Pain Management and Anesthesia in Veterinary Dermatology

David D. Martin and Alondra L. Martin

Pain management has become a rapidly growing area of veterinary medicine over the past 5 to 7 years. Dermatologic patients are a segment that may have been overlooked and present some unique challenges for sedation and pain management. This article focuses on potential pain management strategies for certain dermatologic procedures and conditions as well as on current knowledge of acceptable anesthetics for intradermal allergy testing.

Lasers in Veterinary Dermatology

David Duclos

The carbon dioxide (CO₂) laser has many unique uses in veterinary dermatology. It can be used for oral lesions, such as viral papillomas, gingival hyperplasia, epulis, melanomas, fibromas, and other tumors, or for reactive tissue affecting the tongue or oral mucosa. It can be used for various neoplastic conditions, such as canine or feline pigmented viral plaques, Bowenoid in situ carcinoma, actinic in situ carcinoma, and certain cases of squamous cell carcinoma. It is also useful for pinnal, neoplastic, nonneoplastic, or inflammatory lesions; because of the precise control of tissue destruction, the surgeon can remove abnormal tissue and spare normal tissue and structures. Similarly, lesions on the feet can be treated with this laser. The CO₂ laser’s major advantage is hemostasis and limited tissue penetration. These two factors allow the surgeon to see what is being removed and to control precisely what is removed and what is spared. With this laser, it is easy to remove tissue right along vital structures, such as blood vessels, and to remove only the abnormal tissue without cutting into the blood vessel or other similar normal structures that should be avoided. Veterinarians in various specialties, particularly dermatology, surgery, and ophthalmology, are finding the CO₂ laser to be a useful tool, are finding new ways to deal with old problems, and are learning to understand old problems in new ways because they are able to see them without the obstruction by blood.
Updates in Therapeutics for Veterinary Dermatology
Stephanie R. Bruner

Maintaining a current practical database in veterinary therapeutics can be a challenge for today’s busy professional. Veterinarians must continually educate themselves about new uses for older medications, even as they struggle to familiarize themselves with all the newly marketed drugs. This article discusses several medications for which new and renewed interest exist in veterinary dermatology: imiquimod, an antiviral and antiproliferative medication; trilostane, a hormone modulator; the immunomodulating properties of tetracycline and niacinamide, pentoxifylline, cyclosporine, and tacrolimus; the antifungal potentials of lufenuron and terbinafine; the antibacterials cefpodoxime and marbofloxacin; and the parasiticides selamectin, doramectin, and moxidectin.

Skin Diseases of Animals in Shelters: Triage Strategy and Treatment Recommendations for Common Diseases
Sandra Newbury and Karen A. Moriello

This article is divided into three sections. The first section is a brief “primer” on the topic of shelter medicine and how it relates to skin diseases. In the second part, we describe an approach to the diagnosis and treatment of skin diseases when you must treat a patient without the benefit a dermatologic history, as is so often the case in animal shelters. In the third part of this article, we describe successful treatment protocols for common skin diseases in shelter animals. This section also describes some diseases of special mention.

Recommendations for the Management and Treatment of Dermatophytosis in Animal Shelters
Karen A. Moriello and Sandra Newbury

This article summarizes new findings in the area of dermatophytosis and focuses on the treatment of this disease in animal shelters. Animal shelters are unique environments, and individual animal care protocols do not always work well in a shelter. This article provides some core background for veterinarians working with shelters on the control and treatment of this disease.

Feline Facial Dermatoses
Cecilia Friberg

This article reviews current knowledge of feline dermatologic disorders that produce lesions on the head, face, and ears and/or pinnae. Many of these disorders can additionally affect other body regions. For many of these conditions, only small numbers of cases have been described; thus, these are reviewed and summarized in this article. Disorders are categorized taxonomically into infectious diseases (viral, fungal,
bacterial, and parasitic), allergic diseases, autoimmune diseases, neoplastic diseases, and a miscellaneous category. Lesions often progress through several stages, and the patient may be presented at any point; thus, a basic understanding of the progression of the disorder is helpful.

**Canine and Feline Eosinophilic Skin Diseases**  
Paul B. Bloom

Eosinophilic dermatosis (eosinophilic skin disease) consists of a heterogeneous group of diseases that, in most cases, are secondary to underlying antigenic stimulation (hypersensitivity reaction). Treatment options may include glucocorticoids (GCs), antifungal agents, antibiotics, food trials, allergen-specific immunotherapy, or cyclosporine. To avoid the indiscriminate administration of chronic GCs or random therapeutic trials, a systematic approach to the diagnosis of these diseases should be performed. Diagnosing and managing these diseases are discussed.

**Atopy: New Targets and New Therapies**  
Rosanna Marsella

Recent research has emphasized the complexity of this disease, indicating how type I hypersensitivity is intermingled with T-cell imbalances and, possibly, abnormalities of the barrier function. New strategies for patient management are reviewed, including modulation of the lymphocytic response through the use of calcineurin inhibitors, potential inhibition of the IgE response through use of anti-IgE vaccines, and alternative modalities for immunotherapy. Decrease of allergen exposure by frequent bathing, adjunctive antihistamine therapy, and neuropeptide modulation are useful adjuvant treatments for many patients. Future strategies may include the use of probiotics, inhibitors of cytokines and chemokines, and a targeted approach based on the genetic mutations of the individual patient.

**Food Allergies: Update of Pathogenesis, Diagnoses, and Management**  
Robert A. Kennis

Food allergy with dermatologic involvement is a recognized clinical entity in dogs. There is controversy regarding the true prevalence of this disease because of the difficulty encountered in achieving an accurate diagnosis. Further, the terminology in the literature is inconsistent, and it may be difficult to search for information on this topic. The pathogenesis and immune function have been elucidated better through the development of investigative models; however, there are still many unknowns. New diagnostic techniques have been investigated, but the food elimination test diet continues to remain the “gold standard.” Finally, there have been many new commercially available diets to aid in the diagnosis and management of food-allergic dogs. The purpose of this article is to provide updated concepts on the pathogenesis,
diagnosis, and management of food-allergic dogs with dermatologic complications.

**Bacterial Skin Diseases: Current Thoughts on Pathogenesis and Management**

Elizabeth R. May

*Staphylococcus intermedius* and, less commonly, *Staphylococcus aureus* have been associated with most cases of bacterial skin disease in the dog and cat. Recently published information suggests that newly reported *Staphylococcus* organisms as well as coagulase-negative *Staphylococcus* species should be considered in addition to *S. intermedius* and *S. aureus* in pyoderma cases. The question of zoonotic transfer and the concern surrounding methicillin-resistant *Staphylococcus* mandate a new or modified approach to bacterial skin diseases in small animals. This article focuses on the characteristics of the newly reported *Staphylococcus* species as well as on the importance of recognizing and treating emerging pathogens.

**German Shepherd Dog Pyoderma**

Edmund J. Rosser, Jr

German Shepherd Dog pyoderma (GSP) is a unique recurrent or refractory deep pyoderma that is characterized by pruritus (the chief complaint), with deep pyoderma typically beginning over the lumbosacral region. The condition may progress to affect multiple regions of the body and become a generalized skin disease. The underlying disease processes that may be involved in the development of GSP include flea allergy dermatitis, atopic dermatitis, cutaneous adverse food reactions (food allergy), hypothyroidism, ehrlichiosis, and T- and B-lymphocyte and neutrophil abnormalities. The management of GSP requires a thorough and systematic approach to investigate each dog for the possible triggering disease processes. As each disease is identified, the specific treatment for that disease needs to be initiated with the objective of resolving the recurrent nature of this deep pyoderma. The initial supportive medical treatment in cases of GSP requires 8 weeks of continuous systemic antibiotic therapy and medicated baths while the clinician attempts to determine each underlying disease process involved in a given case of GSP. Finally, the combination of diseases present for a given dog with GSP varies from case to case.

**Updates on the Management of Canine Epitheliotropic Cutaneous T-Cell Lymphoma**

Louis-Philippe de Lorimier

Canine epitheliotropic cutaneous T-cell lymphoma (CTCL; mycosis fungoides), although an infrequent anatomic variant of lymphoma, is the most common type of cutaneous lymphoma in dogs. Challenging to treat once a definitive diagnosis has been obtained, clinical management primarily involves skin-directed therapy, disease-modifying
agents, and systemic chemotherapy. Recent retrospective studies have shown the oral alkylator lomustine (CCNU) to be of value for the therapy of canine CTCL, with encouraging response rates. Additional treatment options are also discussed in this review, including future therapies and others currently undergoing investigation.

**Update on Canine Demodicosis**  
Kinga Gortel

This article reviews several important updates in our understanding and treatment of canine demodicosis. New species of Demodex mites have been demonstrated in some dogs with canine demodicosis. Advances in clarifying the role of the immune system in the disease have also been made. The prognosis for patients with generalized disease has improved in the past decade, primarily because of the important progress that has been made in the treatment of demodicosis in dogs.

**Sebaceous Adenitis**  
Candace A. Sousa

Sebaceous adenitis is a rare idiopathic dermatosis that has been described most often in dogs but has been reported to occur in other mammals. The disease seems to represent an inflammatory disorder directed against or centered on the sebaceous glands. Since its first description in the veterinary literature 20 years ago, sebaceous adenitis has been diagnosed with increasing frequency. Despite the fact that there is a strong breed predisposition for the development of the disease, the cause involves more than genetics. This article discusses the current information as to the cause, diagnosis, and treatment of sebaceous adenitis in companion animals.

**Vesicular Cutaneous Lupus**  
Hilary A. Jackson

Vesicular cutaneous lupus erythematosus (VCLE) is an uncommon to rare disease affecting adult Rough Collies and Shetland Sheepdogs. Although it has been recognized since the late 1960s, it has only recently been characterized as a form of lupus erythematosus. This article reviews the clinical diagnosis and management of VCLE and discusses the evidence supporting its reclassification.