BCG vaccination or posttravel tuberculin skin testing of high-risk travelers be considered.

*Cobelens FGJ, van Deutekom H, Draayer-Jansen IWE, et al: Risk of infection with Mycobacterium tuberculosis in travellers to areas of high tuberculosis endemicity. Lancet 2000;356:461-465.*

## ZINC AND THE COMMON COLD

A randomized, double-blinded, placebo-controlled trial was performed to determine the duration of cold symptoms in participants (N = 50) administered zinc acetate lozenges and those given a placebo. Plasma zinc and proinflammatory cytokine levels were assayed in both groups. The participants were recruited if they had cold symptoms for 24 hours or less and had at least 2 of 10 specified cold symptoms. Participants took 1 lozenge containing 12.8 mg of zinc or placebo every 2 to 3 hours while awake as long as they had cold symptoms. The placebo and zinc lozenges were identical in weight, appearance, flavor, and texture. Participants were asked to complete a daily log documenting the severity of symptoms and the medications taken throughout the duration of the cold. Forty-eight subjects completed the study. Compared with the placebo group, the group

given zinc had shorter mean overall duration of cold symptoms and decreased severity scores for all symptoms. The study concluded that treatment with zinc acetate lozenges was associated with a decrease in the average duration and severity of the common cold. Improvements in clinical symptoms may be related to the effect of zinc on immunomodulation of proinflammatory cytokines.

*Prasad AS, Fitzgerald JT, Bao B, et al: Duration of symptoms and plasma cytokine levels in patients with the common cold treated with zinc acetate. A randomized, double-blinded, placebo-controlled trial. Ann Intern Med 2000;133:245-252.*

## HEPATITIS C VIRUS INFECTION, VIRAL CLEARANCE, AND END-STAGE LIVER DISEASE

A community-based prospective cohort study was carried out to investigate the 2 principal outcomes of hepatitis C virus (HCV) infection—viral clearance and end-stage liver disease (ESLD). HCV clearance was defined as the presence of anti-HCV antibodies without HCV RNA in serum specimens from at least 2 consecutive study visits. ESLD was defined clinically by documentation of esophageal varices, ascites, or hepatic encephalopathy on medical records, a death certificate, or both. A cohort of persons (N = 1667, 94% black, 78% male, 33% HIV positive, median age: 34 years) who acquired HCV infection in the context of injection drug use was followed. The 1667 participants were followed up for a total of 12,737 person-years, with a median 8.8 years per subject. Semi-annual follow-up evaluation included administration of a questionnaire, blood collection, release of medical information, and testing for infectious diseases. Viral clearance was assessed in a subset of participants (n = 919) between January 1995 and March 1996. Viral clearance was demonstrated in 90 participants. Viral clearance occurred more often in nonblacks and those not infected with HIV. The study reported a low incidence of ESLD (detected in 40 persons). It warns, however, that the data should not be generalized to other settings. The study concluded that the majority of adults have persistent viremia without clinically demonstrable liver disease. It suggests that further research is needed to explain the less frequent clearance of HCV infection among black persons.

*Thomas DL, Astemborski J, Rai RM, et al: The natural history of hepatitis C virus infection: host, viral, and environmental factors. JAMA 2000;284:450-456.*

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