Oh, Those Itchy Feet!

Pododermatitis is a common inflammatory disease of the pedal skin of dogs. There is no specific age, sex, or breed disposition for the condition, although some breeds are considered to be more susceptible. Many internal and external factors may be directly or indirectly involved in the pathogenesis of pododermatitis, including infectious, hypersensitive, autoimmune, or endocrine diseases; environmental causes; hyperkeratotic, nodular, and pigmentary dermatoses; and psychogenic or neurologic causes. Clinical signs include diffuse erythema and thickening of the skin, and the primary lesions are often complicated by alopecia, hyperpigmentation, pyoderma, and the presence of sinus tracts with discharge. The disorder is often painful and pruritic, with resulting self-trauma that predisposes to secondary bacterial infection. Because treatment is largely influenced by the underlying cause, diagnostic investigation should include analysis of a detailed history, clinical examination, and appropriate testing. Depending on the underlying problem, prognosis can be good to guarded or poor. Even with a methodical diagnostic approach, an underlying cause may still remain obscure, prompting a diagnosis of idiopathic pododermatitis. Various theories have been proposed to explain this poorly understood condition, although many reports implicate bacterial infection with possible hair follicle–related pathology. The authors of this review article propose the term lymphocytic-plasmacytic pododermatitis among a subpopulation of dogs with idiopathic pododermatitis, based on the histologic appearance of the lesions. These cases appear to respond to immunomodulatory therapy, suggesting an underlying immunologic basis. Further studies on this subpopulation are being conducted by the authors.

COMMENTARY: This review article comprehensively discusses a frequently frustrating disorder. The article does not go into enormous detail on every possible cause, but from a clinical perspective, it offers much for clinicians—including the numerous potential causes of pododermatitis and ways to help differentiate them through history, clinical examination, and histopathologic appearance. Surprisingly, the authors have found only 0.5% of the dogs referred to their dermatology clinic to have idiopathic pododermatitis (other authors have cited higher percentages). They include an interesting discussion of their findings on a subpopulation of this group, and it will be intriguing to see what further insights into the disease their current research will provide.—Jennifer L. Schori, VMD


Maropitant as an Antiemetic

Vomiting can be elicited by many stimuli including gastrointestinal irritation/inflammation, circulating toxins, cancer chemotherapy, and provocative motion. Stimulation may be peripheral, triggering vagal or sympathetic afferent neurons, or central, stimulating neurons in the chemoreceptor trigger zone (CTZ). The emetic center is located in the medulla oblongata and includes the nucleus tractus solitarius (NTS) and dorsal motor nucleus of the vagus. The NTS lies within the blood brain barrier (BBB), so to be an effective antiemetic, a compound must be able to cross the BBB. Neurokinin type 1 (NK1) receptors are one type of neurotransmitter receptor and it has been shown that selective antagonism of the NK1 receptors inhibits emesis. The controlled study reported in this article evaluated the use of a central NK1 receptor antagonist, maropitant (Cerenia, www.pfizer.com), in a known experimental model using gerbils. A gerbil foot-tapping model was used to investigate the in vivo functional activity of maropitant and its ability to penetrate the central nervous system and inhibit foot tapping induced by the selective NK1 agonist GR73632.


How Safe Are Vaccines for Neonates?

Most animals are vaccinated at least twice between 8 and 16 weeks of age. The international “gold standard” for veterinary pharmacologic and biologic surveillance is the United Kingdom Suspected Adverse Reactions Reporting Scheme (SARRS), which has been recording adverse effects in a computerized data bank since 1984. Adverse reactions vary widely and include lack of efficacy, induction of immunemediated reactions (eg, immediate hypersensitivity reactions), and neoplastic reactions (eg, sarcomas associated with feline vaccine). Between 1985 and 1999, 47% of 1137 vaccine-related suspect adverse reactions occurred in dogs less than 6 months of age compared with 17% of 1468 non–vaccine-related reactions. For cats, 45% of 1355 reactions occurred in cats less than 6 months of age compared with 19% of 1361 of non–vaccine-related reactions. The most common adverse effect was a hypersensitivity reaction characterized by facial edema and pruritus shortly after vaccination. In the United States, data from the Banfield Hospital Group have shown that young dogs are particularly susceptible to vaccine-associated adverse reactions, with a peak incidence at 2 years of age. In addition, this group found a clear breed predisposition, with greater frequency in small breeds of dogs. These findings help support use of reduced dose vaccines for smaller