

CLINICAL CAPSULES

Genetic Factors May Affect HIV Risk

Fewer copies of specific immune response genes may increase an individual's risk of contracting HIV and AIDS.

A low copy number of the gene encoding CCL3L1—a potent HIV-1-suppressive chemokine and ligand for the HIV coreceptor CCR5—was associated with markedly increased HIV/AIDS susceptibility in a study of more than 4,300 blood samples from HIV-positive and HIV-negative individuals of varying ancestral origins. The average number of CCL3L1-encoding gene copies varied in each group; those within a particular ancestral group with fewer copies than the average for that group were more susceptible to HIV infection and rapid progression to AIDS, and those with more than the average number of copies were less susceptible, reported Enrique Gonzalez, M.D., of the University of Texas Health Sciences Center, San Antonio, and his colleagues.

For example, each additional copy lowered the risk of HIV by 4.5%-10.5%, depending on the group. Susceptibility was increased in those with disease-accelerating CCR5 genotypes, the investigators said (Science Express 2005;1126:1-10).

The findings could potentially be used to develop screening tests to identify increased susceptibility to HIV/AIDS and to adapt treatment and vaccine trials accordingly, the investigators said.

Resistant UTIs

Urinary tract infections caused by drug-resistant *Escherichia coli* may have an animal origin, Meena Ramchandani, M.D., of the University of California, Berkeley, and colleagues reported.

A number of cases across the United States caused by a trimethoprim-sulfamethoxazole (TMP-SMZ)-resistant *E. coli* strain belonging to a single clonal group sparked concerns about a possible association with contaminated food products. An investigation of 495 animal isolates showed that 128 had an electrophoretic pattern indistinguishable from that of the resistant strain in humans, and 14 of those were TMP-SMZ resistant. One, from a cow, was 94% similar to the pattern of a uropathogenic *E. coli* strain recovered from a human patient (Clin. Infect. Dis. 2005;40:251-7).

The possibility that contaminated food products are the source of drug-resistant UTIs has serious public health implications, the investigators concluded, noting that the introduction of the clonal group *E. coli* strain in this study doubled the prevalence of TMP-SMZ-resistant UTIs in one community.

But in an editorial, Thomas Hooten, M.D., and Mansour Samadpour, M.D., of the University of Washington, Seattle, said that although they agree with the basic premise of the article, the findings do not convince them that there is a link between the animal- and human-associated resistant *E. coli* strains. The study fails to provide clear epidemiologic linkage between the strains, they noted, adding that further study is warranted (Clin. Infect. Dis. 2005;40:258-9).

Acute Laryngitis Treatment

Antibiotics should not be used for the

treatment of acute laryngitis in adults, according to a Cochrane Review.

The reviews of two placebo-controlled trials showed that any small improvements in the symptoms of laryngitis in patients treated with penicillin V or erythromycin are outweighed by the risks involved in using unnecessary antibiotics. Some patients reported slight improvements during the recovery phase in coughing and voice disturbance, but patients in the treatment and control groups recovered in the same amount of time, Ludovic Reveiz, M.D., of Bogota, Colombia, and his colleagues

found (Cochrane Database Syst. Rev. [1]:CD 004783, Jan. 24, 2005).

Rat-Bite Fever

Two recent cases of fatal *Streptobacillus moniliformis* infection—or rat-bite fever—underscore the importance of considering this diagnosis in sick patients with rat exposures, and also the need to prevent infection among those with routine rat exposures, according to the Centers for Disease Control and Prevention.

Both patients were previously healthy adults, and *S. moniliformis* infection was confirmed by the CDC. One 52-year-old woman died within 12 hours after being ad-

mitted with symptoms. She was bitten by a rat 4 days prior at the pet store at which she worked and had developed symptoms 2 days prior (MMWR 2005;53:1198-201).

The second patient was a 19-year-old rat owner who was pronounced dead on arrival at a hospital after 3 days of symptoms. Such rapidly fatal cases of rat bite fever have been reported in children, but not in adults, except when there are systemic complications such as endocarditis or meningitis. The recent cases suggest that prevention of severe disease depends on promoting risk reduction and symptom recognition.

—Sharon Worcester

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1. Wackers FJ, In: Dilsizian V, et al, eds. *Atlas of Nuclear Cardiology*. Philadelphia, Pa: Current Medicine Inc; 2003:76-77.
2. Cerqueira MD, et al. *J Am Coll Cardiol*. 1994;23:384-389. 3. Klocke FJ, et al. *Circulation*. 2003;108:1404-1418.

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