Mast Cell Tumors: Prednisone Before Resection?

Neoadjuvant chemotherapy is the use of chemotherapy as the initial treatment in animals with localized disease, followed by local treatment, such as surgery or radiation therapy. Current treatment for mast cell tumors (MCTs), the most common cutaneous tumor in dogs, is typically wide surgical resection. However, recommended resection margins are not always feasible due to tumor size and/or location. Development of techniques to consolidate and reduce tumor burden before surgery would be beneficial, particularly if complete resection margins could be achieved. A study was conducted to evaluate the efficacy of prednisone as a neoadjuvant treatment for the reduction of tumor burden in dogs with MCTs. Medical records were retrospectively reviewed for dogs with primary untreated cutaneous MCT managed with neoadjuvant prednisone administration and surgery. A prospective subset of dogs assigned a low-dose (1 mg/kg) or high-dose (2 mg/kg) was evaluated to determine effects of dose. When response to treatment was grouped categorically, 13% of cases were classified as a complete response, 57% were classified as a partial response, 19% as stable disease, and 11% as progressive disease. Thus, 70% of dogs were considered to have responded to prednisone treatment; however, response was not significantly related to the dose of neoadjuvant prednisone, and mass location did not significantly affect response to treatment. Treatment with neoadjuvant prednisone appears to be useful for inducing reduction of MCTs and may facilitate resection when adequate surgical margins cannot be easily achieved due to mass location, size, or both. A larger study is still needed to determine the equivalence of or difference between the 2 prospectively investigated doses.

COMMENTARY: This innovative approach attempted to completely remove canine MCTs in areas where wide excision was not feasible. Although this approach has merit, radiation therapy remains the best approach for canine MCTs that cannot be completely excised.—Dudley McCaw, DVM, Diplomate AVCIM (Internal Medicine & Oncology)


Interferon-omega for FIP?

A study was conducted to determine whether feline interferon-omega (FeIFN-Ω) prolongs survival time and increases quality of life in cats with feline infectious peritonitis (FIP). FIP status in the 37 cats included in the study was confirmed by histology or immunostaining of feline coronavirus (FCoV) antigen in effusion, tissue macrophages, or both. The cats were then randomly selected for treatment with either FeIFN-Ω or placebo. Cats (n = 21) in the interferon group received 106 U/kg (0.1 ml/kg) FeIFN-Ω SC Q 24 H for 8 days. After day 8, cats received 106 U/kg FeIFN-Ω once a week for a total of 1 year or until euthanasia. All cats received adjunctive treatment with glucocorticoids and antibiotics and passive immunization with Feliserin (Germany). Cats also received nutrition management and fluid therapy as needed. The median survival time of cats in the FeIFN-Ω group was 9 days; median survival time in the placebo group was 8 days. Therefore, no effect of FeIFN-Ω on survival time or quality of life could be demonstrated in this study. Reasons for the lack of efficacy of FeIFN-Ω are unknown. It is possible that the FeIFN-Ω did not reach tissue concentrations sufficient to exhibit an antiviral effect, or treatment intervals may have been too long. Treatment may also have been initiated too late. Ideally, therapy should start at the time of the mutation, before the mutated virus replicates and invades different tissues. However, because viral mutation precedes clinical signs and a diagnosis is not possible until severe immune-mediated reactions have occurred, the time point of mutation could not be detected.