Recent studies have suggested that presence of acromegaly, a collection of features often occurring together as a result of excess growth hormone (GH) production (hypersomatropism), among cats with diabetes mellitus (DM) has been underestimated. Most cases are assumedly caused by a functional benign pituitary tumor. Excess GH can have various effects on cats, including direct anabolic and catabolic effects. GH decreases insulin sensitivity and through this mechanism often causes insulin-resistant DM. Polyuria and polydipsia are often present from uncontrolled DM; polyphagia is also seen but may be related to effects of GH on appetite. GH induces growth factor-1 (IGF-1) production; excess IGF-1 causes additional anabolic effects. The anabolic effects of excess GH and IGF-1 can cause gradual, marked physical changes including broad facial features, abdominal (organ) enlargement, prognathia, and clubbed paws. Hypersomatropism should be considered in cats exhibiting weight gain despite poor diabetic control and should be included as a differential for insulin-resistant DM.

Routine screening may be indicated for IGF-1 and/or feline serum GH of every diabetic cat. Contrast-enhanced CT and MRI are useful for visualization of a pituitary abnormality. Radiotherapy has been the preferred treatment, although such options as hypophysectomy are increasingly available. Some cats can be managed with high-dose insulin therapy alone; however, regular quality-of-life assessments are indicated.

Commentary

Feline acromegaly is more common in cats than once thought. This review emphasized the importance of being open to this diagnosis, particularly in diabetic cats. Some cats do not demonstrate the physical changes associated with this disease. Although these changes remain important disease markers, they are not required to pursue the diagnosis of acromegaly. In addition, acromegaly can cause significantly diminished quality of life from insulin resistance and poorly regulated DM, as well as concurrent problems (eg, congestive heart failure).—Jennifer Ginn, DVM, DACVIM

Source

Update on feline acromegaly. Niessen SJM. IN PRACT 35:2-6, 2013.

Sudsy Answers for Bacterial Pyoderma

Increasing recognition of methicillin-resistant Staphylococcus pseudintermedius (MRSP) in veterinary medicine has resulted in more interest in antimicrobial properties of topical treatments (eg, mupirocin, fusidic acid). Topical products can deliver high drug concentrations to an affected area with little or no systemic absorption. Miconazole, an imidazole antifungal, has antibacterial properties against some bacteria.

In vitro susceptibility of 112 MRSP isolates, 53 methicillin-resistant S aureus (MRSA) isolates, and 37 methicillin-susceptible S pseudintermedius (MSSP) isolates to miconazole were assessed via agar dilution. The isolates, taken from 48 dogs with clinical infections and 154 dogs with nasal or rectal colonization, were not epidemiologically related. This study found low miconazole minimum inhibitory concentrations (MIC50) for MRSP (1–8 µg/mL), MSSP (1–4 µg/mL), and MRSA (1–8 µg/mL). There were no established breakpoints for miconazole and staphylococci; however, MIC50 levels were well below concentrations achievable with topical therapy (2% commercial products equate to 20,000 µg/mL), suggesting that miconazole may effectively treat superficial bacterial pyoderma in dogs.

Commentary

Most intriguing is that miconazole, traditionally considered an antifungal agent, has antibacterial properties, making miconazole topical shampoo products an excellent first choice for dogs with skin infections exhibiting bacterial and yeast overgrowth and those with skin diseases predisposing them to Malassezia dermatitis. Topical treatments require frequent and thorough application to be effective, and coat hygiene is important in dogs with chronic skin disease. Professional grooming can be helpful before therapy, as medicated shampoos (often expensive) are not ideal grooming shampoos. Prewashing with grooming shampoo to remove gross debris and rinsing thoroughly before applying a medicated shampoo may be best. To avoid irritant reaction, clients can make a sudsy solution of the shampoo in a container and apply that to the hair coat; this makes it easier to rinse the pet and minimizes shampoo residue.—Karen A. Moriello, DVM, DACVD

Source