

# **Steroid Trials in Dogs and Cats - The Good, The Bad & The Frustrating**

A clinical scenario I face almost on a daily basis is a pet that is presented to me for failure to positively respond to a steroid trial initiated by a family veterinarian. A primary care doctor initially evaluated the fur baby, and subsequently made a presumptive clinical diagnosis of a disease that is treated with a steroid. No confirmatory diagnostic testing was performed, but rather the family veterinarian prescribed the medication (most commonly prednisone or prednisolone) based on his/her presumptive clinical diagnosis. A pet may respond positively, subtly suggesting the doctor's clinical guess was correct. Or the pet's condition may fail to improve, raising doubts about the presumptive clinical diagnosis. This common situation raises important questions. Was definitive diagnostic testing recommended? If yes, why did the family decline the recommendations? If no, why wasn't definitive diagnostic testing recommended? Why did the doctor feel treatment based on a clinical gut feeling was more appropriate than determining a definitive diagnosis?

Pet parents who seek the counsel of a board-certified veterinary specialist are uniquely dedicated to their pet's healthcare - they are willing (and typically able) to invest time, effort and finances to maximize the likelihood of a positive outcome. I'm privileged to be able to meet many wonderfully dedicated pet parents every day. They bring their sick fur babies that aren't getting better to me for help. We spend a lot of time talking about their pet's medical history and I perform thorough physical examinations. I make recommendations for both diagnostic testing to obtain a definitive diagnosis and treatments to improve a pet's quality of life. Parents either follow my recommendations or they decline them. Occasionally a family simply can't heed my recommendations due to financial limitations.

This is where my job becomes tricky. Similar to the primary care doctor who initially treated a pet based on his/her clinical gut feeling, I, too, have to come up with a plan to try to help a pet without having all of the necessary information, without having a definitive diagnosis. I have to treat a pet based on my clinical

experience, on a medical “best guess” – this is called empirical therapy. *Empirical therapy can become particularly tricky if a steroid is involved.* So I wanted to take some time to explain some of the real limitations of empirical steroid therapy, and to illustrate my points, I’m going to share a common example.

Let’s say you have a geriatric Maltese that you have noted has been intermittently vomiting for approximately one month. As a concerned pet parent, you bring your dog to her primary care doctor for evaluation.

## **The first round of steroids...**

The doctor’s physical examination documents your fur baby has lost a pound of body weight since her last examination six months ago. The family veterinarian runs some preliminary blood tests and takes some radiographs (x-rays) of the abdomen, but all of these tests are normal. Suspecting your dog is living with dietary indiscretion (gastrointestinal upset that occurs when a dog eats “something” it shouldn’t and that “something” wreaks havoc on the gastrointestinal tract as it passes through it), the primary care doctor prescribes an antibiotic and an anti-vomiting medication. You administer these medications consistently for the next week, but your dog’s vomiting persists, she now starts to leave food in her food bowl, and she develops intermittent diarrhea.

## **The second round of steroids...**

You bring her back to the doctor for further evaluation, and a test for pancreatitis is performed; this test also comes back normal, so the doctor prescribes another antibiotic, a special diet, an appetite stimulant and a different anti-nausea medication due to suspicion for inflammatory bowel disease (IBD). You try these therapies for a couple of weeks, but your dog’s condition simply doesn’t improve.

## **The third round of steroids...**

You return to your family veterinarian for the third time. You’re frustrated. You’re concerned about your dog. The family veterinarian recognizes this, and truly wants to help. The doctor still really suspects your pet is living with IBD, and based on that suspicion, prescribes a steroid called prednisone; this drug is a mainstay medication used to treat IBD. You faithfully administer this medication, and some of your dog’s clinical signs positively respond to the modified therapy

over the next couple of weeks. Her appetite and the consistency of her feces improve, but intermittent vomiting and weight loss persist. So you call your family veterinarian for more help, and the doctor recommends you pursue a consultation with a board-certified internal medicine specialist.

## **The consultation with the specialist...**

The specialist spends a lot of time asking you questions about your dog's medical history and she performs a complete physical examination. She tells you that she shares your family veterinarian's concern that your dog is living with a primary disease of the gastrointestinal tract (GIT). She also tells you that she is most suspicious for either IBD or a GIT cancer called lymphoma. While the specialist says she understands the logic of your dog's previous treatments, she also tells you that currently the only way to definitively diagnose IBD (or GIT lymphoma) is to obtain biopsies from your dog's GIT. You ask the specialist why biopsies weren't recommended before now, but the specialist gently says she can't answer that question because she has only just met your pet - she wasn't present at your pet's previous evaluations with your family veterinarian. Since you want to know definitively if your dog is living with IBD or cancer because you want to treat her as appropriately as possible, you tell the specialist that you want to have the biopsy procedure performed as soon as possible. But this is easier said than done. Why?

## **Aye, there's the rub...**

Recently your primary care doctor prescribed prednisone based on a clinical suspicion for IBD. As this steroid is commonly used to treat this disease and your pet's condition mildly improved with its administration, one can surmise the drug is helping - at least somewhat. But performing GIT biopsies on a pet receiving steroids can be troublesome.

Steroids change biopsy results: Steroids like prednisone are used to treat both IBD and GIT lymphoma. These drugs help reduce GIT inflammation in IBD patients. Steroids may alter the morphology of tumor cells and make confirmation of a diagnosis of lymphoma quite challenging. If one is going to ask a pet to go through a biopsy procedure, one needs to trust the results will be accurate.

Steroids can negatively affect tissue healing: Steroids impair tissue healing through antagonistic effects on tissue growth factors and collagen deposition.

Board-certified veterinary surgeons are quite hesitant to pursue surgery to obtain GIT biopsies in patients receiving steroids because they want to avoid incisional complications.

Pre-treatment with steroids in lymphoma patients can affect outcome: Steroid use for more than a few days before starting chemotherapy can induce multi-drug resistance. Response durations to chemotherapy are seemingly reduced for dogs pre-treated with prednisone. One study even showed worse outcomes for dogs that were treated with prednisone for more than two weeks prior to initiating chemotherapy.

## **The take-away message about steroids...**

Obtaining a definitive diagnosis of your pet's disease process should always be a priority. With a definitive diagnosis, a veterinarian can prescribe the most appropriate medication(s) for your fur baby. While performing the recommended diagnostic testing isn't always possible, a pet parent should always know how one can obtain a definitive diagnosis. S/he should also know the possible benefits and certainly the limitations of empirical therapy, particularly if that therapy includes a steroid.

Wishing you wet nosed kisses,

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To find a board-certified veterinary emergency and critical care specialist, please visit the [American College of Veterinary Emergency and Critical Care](#).

To find a board-certified veterinary surgeon, please visit the [American College of Veterinary Surgeons](#).