

Adrenal Gland Disease in Ferrets

- Adrenal gland disease usually affects adult ferrets (older than 2 years).
- The most common clinical sign is hair loss.
- Treatment may involve surgery or medication.

What Causes Adrenal Gland Disease in Ferrets?

Adrenal gland disease is, unfortunately, a common disease of pet ferrets in the United States. Most affected ferrets are older than 2 years. While the exact cause of this condition has not been determined, it is believed that spaying and neutering ferrets at an early age plays a role. This is problematic because failing to spay females can result in life-threatening illness, while neutering males reduces odor and aggression. Removal of the testes or ovaries removes hormonal influences that appear to affect the adrenal gland. In the absence of these influences, the adrenal glands may overproduce several sex hormones, causing a variety of clinical signs. In some cases, the overactive gland can eventually become cancerous. Genetics may also play a role in the development of adrenal gland disease.

What Are the Clinical Signs?

The most common sign associated with this condition is hair loss, particularly on the tail, hips, and shoulders. Some ferrets may become extremely itchy, and some have an oily appearance to the fur. Female ferrets may develop swelling of the vulva and, occasionally, a discharge. Behavioral changes such as increased aggression are also sometimes observed.

In male ferrets, the prostate may become enlarged, resulting in difficulty urinating. This is an emergency situation. If you have a male ferret that is straining to urinate, veterinary care is required immediately.

Ferrets with any of the conditions listed above could have an adrenal gland problem and should be examined by a veterinarian.

How Is the Problem Diagnosed?

Adrenal gland disease can be diagnosed by measuring hormone levels in a sample of the ferret's blood. If

the hormone levels are elevated above normal, adrenal gland disease is present. Another way to diagnose this problem is with abdominal ultrasound. The ultrasound exam is a noninvasive way of visualizing the internal organs. It allows the veterinarian to determine which adrenal gland may be affected as well as whether there are obvious abnormalities in other abdominal organs. Exploratory surgery, which is performed based on the history, clinical symptoms, and physical examination, is another means of identifying enlarged adrenal glands or masses.

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How Are Ferrets Treated for Adrenal Gland Disease?

Several options are available for the treatment of adrenal gland disease. Surgical removal of the affected gland is the preferred treatment. Surgery allows direct inspection of both adrenal glands as well as the other internal organs. If abnormalities are noted in one or both adrenal glands, the glands can be removed, and other abnormalities can be investigated or addressed at the same time. The left adrenal gland can typically be removed without complication. The right adrenal gland lies very close to a major blood vessel called the *caudal vena cava*, making removal more difficult. For right-sided adrenal gland disease, more advanced surgical techniques may be needed. While surgery is curative in most ferrets, it is important to know that in some cases, an adrenal mass may recur, or grow back.

Hormone therapy can also be employed in treating adrenal problems. The hormone leuprolide acetate (Lupron) is commonly used. Leuprolide mimics the effects of a hormone called GnRH (gonadotropin-releasing hormone). This ultimately causes the body

Common Conditions

to stop producing GnRH, thus decreasing stimulation of the adrenal glands. Lupron is usually given as one injection every 6 to 8 weeks. While leuprolide controls the signs of adrenal gland disease, it does not modify a diseased adrenal gland or prevent tumor development. Even with regular Lupron injections, an enlarged adrenal gland may continue to grow or become a tumor.

A newer treatment, similar to Lupron injection, is the deslorelin acetate (Suprelorin) implant. Like

leuprolide, deslorelin mimics GnRH and blocks adrenal stimulation. The advantage of deslorelin over leuprolide is that the implant lasts for up to 2 years in the average ferret. Additionally, there is some evidence that deslorelin can shrink adrenal tumors or slow their development.

If your ferret has any of the signs listed above, or if you have questions about adrenal gland disease, please consult a veterinarian with experience treating exotic pets.