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ANIMAL MEDICAL CENTER

ADVANCED TREATMENT, RESEARCH, EDUCATION, DEVOTION, SINCE 1910

Pearls for the Practitioner

Topic: MRSA Infections

The Animal Medical Center has created this e-mail publication to keep you informed about the latest practices in veterinary medicine and how these practices are being applied at The AMC. If you are interested in obtaining past issues of "Pearls for the Practitioner" or if you would like to be removed from this mailing list, please e-mail allison.younger@amcny.org.

Methicillin resistant *Staphylococcus aureus* (MRSA) has recently hit the news again and the news articles suggest pets may be to blame for this infection in their human family members. See recent news articles:

[ABC News](#)

[New York Daily News](#)

MRSA can affect humans and animals in 2 ways. They may be infected, when the bacteria causes disease. Infections usually occur in a surgical incision, a wound and occasionally without a prior injury. People and pets may also be "colonized," meaning the MRSA is present, but not causing disease. Both forms of MRSA have been reported in dogs and cats.

The potential for colonization of pets has been known for many years and most often occurs via transmission by infected humans or from environmental contamination. In a recent study of dogs involved in animal assisted programs (*J Am Vet Med Assoc*, June 2009), the nares and feces of 200 dogs were screened for MRSA at baseline and none were found to be colonized or infected. Of the 116 dogs that were exposed to health care facilities as part of their animal assisted program, 7 dogs tested positive for MRSA during the course of the study, while only 2 of the 78 dogs not exposed to health care facilities tested positive for MRSA. Clearly, dogs exposed to human healthcare facilities are at risk for MRSA colonization.

MRSA infection has been documented in pets, typically following orthopedic surgery or as a result of chronic atopy. Infectious disease experts have expressed concern that pets infected or colonized with MRSA could transmit the infection to their family members. Pets may serve as a reservoir for MRSA and facilitate recurrent infections in the human members of the household. Two recent publications, one from the human side (*Lancet, Infectious Diseases*, July 2009) and one from the veterinary side (*J Am Vet Med Assoc*, Feb 2009) have highlighted the risks of bite injuries from pets. At this time, bite injury transmission of MRSA has not been documented.

What does this information mean to the practicing veterinarian?

1. Chronically infected surgical sites or wounds in dogs or cats should be cultured to identify the causative agent and to allow appropriate antibiotic therapy to be prescribed.
2. The nares and feces, of pets residing in a household where there is a human MRSA infection, should be cultured. Pets and humans with positive cultures should be treated to eliminate colonization.
3. Pets involved in animal assisted therapy should participate in a thorough preventive healthcare program, with an emphasis on preventing zoonotic diseases. Endo- and ectoparasite control and rabies vaccination would be considered appropriate interventions and screening nasal swabs and fecal cultures for MRSA may be indicated. Pets eating a raw food diet may be at greater risk for shedding *Salmonella* and *E. coli* in the feces, which could present a hazard to humans participating in animal assisted therapy.

**TO REFER AN EMERGENCY PATIENT, PLEASE CALL:
THE AMC EMERGENCY HOTLINE (212) 329-8616.**

This line is open 24 hours a day, 7 days a week for doctors only.

To refer a case to The AMC, please call The AMC Referral Office at: (212) 329-8890.