

Consider Cat-Scratch Disease in Unknown Fever

BY GREG MUIRHEAD
Contributing Writer

MAUI, HAWAII — Cat-scratch disease should be considered in any patient with fever of an unknown origin who has had contact with cats—especially kittens, according to Dr. Jay M. Lieberman.

He presented several cases of children with prolonged fevers who remained without a diagnosis, despite extensive evaluations, until the possibility of cat-scratch disease was entertained and a history of contact with kittens was obtained.

The diagnosis of cat-scratch disease often can be made from the history and physical examination, and serologies may not be reliable, Dr. Lieberman said at a meeting sponsored by the University Children's Medical Group and the American Academy of Pediatrics.

Kittens are more likely to cause cat-scratch disease than are older cats.

The disease is caused by *Bartonella*

henselae, and approximately 40% of cats are bacteremic with the organism, explained Dr. Lieberman, who is professor of clinical pediatrics at the University of California, Irvine.

Cat-scratch disease is transmitted to humans through scratches, licks, or bites from kittens, less often from older cats, and sometimes from dogs.

A primary papule may be seen 3-12 days after inoculation time, followed 7-60 days (average 12-14 days) later by regional lymphadenopathy that may suppurate or regress over 2-4 months.

Lymphadenopathy usually involves the nodes that drain the site of inoculation. Fever occurs in half of patients, and malaise, anorexia, and headache also may occur.

The area around the nodes may be noninflamed but can be warm, tender, and erythematous, Dr. Lieberman said at the meeting, which also was sponsored by California Chapter 2 of the AAP. As

many as 30% of nodes will suppurate spontaneously.

Atypical presentations of cat-scratch disease included prolonged fever/fever of unknown origin, granulomatous hepatitis, conjunctivitis with preauricular adenopathy (Parinaud's oculoglandular syndrome), encephalopathy/encephalitis, osteomyelitis, and ocular disease.

Although patients may be treated with rifampin or gentamicin or trimethoprim-sulfamethoxazole (TMP/SMZ), or a combination of anti-infectives, Dr. Lieberman does not routinely recommend their use.

"In general, we have not treated our patients with antimicrobial therapy," he said. "Most patients do not require specific therapy, and the illness resolves on its own."

One prospective randomized trial of azithromycin vs. placebo found a significantly greater decrease in lymph node size in azithromycin-treated patients at 30 days, but there was no significant difference thereafter (*Pediatr. Infect. Dis. J.* 1998;17:447-52).

Dr. Lieberman then discussed other infections that can be acquired from pets:

► **Dog and cat bite wound infections.** Approximately 5%-15% of dog bites lead to infections, as do 20%-50% of cat bites.

Pasteurella species, short gram-negative coccobacilli that are part of the normal flora of cats and dogs, are isolated from 75% of infections from cat bites and 50% of infections from dog bites.

Pasteurella organisms are not susceptible to cephalexin or dicloxacillin, Dr. Lieberman said.

To help prevent infection from bites, wounds should be cleaned, debrided, and closed. Bite wounds should be reevaluated in 1-2 days. When indicated, there may be a need for tetanus and/or rabies prophylaxis.

Antibiotic prophylaxis is indicated for puncture wounds (including all cat bites), bites over tendons, joints, and bone; bites on the face and/or genitals; bites involving an immunocompromised person; and bites that cannot be well cleaned and debrided. Antibiotic prophylaxis, when indicated, may be used for 48-72 hours.

Amoxicillin-clavulanate is the antibiotic of choice for prevention or treatment of animal bite wound infections, he said. Alternatives include a combination of cephalexin or dicloxacillin and penicillin V or a combination of clindamycin and trimethoprim-sulfamethoxazole.

► **Rat-bite fever.** This is "caused by *Streptobacillus moniliformis*, an unusual gram-negative pleomorphic rod. It is normal oral flora in rats and can be excreted in rat urine. Humans are infected after a bite or scratch—or kiss—from an infected rat, or after handling a rat or ingesting food or water contaminated with rat excreta," explained Dr. Lieberman.

There is an incubation period of 2-10 days, followed by rapid onset of fever, chills, headache, and myalgia.



'Most patients do not require specific therapy, and the illness resolves on its own.'

DR. LIEBERMAN



An 8-year-old girl with cat-scratch lymphadenopathy, which typically involves the nodes that drain the inoculation site, is shown.

Rash may develop 2-4 days after the onset of fever. The rash usually is maculopapular, often including the palms of hands and soles of feet, and it may evolve into petechiae, purpura, and vesicles. About half of patients develop an asymmetric septic polyarthritides.

Dr. Lieberman described three children with rat-bite fever seen at his hospital over the past several years, all of whom presented with fevers, polyarthritides, and the characteristic rash, which was most prominent on the soles of the feet.

The treatment of choice is penicillin G. "These patients get better quickly," he said.

► **Salmonellosis.** About 3% of U.S. households have reptiles, most commonly lizards, snakes, turtles. Tortoises are chronic, intermittent shedders of *Salmonella*, and the Centers for Disease Control and Prevention estimates that more than 70,000 reptile-associated U.S. cases of salmonellosis occur each year, Dr. Lieberman said.

Rules for dealing with reptiles include washing hands thoroughly after handling them.

Also, reptiles should be kept out of child care centers and households in which there are children younger than 5 years or immunocompromised people living, he noted.

Dr. Lieberman disclosed that he is on a speakers' bureau for GlaxoSmithKline. ■

BRIEF SUMMARY OF PRESCRIBING INFORMATION

Mimyx[™]
cream

For Topical Dermatological Use Only

Rx only

Indication For Use

Mimyx Cream is indicated to manage and relieve the burning and itching experienced with various types of dermatoses, including atopic dermatitis, allergic contact dermatitis and radiation dermatitis. Mimyx Cream helps to relieve dry, waxy skin by maintaining a moist wound & skin environment, which is beneficial to the healing process.

Contraindications

Mimyx Cream is contraindicated in persons with a known hypersensitivity to any of the components of the formulation.

Warnings

In radiation therapy, Mimyx Cream may be applied as indicated by the treating Radiation Oncologist. Do not apply 4 hours prior to a radiation session.

Precautions and Observations

- Mimyx Cream is for external use only.
- Mimyx Cream does not contain a sunscreen and should not be used prior to extended exposure to the sun.
- If clinical signs of infection are present, appropriate treatment should be initiated; use of Mimyx Cream may be continued during the anti-infective therapy.
- If the condition does not improve within 10 - 14 days, consult a physician.
- Keep this and other similar products out of the reach of children.
- Mimyx Cream may dissolve fuchsin when this dye is used to define the margins of the radiation fields to be treated.

HOW SUPPLIED

Mimyx[™] Cream is available in a 70 gram tube, NDC 0145-4200-01. Store at 15°C to 30°C (59°F to 86°F). Do not freeze. Stiefel Laboratories, Inc. Coral Gables, FL 33134 826801-0905

Rx only - Prescription Medical Device: Federal Law restricts this device to sale by or on the order of a physician.

REFERENCES: 1. Del Rosso JQ, Bikowski J, Hawkes S, Sanglay L. Use of a palmitoylethanolamide-containing non-steroidal cream for the treatment of atopic dermatitis: impact on the duration of and time between flares. Presented at: 2006 Meeting of the American Academy of Dermatology; July 2006; San Diego, Calif. Poster 505. 2. Data on file. [TTF clinical results and protocol], August C. Stiefel Research Institute, Inc.

Mimyx is a registered trademark of Stiefel Laboratories, Inc., and Research in Dermatology is also a trademark of Stiefel Laboratories, Inc.

