

Drug Hypersensitivity Reaction

A 5-year-old spayed golden retriever with a history of lethargy and weight gain was diagnosed with hypothyroidism and supplemented with a commercial formulation of levothyroxine. After 19 days, the dog was presented for pyotraumatic dermatitis that continued to worsen over the next 5 days despite treatment with triamcinolone and ampicillin. The pyotraumatic dermatitis spread, and generalized erythema and areas of epidermal desquamation were present.

A possible adverse drug reaction to the thyroid hormone supplementation was suspected. The drug was discontinued. The dog was treated with povidone iodine, ciprofloxacin, and fish oil

supplements, and the lesions completely resolved within 3 weeks. A different formulation of thyroid hormone supplementation was prescribed, and there was a recurrence of generalized erythema and desquamation within 2 days of administration. This drug was discontinued and the dog's hypothyroidism remained untreated for the next 9 months. Both thyroid supplements shared 2 common inactive ingredients: magnesium stearate and polyvinylpyrrolidone. The dog was treated with a third supplement that did not contain these ingredients and did not develop new lesions over a 1.5-year follow up period. The authors conclude that this dog likely had an idiosyncratic drug reaction to 1 of the 2 inactive ingredients present in the first 2 thyroid hormone supplements and that veterinarians should be aware that such reactions can occur.

Commentary

This case study represents the first published report of a canine drug hypersensitivity reaction involving levothyroxine, though there have been previous

anecdotal reports. Drug reactions often present a diagnostic challenge, and presumptive diagnoses are usually based on history and consistent clinical signs. In this case, a drug rechallenge was performed and dermatologic signs reoccurred within 48 hours; this strongly supports the diagnosis of an immune-mediated reaction. Interestingly, the reaction was likely against 1 of the inactive ingredients. Long-term treatment was continued using a different product. Drug formulation is an important consideration in suspected drug reactions, particularly when alternate treatments are not available. Although this report only includes a single case, clinicians should be aware of the possibility of hypersensitivity reactions when prescribing levothyroxine and monitor for consistent clinical signs after initiating therapy. —Karen A. Moriello, DVM, DACVD

Source

Lavergne SN, Fosset FTJ, Kennedy P, Refsal KR. Potential cutaneous hypersensitivity reaction to an inactive ingredient of thyroid hormone supplements in a dog. *Vet Dermatol.* 2016;27(1):53-e16.

New Ovariohysterectomy Technique

The standard approach to ovariohysterectomy (OVH) involves double ligation of the ovarian pedicle (PDL) and uterine body with suture before removal of reproductive tissue. A newer technique, the pedicle tie (PT), involves tying the ovarian pedicle onto itself, similar to feline castration. Potential benefits include decreased operative time and cost and less foreign material left within the abdomen. Despite its growing popularity, particularly in shelter medicine, no studies have reported outcomes using this technique.

This prospective study evaluated hemorrhage-related complications and compared surgical times in 2136 kittens and cats undergoing OVH using the PT technique vs PDL. Three experienced

spay/neuter veterinarians performed all surgeries. Six of the cats (0.281%) experienced a hemorrhage-related complication. Five were identified intraoperatively and resolved with suture ligation; 1 was suspected postoperatively and a bleeding pedicle was ligated with suture on surgical revision. The time to complete an OVH using PT in kittens (4.7 ± 0.1 mins) was significantly shorter when using PDL (6.7 ± 0.1 mins). A significant time reduction was also reported for adult cats using PT (5.0 ± 0.2 mins) vs PDL (7.0 ± 0.2 mins). The authors conclude that PTs are safe and significantly faster than the traditional method of ovarian pedicle ligation in cats.

Commentary

High-volume spay-neuter clinics have a

central role in controlling pet overpopulation. In this environment, efficiency of patient processing is extremely important; however, it must not compromise patient safety. The pedicle tie technique is a fast, safe, effective method for OVH in cats when performed by experienced veterinarians. This was clearly evident in this study, as operating time for the entire OVH procedure was 5-7 minutes regardless of technique. It is important to first consider the learning curve, the application to individual patients, and the environment when interpreting data from this type of study. For the purposes of training veterinary students, the PT procedure does not replace the fundamental surgical skills gained by learning and practicing the traditional surgical procedure.—Jason Bleedorn, DVM, DACVS

Source

Miller KP, Rekers W, Ellis K, Ellingsen K, Milovancev M. Pedicle ties provide a rapid and safe method for feline ovariohysterectomy. *J Feline Med Surg.* 2016;18(2):160-164.