

# Canine Acral Lick Dermatitis

Acral lick dermatitis (lick granuloma) is a lesion induced by chronic licking, most often on a dorsal forelimb between the metacarpals and elbow, although other locations have been noted.

**A**cral lick dermatitis, which is more common in large-breed dogs, is initiated by pruritus, pain, or behavioral factors, although pruritus may be the most common initiating factor. Careful history and examination are essential to evaluate any potential underlying allergic disease. Signs may include recurrent skin and ear infections, recurrent hot spots, or pruritus associated with other areas (eg, feet, face, trunk). However, pruritus can also result from infection (eg, bacterial, fungal).

The disorder, which is typically diagnosed according to clinical appearance and a patient history of licking the lesion, is characterized by hair loss and an ulcer surrounded by thick plaques. Pain associated with trauma, osteoarthritis, fractures, surgical sites, or peripheral neuropathies may also initiate excessive licking.

Because other conditions may appear clinically similar (eg, deep fungal infection, neoplasia),<sup>1</sup> skin biopsy with histopathology is indicated. Diagnostics (eg, digital imaging) may be indicated when there are no signs of pruritus or allergic disease elsewhere.

Although patients may have acral lick dermatitis attributable to a behavioral abnormality, this usually is not the sole cause for the disorder, particularly if the patient has no other behavioral manifestations. However, eventually the licking behavior can become a primary factor.

Secondary problems (ie, bacterial infection, furunculosis [ruptured hair follicles], ruptured apocrine glands) may develop from and can contribute to the patient's pruritus as well as perpetuate the cycle. These factors should be addressed to resolve the problem.

CONTINUES



## How I Treat Acral Lick Dermatitis

- Determine the primary cause
- Address bacterial infections
- Administer glucocorticoids concurrently with antibiotics
- Apply physical restraint
- Use topical therapy
- Consider behavior & environment
- Look for extensive fibrosis

**✓ Determine the primary cause**

If the cause of pruritus is not addressed, the lesion will typically recur even after resolution

**Allergic Disease**

- Evaluate signs of allergic disease
  - Flea allergy dermatitis, adverse food reaction, atopic dermatitis
- Depending on signs and history, evaluate need for additional flea control, hypoallergenic diet trial, and allergy medication

**Additional Testing**

- Perform skin scrapings to rule out demodicosis
- Pursue diagnostic imaging if patient has no signs of pruritus/allergies elsewhere and history suggests painful underlying cause

**✓ Address bacterial infections**

Of dogs with acral lick dermatitis, 94% have deep bacterial infections<sup>2</sup>

**Deep Infection**

- Particularly in chronic cases with fibrosis, infection tends to be “walled off” and an extensive course of antibiotics is necessary
  - Minimum of 4 weeks of antibiotics is indicated; 6–8 weeks or longer is not unusual
  - Recheck patient after 4 weeks of antibiotic therapy to determine status of clinical signs
  - Administer antibiotics until there is hair regrowth, resolution of acral lick dermatitis, and no evidence of exudation or moist dermatitis

## Acral Lick Dermatitis in a Labrador Retriever

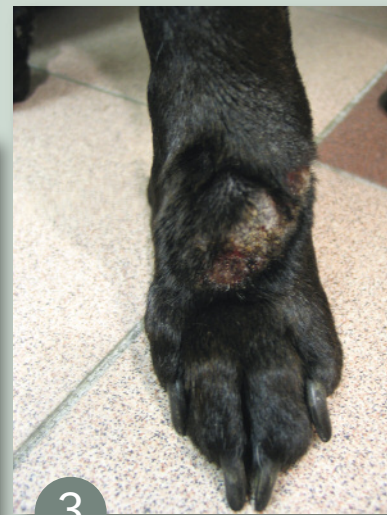
A 6-year-old male Labrador retriever presented with chronic acral lick dermatitis and clinical signs of flea allergy dermatitis (**Figures 1, 2, and 3**). Tissue collected by biopsy for macerated tissue culture revealed methicillin-sensitive *Staphylococcus pseud-intermedius* (MSSP). The patient was treated with cephalexin at 28 mg/kg q12h and daily dosing of nitenpyram. The patient was also placed in a BiteNot collar (bitenot.com).



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### Culture & Sensitivity Testing

- Purulent material can be obtained by aspiration of acral lick dermatitis sample
  - Alternatively, biopsy lesion and submit sample for macerated tissue culture
- Cultured organisms include *Staphylococcus* (60%), *Pseudomonas* (8%), and *Enterobacter* (8%)
  - Because these organisms are often multi-drug resistant and 25% are methicillin resistant, empirical selection of antibiotics is not recommended

### ✓ Administer glucocorticoids concurrently with antibiotics

### Glucocorticoids

- Relieve inflammation and pruritus associated with foreign body reaction to free keratin (because of furunculosis and contents of ruptured apocrine glands)

- Used to treat pruritus associated with underlying allergic disease
- Discontinue after initial itch has been controlled

### Antibiotics

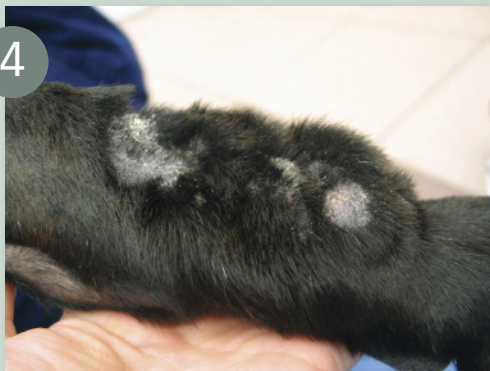
- Continue antibiotic administration after discontinuing glucocorticoids (they may mask signs of remaining infection)

### ✓ Apply physical restraint

- Elizabethan or BiteNot collar with or without bandage covering the lesion
- Once lesion has completely resolved, remove physical restraint for short periods (with supervision)
  - Only remove restraint without supervision after the patient has stopped licking

CONTINUES

At reevaluation 3 weeks later (Figures 4 and 5), the pruritus had resolved, along with clinical signs of flea allergy dermatitis. Cephalexin therapy was continued an additional 7 weeks, and flea control involved topical application of imidacloprid. The BiteNot collar was removed.



Evaluation at week 10 (Figure 6) revealed significant improvement in the acral lick lesion. Because the owner reported no further licking of the lesion, antibiotic therapy was discontinued and imidacloprid application reduced to q14days.

The patient was successfully managed long-term, although when a minor relapse occurred 18 months later, the owner admitted to being inconsistent with application of imidacloprid.



**✔ Use topical therapy**

**Application**

- Apply 2–3 times q24h in conjunction with systemic antibacterial and anti-inflammatory therapy
- Owner observation is useful to ensure that topical applications do not cause increased rubbing or licking of lesion

**Options**

- Mupirocin (antibacterial) can be used alone or followed by application of dimethyl sulfoxide (DMSO) to increase penetration
  - Useful if *Staphylococcus* species was cultured
- DMSO (antiinflammatory)
- Synotic (DMSO and corticosteroid)
- Bitter Apple spray (taste may discourage licking; bitterapple.com)

**✔ Consider behavior & environment**

**Antianxiety & Behavior-Modifying Drugs**

- Use in conjunction with medical treatment if anxiety or behavioral abnormalities are potential or known components
  - Clomipramine (tricyclic antidepressant) at 1–2 mg/kg PO q12h
  - Fluoxetine (selective serotonin reuptake inhibitor) at 1 mg/kg PO q24h

**Additional Considerations**

- Address environmental factors (ie, excessive confinement, lack of exercise)
- Consider Thundershirts (thundershirt.com) for anxiety relief

**✔ Look for extensive fibrosis**

**Causes**

- Patients with long-standing acral lick dermatitis may have extensive fibrosis surrounding areas of furunculosis
- Chronic foreign body reaction and walled-off infection may make resolution difficult

**Treatment**

- CO<sub>2</sub> laser ablation of the lesion may be useful
- Keep patient in Elizabethan or BiteNot collar
- Change bandage daily until surgical site has healed

See Aids & Resources, back page, for references & suggested reading.

**Coming Soon...**

Look for **Acral Lick Dermatitis in Dogs** by Dr. Lore I. Haug in an upcoming issue for a behaviorist's approach to this disease.

**KEY FACT**

Continue to address the initiating factor after the lesion has healed, including aggressive flea control, hypoallergenic diet, management of atopic dermatitis, pain control, or behavior modification.

**IVERHART MAX<sup>®</sup>**

(ivermectin/pyrantel pamoate/praziquantel)

**Chewable Tablets**

**CAUTION:** Federal (US) law restricts this drug to use by or on the order of a licensed veterinarian.

**BRIEF SUMMARY:** Please consult package insert for complete product information.

**Indications:** For use in dogs to prevent canine heartworm disease by eliminating the tissue stage of heartworm larvae (*Dirofilaria immitis*) for a month (30 days) after infection and for the treatment and control of roundworms (*Toxocara canis*, *Toxascaris leonina*), hookworms (*Ancylostoma caninum*, *Uncinaria stenocephala*, *Ancylostoma braziliense*), and tapeworms (*Dipylidium caninum*, *Taenia pisiformis*).

**WARNINGS:** For use in dogs only. Keep this and all drugs out of reach of children. In safety studies, testicular hypoplasia was observed in some dogs receiving 3 and 5 times the maximum recommended dose monthly for 6 months (see Animal Safety). In case of ingestion by humans, clients should be advised to contact a physician immediately. Physicians may contact a Poison Control Center for advice concerning cases of ingestion by humans.

**PRECAUTIONS:** Use with caution in sick, debilitated, or underweight animals and dogs weighing less than 10 lbs. The safe use of this drug has not been evaluated in pregnant or lactating bitches.

All dogs should be tested for existing heartworm infection before starting treatment with IVERHART MAX Chewable Tablets, which are not effective against adult *D. immitis*. Infected dogs should be treated to remove adult heartworms and microfilariae before initiating a heartworm prevention program.

While some microfilariae may be killed by the ivermectin in IVERHART MAX Chewable Tablets at the recommended dose level, IVERHART MAX Chewable Tablets are not effective for microfilariae clearance. A mild hypersensitivity-type reaction, presumably due to dead or dying microfilariae and particularly involving transient diarrhea, has been observed in clinical trials with ivermectin alone after treatment of some dogs that have circulating microfilariae.

**ADVERSE REACTIONS:** In clinical field trials with ivermectin/pyrantel pamoate, vomiting or diarrhea within 24 hours of dosing was rarely observed (1.1% of administered doses). The following adverse reactions have been reported following the use of ivermectin: depression/lethargy, vomiting, anorexia, diarrhea, mydriasis, ataxia, staggering, convulsions and hypersalivation.

**ANIMAL SAFETY:** Studies with ivermectin indicate that certain dogs of the Collie breed are more sensitive to the effects of ivermectin administered at elevated dose levels (more than 16 times the target use level of 6 mcg/kg) than dogs of other breeds. At elevated doses, sensitive dogs showed adverse reactions which included mydriasis, depression, ataxia, tremors, drooling, paresis, recumbency, excitability, stupor, coma and death. No signs of toxicity were seen at 10 times the recommended dose (27.2 mcg/lb) in sensitive Collies. Results of these studies and bioequivalence studies support the safety of ivermectin products in dogs, including Collies, when used as recommended by the label.

In a laboratory safety study, 12-week-old Beagle puppies receiving 3 and 5 times the recommended dose once weekly for 13 weeks demonstrated a dose-related decrease in testicular maturation compared to controls.

**HOW SUPPLIED:** IVERHART MAX Chewable Tablets are available in four dosage strengths (see **Dosage** section) for dogs of different weights. Each strength comes in a box of 6 chewable tablets and in a box of 12 chewable tablets, packed 10 boxes per display box.

**STORAGE CONDITIONS:** Store at controlled room temperature of 59°–86° F (15°–30° C). Protect product from light.

For technical assistance or to report adverse drug reactions, please call 1-800-338-3659.

Manufactured by: Virbac AH, Inc. Fort Worth, TX 76137

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