Animal Bite-associated Infections

Microbiology and Treatment

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Disclosures

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Cat Bites

Cats are responsible for approximately 10–20% of animal bites in the USA. These occur more frequently in adult women and are often associated with handling the animal.[3,34] Bite location is most commonly on the face and upper extremities, with the injury usually consisting of a deep puncture wound with only a small opening. Although these bites are not as damaging as those inflicted by dogs, wounds are often more difficult to debride and disinfect, and the mechanism of injury is more commonly associated with infection as well as soft tissue abscess and osteomyelitis.[35] It is reported that anywhere from 20–80% of cat bites may become infected.[36]

As with other bite-associated infections, those due to cats are polymicrobial, with a mix of aerobes and anaerobes. Common aerobic pathogens in cat bites include *Streptococcus* species (including *Streptococcus pyogenes*), *Staphylococcus* species, especially *S. aureus*and *Moraxella*. *Pasteurella multocida*, a small (0.2–2.0 µm) facultatively anaerobic, Gram-negative, nonmotile, non-spore-forming, pleomorphic coccobacillus is the most common organism isolated in cat bites. *Pasteurella* is part of the natural oral flora of domestic cats, with up to a 90% carriage rate.[37] Infection with *P. multocida* generally presents as a rapidly spreading cellulitis, usually occurring within 24 h of the bite. If untreated, complications range from pneumonia to osteomyelitis, brain abscess or endocarditis.[38]*Bartonella henslae*, the organism associated with 'cat scratch fever', may be transmitted by a cat bite or scratch (usually by a kitten). Disease is usually self-limited, but may present with lymphadenitis, osteomyelitis or prolonged fever. *Bacillary angiomatosis* (cutaneous nodules due to *Bartonella* species) may develop in patients with AIDS. Associated anaerobes, like those seen in dog bite infection, include Fusobacterium, bacteroides and porphyromonas species. Rare diseases that have been reported from cat bites include ulceroglandular tularemia,[39,40] human plague[41] and sporotrichosis.[42,43] Owing to the concern for serious infection, especially with Pasteurella,