

Exotic Small Mammals and *Bartonella*

[Announcer] This podcast is presented by the Centers for Disease Control and Prevention. CDC — safer, healthier people.

[Ted Pestorius] Welcome to this CDC podcast. I'm your host, Ted Pestorius. Today, I'm talking with Dr. Nina Marano of the Travelers' Health and Animal Importation Branch. We're discussing an article about *Bartonella* that appears in the April 2009 issue of *Emerging Infectious Diseases*. Welcome to the show, Nina.

[Nina Marano] Thanks for inviting me.

[Ted Pestorius] Tell us about *Bartonella*.

[Nina Marano] *Bartonella* is a bacterial agent that's quite prevalent in many species, including cats, dogs, and cattle. It's transmitted by vector-borne insects, especially by fleas. The article is important because there's a wider range of animals that can be affected than we previously thought. Wild animals are normally thought to carry *Bartonella*, so when animals are caught in the wild for pet trade, the risk that humans can become infected with *Bartonella* increases.

[Ted Pestorius] And why is *Bartonella* in small mammals of interest?

[Nina Marano] Well, *Bartonella* is a pathogen that's known to infect people in a variety of ways. Often people are infected by being bitten by a flea or by being scratched or bitten by an infected animal. The disease is hard to diagnose, and it can cause chronic joint pain, heart valve infections, and muscle inflammation. Most laboratories aren't set up to diagnose *Bartonella*, so patients are often diagnosed with a number of other things or they're not diagnosed at all. *Bartonella* may often be confused with other illnesses, including chronic fatigue syndrome.

[Ted Pestorius] That's interesting. So, tell us about the article.

[Nina Marano] Well, a group of authors from Japan purchased 546 small mammals in Japan that had been imported from four different parts of the world as pets. They purchased a variety of animals, such as fat-tail gerbils and flying squirrels and Siberian chipmunks. These small mammals are cute, furry critters that people keep in their homes and are very popular in places like Japan where homes tend to be small. The authors sampled these 546 small mammals for *Bartonella* and found that 26 percent had at least one species of *Bartonella*, including some species already known to infect humans. They also found six new species that have never been described before. Of the 546 small mammals, 367 were captured in the wild, and 179 came from breeder facilities. The prevalence of *Bartonella* was 37 percent among the mammals found in the wild and only 2.8 percent among the small mammals from the breeders. Of the animals from the breeding facilities, only five chipmunks from China had *Bartonella*. We tend to think that *Bartonella* in pets is very rare, but that's really not the case. In this study, 40 percent of the wild animals that originated from North America had *Bartonella*.

[Ted Pestorius] And what were the primary conclusions of the article?

[Nina Marano] This was the first report on the prevalence of *Bartonella* in small pets imported into Japan. Based on their findings, one could conclude that only animals from breeders should be imported and kept as pets. The authors also recommended that the novel species of *Bartonella* found in this study be studied to determine how they can cause human illness. We know that *Bartonella* is an agent of cat scratch disease, but we don't fully understand the route of transmission to humans from exotic small animals.

[Ted Pistorius] Nina, is there anything people need to do to protect themselves against *Bartonella*?

[Nina Marano] Well, yes. People should know where their pets are coming from. Did the pet come from a reputable breeding facility or was it taken from the wild? Prospective owners should inspect the pet to make sure it doesn't have fleas and that it appears to be robust and in good health. Be especially careful if you have children who interact with these pets. Kids who are under age 5 interact with pets very intimately. They kiss them, handle them, and let them walk all over them. A 2008 article released by the American Academy of Pediatrics recommended that small animals should not be kept by children under age 5. Enjoy pets, but maintain precautions that can be found on CDC's Healthy Pets Healthy People website at www.cdc.gov/healthypets.

[Ted Pistorius] And what's the public health importance of this article?

[Nina Marano] This article is very relevant to our lifestyles and preferences as pet owners. Humans can be unnecessarily exposed to *Bartonella*. Some people want these small exotic mammals because they're cute, but they need to know where their pet comes from. *Bartonella* is an identified risk associated with ownership of exotic animals and has serious health consequences.

[Ted Pistorius] This discussion with Dr. Nina Marano was prompted by an article in the April 2009 issue of *Emerging Infectious Diseases*. This article, and others on emerging bacterial and viral diseases, can be read online at www.cdc.gov/eid. You can submit your comments on this interview to eideditor@cdc.gov. For Emerging Infectious Diseases, I'm Ted Pistorius.

[Announcer] For the most accurate health information, visit www.cdc.gov or call 1-800-CDC-INFO 24/7.