Visiting Dogs Harbor *C. difficile*, MRSA, *Salmonella*

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SAN ANTONIO — Dogs serving as visitation-therapy animals in health care facilities have tested positive for *Clostridium difficile* and can also harbor *Salmonella* and methicillin-resistant *Staphylococcus aureus*, according to new research.

Sandra Lefebvre, D.V.M., and her colleagues of the Ontario Veterinary College at the University of Guelph discussed her group's findings on *C. difficile* in a poster presentation at a meeting of the Southwest Conference on Diseases in Nature Transmissible to Man.

They collected fecal samples from dogs used in a hospital visitation program in Ontario and used polymerase chain reaction techniques to identify microorganisms in the samples. They found *C. difficile* in 58 (57%) of the 102 dogs. Of the strains identified, 10% were indistinguishable from human strains.

One dog, a toy poodle, shed an epidemic strain of the bacteria.

The investigators discovered that this healthy animal had previously visited a hospital with documented cases of *C. difficile*–associated disease. Dr. Lefebvre and her colleagues recently reported these findings in a published letter (Emerg. Infect. Dis. 2006;12:1036-7).

The group is currently conducting a prospective cohort canine study that has revealed perhaps a more ominous discovery.

"We're finding that dogs are picking up MRSA, too," as well as *Salmonella*, Dr. Lefebvre said in an interview with PEDIATRIC NEWS.

She noted that the dogs often lick the hand of a patient with the infection and then lick a noninfected patient, risking transmission of the disease. Such findings do not prove that dogs have spread such diseases to humans, her group wrote—but "they certainly support that possibility."

Furthermore, visitation dogs then return to the home and neighborhood, where they can spread the disease to humans and other dogs, she said at the meeting, held in conjunction with the International Conference on Diseases in Nature Communicable to Man.

They collected fecal samples from 102 dogs used in a visitation program and found *C. difficile* in more than half. Of the strains identified, 10% were indistinguishable from human strains.

Three dogs so far have tested positive for MRSA after visiting hospitals, but one dog with no such exposure has also tested positive.

"These animals are going from patient to patient, getting up onto beds and licking people," Dr. Lefebvre said. "They also lick and are handled by health care workers, who are notorious for having contaminated hands."

She added that the MRSA found so far in the dogs is community acquired—an ominous fact, given that this type of bacterium (unlike the less robust hospital-acquired variant) often infects healthy individuals, rather than the elderly and immunocompromised.

Additionally, one-third of the dogs have so far tested positive for *Salmonella*, she noted, speculating that a diet containing raw meat or poultry (common among visitation dogs) could be the prime source of this bacterium.

Dr. Lefebvre emphasized that, even in light of these findings, she personally supports animal-visitation programs and believes they "spread more good than harm.. ..But people are being really naive in their approaches, and they need to practice more intact vector control than they are right now.

"A few simple precautions, particularly practicing hand hygiene [before and] after handling the animals, can reduce the potential harms—to both pets and people," Dr. Lefebvre said.

She also pointed to the dogs' habit of licking as a principal link in the disease-transmission chain.

"I think it's a bad idea to … let dogs lick people and think there are no ramifications for that," she said.

Dr. Lefebvre also advised that people caring for visitation dogs not feed them raw meat or poultry. ■

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