Rochalimaea henselae infection of humans by domestic cats

In order to determine the reservoir and vector(s) for *Rochalimaea henselae*, a causative agent of bacillary angiomatosis (BA) and cat scratch disease, and to estimate the percentage of domestic cats with *R henselae* bacteremia, the authors conducted a hospital-based survey in the Greater San Francisco Bay Region of Northern California.

The patients surveyed were those with or without human immunodeficiency virus infection, with biopsy-confirmed BA, who also had prolonged exposure to at least one pet cat.

Cultures and laboratory studies were performed on blood drawn from pet cats associated with patients with BA. The *Rochalimaea* species infecting pet cats and fleas and causing the BA lesions in human contacts of these cats was identified by culture, polymerase chain reaction-restriction fragment length polymorphism analysis, and DNA sequencing. The presence of *R henselae* bacteremia in pet cats was documented, and predictor variables for culture positivity were evaluated.

Four patients who met the survey criteria were identified. The *Rochalimaea* species causing BA lesions in these patients was determined to be *R henselae*. The seven pet cats were found to be bacteremic with *R henselae*. This bacterium was also detected in fleas taken from an infected cat.

The researchers documented that the domestic cat serves as a major persistent reservoir for *R henselae*, with prolonged, asymptomatic bacteremia from which humans, especially the immunocompromised, may acquire potentially serious infections. Antibiotic treatment of infected cats and control of flea infestation are potential strategies for decreasing human exposure to *R henselae*.

Koehler JE, Glaser CA, Tappero JW: *Rochalimaea henselae* infection: A new zoonosis with the domestic cat as reservoir. *JAMA* 1994;271:531-535.

Association of chronic sinusitis with allergy, asthma, and eosinophilia

The association between sinus disease and asthma is generally accepted, although the mechanisms involved are not completely understood.

This study evaluated, in patients with chronic sinusitis who were scheduled for sinus surgery, the interrelationships and correlation among the extent of sinus disease, asthma, allergy, culture results, peripheral eosinophilia, and tissue eosinophilia.

The researchers evaluated the patients' computed tomographic scans, serum samples, peripheral blood samples, and surgical biopsy specimens. Extensive disease was present in 30% of the subjects and correlated well with asthma, specific IgE antibodies, and eosinophilia, but not with elevated total IgE. Among patients with peripheral eosinophilia, 87% had extensive disease. All cultures grew aerobic bacteria; anaerobes and fungi were uncommon.

With the use of computed tomographic scans of patients with chronic sinusitis, the researchers developed a system for quantitating the extent of the disease.

The well-accepted associations of chronic sinusitis with asthma and allergy appear to be restricted to the group with extensive disease. The presence of peripheral eosinophilia in patients with sinusitis indicates a high likelihood of extensive disease.

Newman LJ, Platts-Mills TAE, Phillips CD, et al: Chronic sinusitis: Relationship of computed tomographic findings to allergy, asthma, and eosinophilia. *JAMA* 1994;271:363-367.

Alzheimer's disease and general anesthesia

An association between prior general anesthetic exposure and Alzheimer's disease (AD) has been hypothesized, but no positive link has been found. Nevertheless, repeated exposure and cumulative total of exposure to neurotoxic factors, such as anesthetics, may accelerate the cognitive decline seen in elderly patients.

This population-based, case-control study was conducted to evaluate prior exposure to general anesthesia as a potential risk factor for AD. Incident cases of AD in the Olmsted County, Minnesota, population from 1975 to 1984 were compared with control subjects matched for age and gender, selected from all registrations for care at Mayo Clinic.

The case and control groups each had 252 individuals. Of these, 208 cases and 199 control subjects had at least one exposure to gen-

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eral anesthesia prior to the year of onset of dementia in the matched AD patient.

The cumulative duration of anesthesia and the total number of general anesthetic exposures prior to the age of onset of dementia and the corresponding year in each matched control subject was ascertained.

The results of the study show no significant difference in mean cumulative exposure (in minutes) to general anesthesia (patients vs control individuals: 188.4 vs 170.5 minutes, not significant). Neither exposure to six or more episodes of general anesthesia nor cumulative exposure to 600 minutes or more of general anesthesia was associated with a significantly increased risk of AD.

The authors concluded that multiple exposures to general anesthesia are not likely to increase the risk of AD.

Bohnen NILJ, Warner MA, Kokmen E, et al: Alzheimer's disease and cumulative exposure to anesthesia: A case-control study *J Am Geriatr Soc* 1994;42:198-201.

Noninvasive detection of malignancy by identification of unusual CD44 gene activity in exfoliated cancer cells

The authors report on the results of their investigation of noninvasive cancer detection by testing for unusual CD44 gene activity in a clinical sample as an indicator of exfoliated tumor cells.

Forty-four unselected, consecutive patients with bladder cancer and 46 people with no evidence of neoplasia participated in the investigation.

Novel abnormalities in the pattern of expression of CD44 gene, seen specifically in tumor tissue, led to cloning of a newly recognized coding region in it (exon 6). This was tested as a probe for detection of exfoliated malignant cells in naturally voided urine. CD44 gene products extracted from the urine and amplified with polymerase chain reaction contained predicted electrophoretic band of 735 base pairs in 40 of the 44 patients with bladder cancer. Products from 38 of the 46 people with no evidence of neoplasia showed no such band.

The investigation confirmed the unusual activity of the CD44 locus in the neoplasia and the malignancy. Techniques for the analysis of such activity can enable noninvasive investigation of patients for primary or recurrent bladder cancer or for other tumors that shed neoplastic cells into body fluids.

Matsumura Y, Hanbury D, Smith J, et al: Non-invasive detection of malignancy by identification of unusual CD44 gene activity in exfoliated cancer cells. *BMJ* 1994; 308:619-624.

Are seasonal variations in plasma fibrinogen and FVIIc linked to excess CVD-related winter deaths?

Approximately 20,000 more deaths from cardiovascular disease (CVD) occur in England and Wales during an average winter than during other times of the year. The reasons for the excess have not been fully elucidated.

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