Hemangiosarcoma in Cats Characterized

This retrospective study attempted to characterize feline hemangiosarcoma (HSA) and to determine the signalment, clinical signs, biological behavior, treatment outcomes, and prognostic indicators. Data and outcomes for 53 cats with histopathologic diagnosis of HSA were collected. Cutaneous and subcutaneous lesions accounted for 77% of all cases (24 cutaneous, 17 subcutaneous, 10 visceral, 2 gingival). Subcutaneous tumors were associated with longer survival than visceral tumors, and cutaneous tumors were associated with longer survival than subcutaneous tumors. Completely excised tumors were associated with longer survival than incompletely excised tumors, and cats with incompletely excised tumors had longer survival times than those for which surgical resection was not attempted. No breed or sex predilection was detected, and most cats were middle-aged to older at the time of initial diagnosis. Surgical excision was the primary treatment used for cutaneous and subcutaneous forms. Visceral HSA masses were the most clinically aggressive. Surgical excision was the primary treatment modality in only 6 of 10 cats with visceral HSA because of the typically widespread nature of the disease, metastases present at the time of diagnosis, or both. Given the local recurrence and the metastatic potential of subcutaneous HSA, combination adjuvant chemotherapy and local radiation therapy may be indicated after surgery, especially when surgical margins are incomplete. Feline subcutaneous HSAs are more likely to be incompletely excised, recur locally, and have more aggressive biological behavior than cutaneous masses. Visceral HSA in cats warrants a poor to grave prognosis despite therapeutic interventions.

COMMENTARY: Complete excision of cutaneous and subcutaneous tumors produced long-term survival; however, only 1 subcutaneous tumor was completely excised. Although not discussed in this article, advanced imaging, such as computed tomography, might aid the surgeon, resulting in more cases of complete removal. Higher mitotic counts, which have been found in various tumors, were associated with a poor prognosis. Cases with more than 3 mitotic figures/10 high-power field should be strongly considered for adjuvant chemotherapy. —Dudley McCaw, DVM, Diplomate ACVIM (Internal Medicine & Oncology)


14-Day Antibiotic: Pharmacology in Dogs

Cefovecin is a semisynthetic cephalosporin that needs to be administered only every 2 weeks. This paper describes a series of in vivo, ex vivo, and in vitro studies in dogs to determine the pharmacokinetics and pharmacodynamic properties of cefovecin. No adverse events were observed. Cefovecin at 8 mg/kg given either by a subcutaneous or intravenous route was fully bioavailable. High protein binding and possible kidney reabsorption account for the long half-life. Bactericidal activity for Staphylococcus intermedius was observed in transudate up to 12 days after administration. Fourteen days after administration, concentration of cefovecin in urine was 5.5 µg/mL, which is more than 5 times the MIC90 for uropathogenic Escherichia coli. The slow elimination and long-lasting in vivo antibacterial killing activity following administration of cefovecin allow for 14-day dosing intervals.

Research conducted by Pfizer Animal Health


HIGHLIGHTS

- Cefovecin, a semisynthetic cephalosporin, was shown clinically safe, with no adverse effects.
- Cefovecin is highly bioavailable and concentrated in transudate, which means it is likely to be in the extracellular fluid of skin.
- The elimination half-life is about 5.5 days, allowing for dosing at 14-day intervals.