

PODODERMATITIS

About the Diagnosis

Pododermatitis refers to skin disease involving the feet (paws). Bacterial infections are frequently involved, although a variety of conditions may be underlying causes. For example, allergies can predispose pets to a variety of skin diseases, including pododermatitis. Embedded hairs or other foreign bodies (plant awns, splinters, thorns) can cause pododermatitis with nodules or draining tracts in the feet. Several parasites, most notably *Demodex* mange mites and hookworm larvae, can cause skin irritation and secondary bacterial infection of the feet. Contact with irritants such as chemicals or fertilizers can also be involved. Trauma can also be a factor, especially in working and hunting dogs that can damage their feet on rough ground.

Cats can develop a type of pododermatitis that affects the footpads called plasma-cell pododermatitis. Plasma cells, a cell type that is involved in immune responses, are found in large numbers in skin biopsies of the feet of cats with this condition. Causes for this condition are not well understood, but it is thought that the body's immune system becomes hyperactive within the tissues of the feet and leads to excessive inflammation there. Some affected cats also have inflamed sores in the mouth containing plasma cells, and others have a type of kidney disease, indicating a more generalized problem.

With pododermatitis of any cause, the skin between the toes and footpads is typically affected most prominently. Symptoms may include one or more of the following: reddened skin, swelling, nodules, blisters containing bloody fluid, draining tracts, and sores. Dogs will often lick the feet. Lameness (limping) commonly may occur.

Cats with plasma-cell pododermatitis are often seen to limp (lameness). One or more footpads are soft and swollen; draining sores may develop.

Diagnosis: History may indicate trauma or irritant chemicals as a cause of pododermatitis, and you should mention any such exposure to your veterinarian. A series of tests may be needed to determine the underlying cause of other types of pododermatitis:

- Skin scrapings are simple, painless samplings of the surface of the skin that are performed with the animal awake and are used for looking for parasites that live on or in the skin.
- Any discharge present may be examined under a microscope to look for causative agents.
- Bacterial cultures may be indicated to identify the organisms involved and to determine sensitivity to antibiotics.
- Skin biopsies may be indicated in some cases to rule out immune-mediated diseases and tumors.

Living with the Diagnosis

Pets with allergic conditions as the underlying factor in pododermatitis tend to have chronic or reoccurring problems. Taking steps to control the allergic condition will help control the pododermatitis as well.

TREATMENT

Treatment is aimed at correcting or avoiding any underlying conditions and at treating any infection present. Antibiotics given by mouth for several weeks are necessary to control bacterial infection. Ideally, the antibiotic is selected based on bacterial culture and sensitivity testing, which is a test performed on a skin swab or skin biopsy sample and which determines the antibiotic that will be most effective. Moisturizing and disinfecting the feet can help healing, and soaking the feet daily in a dilute, purpose-made antiseptic solution is also recommended. Be sure to obtain antiseptic solution recommended by your veterinarian, since other substances (antiseptics for other animals or for people or inadequately diluted small animal antiseptics) may be caustic to cats and dogs. If a foreign body is suspected or in severe, chronic cases, surgery may be required to remove affected tissues.

Plasma-cell pododermatitis in cats sometimes resolves without treatment. If the cat is in pain, several treatment alternatives may be tried. Some cats respond to the antibiotic doxycycline. Others improve with corticosteroid therapy. Immunosuppressive drugs are required in some cases.

- Give medications exactly as directed.
- Avoid areas where foreign bodies such as thorns, grass awns, and glass splinters may be stepped on or walked through by your pet.

DON'Ts

- Do not allow your pet to exercise in areas where fertilizers, herbicides, or other chemicals have been applied.
- Do not stop giving antibiotics until directed to do so by your veterinarian. It is important to continue treatment at least 2 weeks beyond the point when all signs and symptoms resolve.

Signs to Watch For

- Constant foot licking.
- Lameness (limping).

Routine Follow-Up

- Any severe pododermatitis involving sores, blisters, or draining tracts should be monitored periodically by your veterinarian until the signs are completely resolved. Premature termination of treatment may result in reoccurrence of the problem.