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Cat Bite Abscesses

Carl Pastor couldn't figure out where the foul smell was coming from. BeeJay, his 4-year old longhaired cat, always took pride in her spotless appearance, grooming enthusiastically at every opportunity. Lately, however, something wasn't right. Normally playful and energetic, these last three days found BeeJay very quiet, apathetic toward food, and disinterested in going out in the yard. And there was that unpleasant odor that she mysteriously acquired. Determined to find the source of the odor, Carl gave BeeJay his own physical exam. Her teeth were fine, and her fur looked spotless. As he attempted to examine her rear end, however, BeeJay let cried and tried to run away. "I retrieved her, to finish checking her out", said Carl, "and when I touched near her tail, and she cried again, and my hand was covered with some really awful smelling pus".

Welcome to the world of cat bite abscesses.

Cat fights, and their resultant injuries, are a common reason for veterinary visits. Although cats living together indoor occasionally fight over territory or for owner attention, it rarely leads to serious injury. Cats that encounter other cats outdoors, however, are more likely to fight, usually over territory.

Cats' teeth are sharp, and when they bite, puncture wounds are produced. There is a tremendous amount of bacteria in cats' mouths. The puncture wounds seal over quickly, and bacteria injected into the skin become trapped. The bone marrow sends out many white blood cells to help fight this infection. The white blood cells and bacteria accumulate to form a painful pocket of pus just beneath the skin. This collection of pus is an abscess. Abscesses are common in cats, owing to the tough, elastic nature of feline skin, which readily seals over contaminated puncture wounds, allowing for pus to accumulate beneath the skin.

Dr. Mitchell Crystal is a board-certified veterinary internist at North Florida Veterinary Specialists in Jacksonville. Dr. Crystal warns that trauma and infection are not the only concern regarding cat bite injuries. "Cat bites have the potential to transmit several life threatening infectious diseases to other cats", notes Dr. Crystal. "Examples of these include the feline leukemia (FeLV) and feline immunodeficiency (FIV) virus, Bartonellosis, and rabies. Some of these, such as Bartonellosis and rabies, have zoonotic potential – they are transmissible to humans".

The diagnosis of an abscess is based on history and physical examination findings. The majority of abscesses are seen in cats that go outdoors, like BeeJay. Intact

males are at higher risk than neutered males or females, as they're more likely to roam and fight over territory. Typically, a cat that has been bitten appears fine after the encounter. Over the next 2 – 4 days, bacteria deposited in the wound begin to multiply, and cats develop a fever, become lethargic, and often stop eating. Many cats are taken to the veterinarian at this stage, where the abscess appears as either a firm or soft painful swelling. In most cases, puncture wounds or small lacerations may be present, and the

area may feel warm. If not discovered in this early stage, the abscess will continue to swell, burrowing through tissues and accumulating more pus. The abscess may then burst through the overlying skin, releasing creamy yellow or brownish, often malodorous pus. Overlying hair may become matted with dried discharge. Common locations for abscesses are the face and neck, tail, back, and legs, although any part of the body can be bitten during a fight. If a bite wound occurs in a location that does not have much loose skin, such as a leg, the infection can dissect its way through the tissues, causing diffuse swelling instead of a discrete collection of pus. This diffuse swelling is called cellulitis.

The goal of treatment is to prevent further contamination by cleaning the wound, removing dead tissue, and treating for infection. The earlier that treatment is instituted, the better the chances of the wound healing without complication. Dr. Gary Norsworthy is a board certified feline specialist and owner of Alamo Feline Health Center, in San Antonio. Dr. Norsworthy has treated hundreds of catfight abscesses, and has even authored a chapter on these types of injuries in a veterinary textbook, "The Feline Patient". "In most cases, the cat is anesthetized so an incision can be made into the abscess", says Dr. Norsworthy. "The wound is then flushed with an antibacterial solution to further remove pus and other debris". If detected and addressed at an early stage, lancing and flushing (plus antibiotics) may be all that is required. If discovered at a later stage, where significant tissue damage has occurred beneath the skin, the veterinarian may need to debride the wound (i.e. remove dead or compromised tissue). In some cases, the veterinarian may find it necessary to insert a *drain* (a piece of soft rubber tubing that exits at the lowest point of the wound) to allow any future accumulation of fluid or pus to escape. After debriding, if the wound is large, sutures may be required to partially close it, however, most wounds are left open to drain and heal on their own. Very large skin defects may require some type of reconstructive skin surgery after the infection has resolved. BeeJay's abscess had already burst through the skin, leaving a small hole just to the left of her tail base. The wound was cleansed, but placement of a drain wasn't necessary. "It was kinda gross looking", said Carl, "but she felt much better afterward". Indeed, once an abscess is opened up so that pus can drain, most cats immediately begin feeling better.

Antibiotic treatment, therefore, is an important part of abscess therapy "because oral bacteria are literally injected below the skin during the biting process", says Dr. Gary Norsworthy, and nearly all of these wounds are infected. Penicillin derivatives are the antibiotics of choice. Pus that has a particularly putrid smell, like that present in BeeJay's wound, usually indicates that anaerobic bacteria – bacteria that thrive in environments where oxygen is low or absent – are involved in the infection, and antibiotics known to be effective against anaerobes should be administered. A short course is typically all that is required. "Antibiotics are given for 5-10 days", says Dr. Norsworthy. Occasionally, some bite wound infections do not respond to initial antibiotic therapy, and a bacterial culture and sensitivity test may be required to

determine which specific bacteria are infecting the wound and which antibiotics are most effective.

The prognosis for a properly treated abscess is excellent, however, cats that engage in frequent fights are at high risk for contracting serious illnesses, such as FeLV and FIV. Cats who contract these viruses may then spread them to other cats in future encounters. Cats with FeLV or FIV also have weakened defenses against infection, and may have difficulty defeating an infection if bitten by other cats. Outdoor cats should be regularly tested for these viruses. Although the majority of cats will test positive within several weeks of being bitten by an infected cat, a cat that tests negative should be retested no sooner than 90 days after exposure, to rule out false negative results obtained during incubation of the virus.

Cats that go outdoors should also be current on their vaccinations, especially rabies and FeLV. A vaccine against FIV was introduced several years ago and is gaining popularity, although there is still some controversy regarding its usage. Administration of the vaccine causes cats to test "positive" when tested for FIV, and there is currently no way to determine if a cat that tests positive is infected, immune, or both. Once a test is developed that can distinguish between vaccinated and infected cats, the FIV is certain to gain more widespread acceptance.

The best prevention is to keep all cats indoors and prevent them from roaming and fighting. All cats should be neutered, to reduce roaming and aggressive tendencies. A good sturdy fence can be helpful in preventing cats that insist on going outdoors from getting into fights with cats outside their property. "BeeJay is an indoor cat now", says Carl. "I love her too much to take chances".

Sidebar 1: Signs of an abscess

Lethargy

Poor or absent appetite

Visible puncture wounds

Swelling or lump on skin

Limping (if bitten on a leg)

Pain or resentment when picked up or touched

Fever

Swollen lymph nodes