Does anyone have any information about the long term (several months) treatment of male dogs with ketoconazole? I have found information on the deleterious effects on testosterone synthesis but this was reported following short courses of therapy and was completely reversible after discontinuation of therapy. I have a 2.5 year old, male Weimaraner that was treated for 10 months for coccidiomycoses (around the time of puberty) and he is now quite markedly oligospermic and teratospermic. He has been off therapy for over 12 months. His testicles and epididymides/cords palpate normally. Libido is average - but it was his very first collection ever and he is a nervous dog to begin with. I do realize that part of the oligospermia may be because it was the first collection and he was nervous, but there are a very high number of pyriform and microcephalic heads and broken/stump midpieces so am inclined to believe that the oligospermia may be real as well. I will be collecting him again, but was interested to find out whether anyone had any more information on the potential long term effects of long term ketoconazole therapy.

Thanks in advance. Cheryl

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Hi Cheryl,
I don't have information on ketoconazole given at puberty, but I did have a terrier treated with griseofulvin at puberty that only ever gave us round spermatids in the second fraction, lots of them. I was never sure of the cause, but always wondered... I also did not know why these spermatids were released since "normally" one would see azoospermia when spermatogenic arrest occurs. All I remember finding on griseofulvin at that time (10 to 15 years ago) was that griseofulvin could act as an estrogen in children. I'm thinking that the significant issue is puberty, no just length of treatment.
Full of cheer.
Cathy

Hi, Cheryl,
When I was in Arizona (1 yr) we saw SO MUCH coccidioidomycosis, nearly every week... although most of my patients there were either spayed or neutered...

Could it be that the stud dog still has it, which could be contributing to the poor semen quality? Do you have any recent "cocci" titers and current blood work (we used "desert dx panels" from Idexx or Antech)? Any compliants of lameness, coughing, weight loss, seizures, occ. skin issues, etc.? We generally started out with fluconazole 10mg/kg, BID, once daily, 1st week (check for vomiting), then Bid, for 6 months, initially. Then we rechecked titers. Many needed longer treatment. If bone or brain involvement-long term tx for life is needed.
We generally only used ketoconazole if Rx $ had to be kept to a minimum.

Just my thoughts, sorry that I have not answered your initial questions about steroid suppression in puberty.

Audrey A. Kelleman, DVM, DACT

Well, that is what I was wondering - does the ketoconazole have any effects on the developing germ cells when administered in the peri-pubertal time frame, that could result in permanent dysfunction of spermatogenesis? Does the lack of testosterone during this critical phase of development result in permanent alteration of the local hormonal environment or spermatogenesis?

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Dear Audrey:

The dog was treated by a local internist and is a very healthy dog right now. He is in good body condition and being trained for field trials and doing very well, with no signs of lameness, respiratory or dermatologic disease. I don't know if they did follow up titers or not, but the clinic where he was treated generally does an excellent job in internal medicine. There is no evidence of any inflammation in the ejaculate or in the scrotum, no increase WBC, no blood, normal pH, normal testes size and palpation, just low numbers and poor morphology.

Cheryl Lopate, MS, DVM

Cheryl, Cathy and others:

Hope this might give some thoughts to your question - RAM.
Influence of long-term dietary administration of procymidone, a fungicide with anti-androgenic effects, or the phytoestrogen genistein to rats on the pituitary-gonadal axis and Leydig cell steroidogenesis.

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