

DERMATOPATHOLOGY OF DOMESTIC ANIMALS

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Animals present with many skin conditions and diseases that are similar to those in humans, but also come with some quite specific features for a given species or breed. We will review common pathologies of the skin in domestic/companion animals. In recent years, atopic dermatitis/atopy, a genetically predisposed allergic dermatitis with extensive inflammation and pruritus, is on a rise among dogs in urban settings fed processed dog food. Urticaria and angioedema initiated by many immune stimuli occur in dogs and horses. Juvenile pyoderma affects pups less than 4 months of age that present with multiple pustular and nodular lesions on the face, ears and mucocutaneous junctions. Among autoimmune disorders, pemphigus foliaceus and pemphigus vulgaris occur in dogs, cats, horses and goats, and present with various degrees of acantholysis. In domestic animals, parasitic diseases of the skin or adnexa are common. Mites cause severe cutaneous lesions (mange) in food animals, dogs, cats and rabbits (*Sarcoptes* sp., *Psoroptes* sp., *Demodex canis*). Dermatophytoses (the genera *Trichophyton* and *Microsporum*) commonly present a zoonotic issue between companion animals and their owners. Of viral diseases, some with zoonotic potential, calicivirus and poxvirus infections of many terrestrial and marine mammals, present with vesicu-

lar dermatitis and proliferative lesions (hyperkeratosis/parakeratosis), respectively, while herpes virus infection in cattle and horses will result in large areas of alopecia and depigmentation. Equine papilloma virus in young horses present with warts on the skin of ears, legs, lips and nares. Cutaneous manifestations of some endocrine disorders or systemic diseases include laminitis in horses, cutaneous paraneoplastic syndromes (pancreatic panniculitis, thymoma) in dogs and cats, hepatocutaneous syndrome, and Cushing's disease (hyperadrenocorticism). Hypothyroidism in dogs typically presents with obesity, symmetric alopecia, and hyperpigmentation, while pituitary adenomas of pars intermedia in older horses present with hirsutism and excessive sweating. Of neoplastic diseases, malignant mast cell tumors (most common in boxer dogs), squamous cell carcinomas, basal cell tumors, cutaneous histiocytomas, melanomas, adenocarcinomas of perianal glands are most prominent. Cutaneous lymphomas-epidermal form (T lymphocyte), also known as mycosis fungoides, occurs in dogs. Extramedullary plasmacytomas occur in dogs and cats. Acral lick granulomas (neurodermatitis) are common on the legs of dogs and are associated with boredom or separation anxiety.