**IP Chemotherapy Administration for Cats?**

In this retrospective study, 26 cats with malignant lymphoma (ML) were treated with an intraperitoneal (IP) chemotherapeutic protocol of cyclophosphamide, vincristine, and prednisolone (IP-COP). Chemotherapy is the treatment of choice for ML, and combination protocols tend to be more effective than using a single agent. The IV cyclophosphamide, vincristine, and prednisolone (COP) protocol has been proven effective, but many cats resist restraint and IV administration. IP administration was evaluated for efficacy and safety with the goal of improving clinician safety and reducing patient stress. This represents the first report of IP chemotherapy in veterinary patients.

Using the IP-COP protocol, complete remission rate was achieved in 76.9% of the patients. Median disease-free period (DFP) was 421 days with 1- and 2-year estimated DFP of 67.1% and 48.0%, respectively. Animals with alimentary lymphoma had the lowest DFP at 228 days, while median DFP was highest for cats with nasal and peripheral lymphoma at 388 and 421 days, respectively. Total median survival was 388 days with 1- and 2-year survival rates of 54.7% and 46.9%, respectively. The youngest group of cats had the most favorable survival with the longest DFP. Achieving complete remission was essential for long-term survival and second treatments had poor efficacy. Most adverse effects were considered mild; none was related specifically to IP administration. Adverse effects were mild and uncommon. IP route for COP chemotherapy administration was deemed safe and effective. Further studies are suggested using pharmacokinetics to assess serum levels of drugs following IV vs IP administration.

**Global Commentary**

IP chemotherapy was used in reportedly fractious cats with lymphoma of different types and in different anatomic locations. The IP injection was done with the cat scruffed, in vertical position, and with one assistant supporting/holding the rear legs on the table. This protocol was effective. However, most of my patients may be more displeased with chemotherapy when held in this position for 30–40 seconds than when scruffed in lateral recumbency while using the medial saphenous vein for IV injections (which takes <40 seconds in the average cat). I always tell students that the medial saphenous vein and a 25G butterfly are the best friends of the feline oncologist!—C. Guillermo Couto, DVM, DACVIM (Oncology)

*Source*


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**Developing Antiinfective Therapy**

Antimicrobial peptides (AMPs) are small, predominantly cationic proteins that play a critical role in the defense against microorganisms. They are produced by epithelial and immune cells. The β-defensins (BDs) and cathelicidin (Cath) have been most widely researched. This study sought to determine the minimum inhibitory concentration (MIC) and minimal bactericidal concentration (MBC) of two BDs and one Cath against common pathogens associated with canine skin disease. Methicillin-susceptible and methicillin-resistant *Staphylococcus pseudintermedius* (MSSP & MRSP) were more susceptible to canine AMPs than were methicillin-sensitive or methicillin-resistant *S aureus* (MSSA & MRSA). *Malassezia pachydermatis* was more sensitive than *Candida albicans* to canine AMPs. All canine AMPs used in the study exhibited killing within 2 hours of exposure.

**Commentary**

This is an exciting area in antiinfective therapy. This study shows some bacterial species differences that will need to be considered before it becomes a viable treatment option. The advantages and disadvantages of their development were succinctly summarized in one recommended open access review article.

1. The advantages are that they have broad-spectrum activity, rapid onset of killing, microbiocidal activity, potentially low levels of induced resistance, and concomitant broad antiinflammatory activities. Disadvantages to the development of AMPs as antiinfective drugs include research and development costs and screening, problems with development of patents, systemic and local toxicity, susceptibility to proteolysis, pharmacokinetic and pharmacodynamic problems, potential development of sensitivity after repeated topical application, and the predicted high cost of manufacturing.—Karen Moriello, DVM, DACVD

*Source*

Canine antimicrobial peptides are effective against resistant bacteria and yeasts. Santoro D, Maddox CW. *Vet Dermatol* 25:35-e12, 2014.