

Insights into veterinary endocrinology

by Dr. Mark E. Peterson

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Q & A: Best Test to Determine if Cat is Cryptorchid or Castrated

My patient is a 4-year old, male "neutered," DSH cat who presented about 1 month ago for urine marking. He was adopted at a local shelter as a neutered male at about 8 weeks of age and has displayed urine marking since he was about a year of age. According to his owner, his urine also has always had a very strong odor.

On physical examination, he looks like an intact tom cat — very muscular and "jowly." I was unable to palpate a testicle in the inguinal region.

The owner wants to confirm a retained testicle prior to referral to a surgeon for exploratory. What is the best test one can do to determine if a male cat is really neutered or has a cryptorchid testicle?

My Response:

The easiest thing to do is to look for "barbs" on the penis. A intact male cat's penis has a band of about 120–150 backwards-pointing spines, which are about one millimeter long (1). Once the cat is castrated, these penile barbs will disappear.



Follow-up question:

So if he has no barbs, then he has been castrated. If barbs present, then testes are present — a very direct correlation?

My Response:

Well, yes and no. The finding of spines on a cat's penis indicate the presence of testosterone in the cat's body. The penile spines act as a bioassay for testosterone. This testosterone could be of adrenal origin (ie, an androgen-secreting adrenocortical tumor) but this is unlikely in this cat since he has been symptomatic since a year of age. You need to also exclude exposure to human testosterone creams or gels that this cat may have been exposed to. If no use of this hormone replacement therapy in household, then a retained testicle is very likely.

There are other tests we can do (ie, GnRH or hCG stimulation tests) but in cats, I don't do these —I check the penis. This bioassay is the cheapest and best kind of assay.

References:

1. Aronson LR, Cooper ML. [Penile spines of the domestic cat: their endocrine-behavior relations](#). *Anat Rec* 1967;157:71–78.
2. Parker-Pope T. [When hormone creams expose others to risk](#). *The New York Time*. October 25, 2010.

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