

what's the take-home?

INSIGHTS FROM CLINICAL CASES . PRESENTATION

Juvenile Cellulitis

Autumn P. Davidson, DVM, MS, Diplomate ACVIM (Internal Medicine), University of California, Davis

A 10-week-old, 8-kg, female Labrador retriever was examined for lameness and progressive cutaneous lesions several weeks in duration.

At 6 weeks of age, the puppy was examined by the referring veterinarian for pustules on the eyelids and inner pinnae. The puppy had 9 unaffected littermates, was fed commercial growth-formula kibble, and was unvaccinated. Cytologic evaluation of a pustule identified neutrophilic inflammation. Amoxicillin/clavulanic acid (14 mg/kg PO Q 12 H) was dispensed. A week later, the cutaneous lesions progressed to involve the ventral thorax and inguinal regions, and mandibular lymphadenomegaly was noted. At that time, the patient was additionally given 5 mg prednisone PO Q 12 H. Five days later, she was anorexic and febrile. A hemogram showed mild anemia (hematocrit 28%, regenerative); chemistry panel changes were typical for her age. After 4 days of hospitalization for IV fluid and cefazolin therapy, the patient was discharged on cephalexin (20 mg/kg PO Q 12 H) and 15 mg prednisone PO Q 12 H. She improved clinically; after 10 days, the prednisone was tapered to 5 mg PO Q 48 H.

One week later, new cutaneous lesions were noted by the owner, prompting referral to the Veterinary Medical Teaching Hospital. Physical examination identified lethargy, body condition score 7/9, and normal vital signs. Marked lichenification, crusting, alopecia, and hyperpigmentation were present on the periocular, muzzle, and ventral abdominal skin. Pustules were present on the medial pinnae. The mandibular



Pustular lesions on the muzzle



Coalescing ventral thoracic lesions

ASK YOURSELF ...

This puppy was treated with appropriate drugs for the presumptive diagnosis of juvenile cellulitis. Why did treatment fail?

- A. The dose of prednisone was not immunosuppressive.
- B. Initiation of immunosuppressive therapy was delayed, and therapy was discontinued too rapidly.
- C. The diagnosis was not confirmed, which is especially important when response to therapy is problematic.
- D. All of the above

lymph nodes were enlarged and painful. The oral cavity was normal with deciduous dentition and mild brachygnathia. Thoracic auscultation was unremarkable. The abdomen was relaxed with no masses or organomegaly. Gait was normal.

continues

INSIGHTS FROM CLINICAL CASES . DISCUSSION

Correct Answer: D All of the above

Juvenile cellulitis is a progressive, granulomatous, pustular disorder of puppies. It is most common in dogs younger than 4 months of age but is occasionally reported in dogs up to 4 years old. The eyelids, pinnae, lips, chin, muzzle, paws, abdomen, thorax, vulva, prepuce, and anus can be affected with lesions that fistulate, drain, and crust. Lymphadenomegaly, most commonly mandibular and superficial cervical, can be distant from the affected skin sites and is often painful. Pustules and lymph nodes are usually sterile when cultured. Superficial cutaneous flora can be cultured from open, draining lesions (**Figure 1**). Pyrexia, anorexia, sterile suppurative painful arthritis, and an inflammatory hemogram can occur. The diagnosis is confirmed by histopathologic evaluation but is commonly made on the basis of clinical appearance.

The predominant inflammatory cell in juvenile cellulitis, characterized by light and electron microscopy and immunohistochemical staining, is an epithelioid macrophage. Histopathologic confirmation was important in this case because of the apparently incomplete response to therapy. Skin biopsies were obtained with the patient under local anesthesia with 2% lidocaine. Histopathologic evaluation identified severe, chronic, multifocal coalescing pyogranulomatous panniculitis with fibrosis, diffuse hyperplasia, and mild acute focal periadnexal dermatitis. Special stains were negative for infectious agents.

The puppy was discharged on 2.2 mg/kg prednisolone PO Q 24 H and 30 mg/kg griseofulvin PO Q 12 H with food. Griseofulvin therapy offers



Large draining lesion in inguinal skin



Cicatricial lesions at 8 months of age

TAKE-HOME MESSAGES

- Juvenile cellulitis (puppy strangles) requires aggressive immunosuppressive therapy early in the course of disease for resolution and to avoid the sequelae of cicatricial lesions.
- Griseofulvin therapy offers an apparently effective treatment without the side effects of corticosteroids and enables earlier tapering when used in conjunction with them. The use of griseofulvin as sole therapy could be attempted in early cases.
- Vaccination of puppies undergoing immunosuppressive therapy is not advised, and they must be strictly isolated from sources of infectious disease.

an apparently effective treatment without the side effects associated with corticosteroid administration, enabling discontinuation of corticosteroids sooner in the course of the disease. It has been reported to be effective as sole immunomodulatory therapy (14.2 to 34 mg/kg PO Q 12 H). Griseofulvin is postulated to induce downregulatory signals within the lesions.

A diet for large breeds was also suggested. Vaccination was delayed. The puppy was reevaluated on a weekly basis over the next month. After 1 month of therapy, she was determined to be free of new lesions. Prednisone was tapered over a 4-week period. Tapering of prednisone

was delayed until no new lesions were identified; the taper was continued progressively as no lesions recurred. Griseofulvin was continued for an additional month and then discontinued. The puppy was routinely vaccinated at 5 and 6 months of age.

At 8 months of age, she is free of new lesions but has residual cicatricial lesions (**Figure 2**). ■

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See Aids & Resources, back page, for references, contacts, and appendices.