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# Canine Perianal Fistula — Medical Approach

Shadow, a 7-year-old neutered German shepherd dog, was presented with signs of tenesmus, dyschezia, licking of the anal area, and mucopurulent anal drainage with an odor.

**History.** These signs had been present for more than a year but had progressively worsened.

**Physical Examination.** Shadow was reluctant to have his tail lifted. Following sedation, a rectal examination revealed mild thickening (2 to 3 cm) inside the anus. There were multiple draining tracts within the entire circumference of the anus (**Figure 1**).



Appearance of anal area at initial presentation



## ASK YOURSELF ...

For this advanced case of perianal fistula, what is the approach to management that is most appropriate and gives the best chance of a successful outcome?

- A. Surgical management with a laser to ablate each fistula
- B. Surgical management with derroofing of each fistula, followed by electrocoagulation or fulguration
- C. Administration of prednisone and cephalexin for several weeks
- D. Treatment with the immunosuppressive drug cyclosporine because perianal fistulas in German shepherd dogs are due to an immunologic defect that affects the colon as well as the perianal area

## Correct Answer: D Treatment with cyclosporine

The cause of perianal fistulas remains unclear. German shepherd dogs are the most common breed affected, but fistulas may be seen in other breeds, such as Irish setter dogs. Many of the breeds in which perianal fistulas occur have broad sloping tail heads, which may predispose them to fistulas. In addition, there is a reported link between colitis in the German shepherd dog and perianal fistulas.<sup>1</sup>

**Treatment Options.** One treatment for perianal fistulas advocated in the past is tail amputation. Surgical treatment (surgical ablation or fistula deroofing) has also been incorporated into treatment regimens, but has generally been replaced by the use of immunosuppressive drugs.

The response to immunosuppressive drugs, such as cyclosporine or prednisone, is encouraging (**Figure 2**). Azathioprine, another potent immunosuppressive agent, may be tried if prednisone or cyclosporine is unsuccessful. This author has not had to resort to its use.

Surgery is now usually reserved for cases that involve the anal sacs or for selective fistulas that do not respond to medical management.

**Cyclosporine.** In 1997, Matthews and colleagues performed a study in which 20 German shepherd dogs with perianal fistulas were treated with cyclosporine or a placebo.<sup>2</sup> At 4 weeks, perianal fistulas in all dogs in the cyclosporine group had improved compared with 70% of those in the placebo group. At 16 weeks, 85% of the perianal fistulas in the dogs treated with cyclosporine had completely healed. However, lesions recurred in 41% of dogs after discontinuation of the drug; these dogs required additional cyclosporine treatment or were considered for surgical excision.



Appearance of anal area after 8 weeks of treatment with cyclosporine

A downside to cyclosporine therapy is its expense. Also, while the drug is best absorbed on an empty stomach,<sup>3</sup> some dogs cannot tolerate cyclosporine without food due to gastrointestinal upset. One possible way to decrease

costs is to combine cyclosporine with ketoconazole (2.5 to 10 mg/kg), a drug that decreases clearance of cyclosporine by the liver as well as acting as a competitive binder. This combination could lead to savings of 30% to 80%.

The starting dosage of cyclosporine is 1.75 to 3 mg/kg Q 12 H. The microemulsified formulation is more readily absorbed. Many generic forms of cyclosporine are available for human use, but cyclosporine A (Atopica; Novartis, www.novartis.com) is the only form approved for use in animals. Cyclosporine is often combined with an antibiotic or a novel protein diet (ie, fish/potato, rabbit/potato) (see **Table** on next page).

**Additional Options.** When applied locally, the immunosuppressive ointment tacrolimus has a mechanism of action similar to that of cyclosporine.<sup>4</sup> Although expensive, tacrolimus can be used with cyclosporine therapy or if small fistulas remain or recur.

In the case of financial constraints, prednisone in place of cyclosporine has shown some bene-

continues

### TAKE-HOME MESSAGES

- In German shepherd dogs perianal fistulas are an immunologically based, inflammatory disease of the entire large bowel; they are not cases of sole fistulas in the perineal area.<sup>5,6</sup>
- Perianal fistula is a diagnosis of exclusion; it typically occurs in dogs 5 to 7 years of age. The major differential diagnoses are anal sacculitis with rupture and squamous cell carcinoma.
- Fistulas are best treated medically with immunosuppressive drugs such as cyclosporine. Novel protein diets, good hygiene of the anal area (including clipping the hair and wiping or cleaning the anal area with a disinfectant after bowel movements), and tacrolimus are beneficial.
- This condition is expensive to treat.
- Owners need to be aware that although most dogs improve with medical management, a significant number will relapse. It may take 4 to 6 weeks of therapy to see significant improvement. For those dogs that relapse, intermittent therapy with cyclosporine or prednisone maybe advised. Surgery is reserved for cases with anal sac involvement or fistulas that do not respond to medical management.

fit. Since many owners object to the side effects of prednisone, another option is to try azathioprine (1 to 2 mg/kg orally Q 24 H). This may be combined with prednisone (1 mg/kg orally Q 12 H for 2 weeks followed by 0.5 mg/kg Q 12 H). Ancillary antimicrobial therapy may be a beneficial option (see **Table**). ■

### Options for Medical Management of Perianal Fistula

#### Option 1

Cyclosporine (microemulsified): 1.75 to 3 mg/kg Q 12 H for 16 weeks

Sulfasalazine: 1 g Q 8 H for 6 weeks *or*

Cephalexin: 22 mg/kg Q 8 H for 6 weeks

Novel protein diet

#### Option 2

Cyclosporine: 1 mg/kg Q 12 H for 16 weeks

Ketoconazole: 10 mg/kg Q 24 H for 16 weeks

*The addition of ketoconazole can reduce the cost of cyclosporine by 30% to 80%.*

Sulfasalazine or cephalexin at Option 1 dosage

Novel protein diet

#### Option 3

Prednisone: 1 mg/kg Q 24 H for 4 weeks, followed by 0.5 mg/kg Q 24 H for 8 weeks

Sulfasalazine or cephalexin at Option 1 dosage

Novel protein diet

#### Option 4

Azathioprine: 1 to 2 mg/kg orally Q 24 H for 16 weeks

Prednisone: 1 mg/kg orally Q 12 H for 2 weeks; then 0.5 mg/kg Q 12 H for 14 weeks

Sulfasalazine or cephalexin at Option 1 dosage

#### Notes

The use of prednisone in place of cyclosporine drastically reduces the cost of treatment. Side effects of high doses of prednisone are increase in water consumption and frequency of urination. This treatment option appears to give good clinical results.

Tacrolimus ointment, 0.10%, may be added to any treatment option. Tacrolimus may allow shortening of drug administration time.

Patients should be reevaluated monthly, under sedation, until fistulas completely resolve. The drug therapy may be adjusted depending on the progress of the patient. Following 16 weeks of therapy and good response to treatment, clients are instructed to maintain the novel protein diet, practice good anal hygiene, and monitor the anal area for fistula recurrence.

If fistulas are still present at the end of 16 weeks or if there is recurrence; then one of the medical protocols is initiated again. If there is limited to no improvement following 16 weeks of therapy, surgery to derroof each fistula followed by fulguration is recommended.

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

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### Legislation

#### Uniform Emergency Practitioners Act

Laws aimed at breaking legal hurdles that prevented hundreds of doctors and nurses from volunteering to help Katrina victims in 2005 are gaining momentum in states across the nation. The legislation would allow veterinarians, physicians, nurses, pharmacists, coroners, and emergency medical technicians who are not licensed in the states affected by disaster to get quick authorization to provide medical help. The legislation would also protect practitioners from lawsuits.—*USA Today 10/9/07*

### Advisement

#### Legal Wellness Check

Veterinary law specialist Frank C. Muggia advises that veterinarians schedule regular “check ups” with legal counsel. Tailoring forms to limit financial liability, getting advice on how to word recommendations to clients, and periodically examining your business goals are just a few ways to protect your professional health. Mr. Muggia’s presentation at the recent NAVC Conference is available in the *NAVC Proceedings*.—*Press release 12/13/07*

#### Heska Introduces the DRI-CHEM 4000 Chemistry Analyzer

FUJIFILM Corporation has entered into an exclusive agreement with Heska to supply the DRI-CHEM 4000 chemistry analyzer and affiliated consumables for the North American veterinary market. Heska and FUJIFILM collaborated on the system, which offers a broader menu of tests than Heska’s previous chemistry instrument. DRI-CHEM 4000 uses dry-slide technology to perform multiple test panels or individual tests.—*Press release 11/5/07*

