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Welcome!

Welcome to the February 2004 issue of VetCom. We here at Abaxis would like to take this somewhat belated opportunity to send our best wishes to you and your family & staff for a happy, healthy and prosperous 2004!

We would also like to thank all of you who visited with us at the North American Veterinary Conference in Orlando last month, and give special thanks to those who were able to make time to join us for our hospitality night. It is indeed a special treat for us to

spend some social time with friends.

In this month's issue, we will be offering a summary article, third in a series, on the subject of equine hypothyroidism. Enjoy.

Guerilla's Marketing

Golden Rule #2: The ability to accurately define your precise market/s dramatically affects your profitability.

Of the many marketing errors committed by small business owners, this is one of the most common and glaring. Can you answer the following: What business are you in and what are you known for?

If you can't answer quickly & concisely,

you are guilty of failing to position yourself clearly. Here's an easy way to gain clarity of focus: make a list of your 10 best clients and ask:

- What do they read?
- To what groups do they belong?
- To what do they respond? (telephone calls, letters, etc)
- How did they first hear about you?
- What are their problems?

Knowing the answers to these questions will help you define your market and more effectively communicate with new prospective clients.

from: Guerilla Marketing Excellence, JC Levinson, Houghton-Mifflin

In the Trenches

various sources

Equine Hypothyroidism?

This is the final segment of a three-part series on controversial topic of equine "hypothyroidism" The segment is intended to offer a summary of recently published findings on the topic.

It is clear that the existence of primary hypothyroidism in the horse is the subject of considerable debate. Horses presenting with typical lethargy, obesity (many with abnormal fat deposits in neck, rump and tail-head regions), and laminitis are often suspected to be hypothyroid and as such are tested for blood thyroid hormone levels. Diagnosis of hypothyroidism is often made by confirmation of decreased levels of thyroid hormone and thyroxine supplementation is subsequently begun. Although recent findings



have demonstrated that the underlying disease in these horses may have little to do with thyroid function, a considerable percentage of patients do respond to therapy as thyroid hormone does have a stimulatory effect on the body's metabolism. Although supplementation may alleviate clinical symptoms, this approach may be failing to accurately diagnose and treat the condition at hand.

Because blood thyroid levels in the healthy horse are quite variable, blood hormone measures do not necessarily serve to accurately reflect thyroid function, which in and of itself can be problematic. A number of researchers at facilities such as University of Tennessee, Purdue and elsewhere are currently take the position that that horses rarely if ever, suffer from primary hypothyroidism, and that indeed other underlying conditions are to blame for the symptoms of these "easy-keepers".

Ongoing work by Dr Nicholas Frank, et al, at the University of Tennessee as well as studies conducted elsewhere have shown, among other things, that surgically induced hypothyroidism (via thyroidectomy) does not in fact, appear to be a factor in the pathogenesis of hyperlipemia in horses. He and others have shown that although the amount of fat being transported in the blood was increased after removal of the thyroid gland, none of the horses studied showed the clinical signs of obesity, typical fat deposits and laminitis frequently blamed on hypothyroidism. Thyroid gland removal demonstrates that

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VetCom

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the lack of circulating thyroid hormone can not be the sole contributor to the symptoms seen in these horses.

The alternate diagnosis of Metabolic Syndrome, otherwise known as Peripheral Cushing's Disease, has been purported to be the underlying disease in many of these cases. Under normal conditions, the level of cortisol (produced by the adrenal gland) is regulated by a negative feedback system. Corticotropin-releasing hormone (CRH- produced in the hypothalamus) stimulates adrenocorticotrophic hormone (ACTH released from the pituitary), which stimulates the subsequently stimulates cortisol release. The main effects of this hormone include (stimulation of) conversion of amino acids to glucose in the liver, elevation of blood sugar levels and promotion of glycogen storage in the liver. A significant and sustained increase in cortisol levels can result in the classic signs of Cushing's disease (obesity, laminitis, etc). The traditional overnight

dexamethasone suppression test (DST) however has shown that a number of these horses have normal pituitary function.

Although this disease is still not well understood, Peripheral Cushing's Syndrome (PCS), or Metabolic Syndrome, cases appear to be a function of increased cortisol activity in the peripheral tissues (skin, fat & laminar tissues) with normal thyroid function as established by administration of thyrotropin-releasing hormone (TRH). There are indications that these PCS horses have increased (oxoreductase activity of 11-beta hydroxysteroid dehydrogenase) conversion of inactive cortisone into active cortisol in the peripheral tissues, mirroring the human central obesity (or metabolic syndrome) disorder, which is also incompletely understood. Additionally, these horses demonstrate elevated serum insulin concentrations.

Dr. Emily Graves (Michigan State University) suggests that peripheral Cushing's syndrome affected horses be treated with corrective trimming and shoeing, non-steroidal anti-inflammatory

drugs and a diet and exercise program to encourage weight reduction.

There are several groups continuing to evaluate these topics, a few of which I will list here for your reference. Dr Nicholas Frank's laboratory at the University of Tennessee can also offer guidance and esoteric laboratory services to aid in the differential diagnosis of horses suffering from these symptoms.

Nicholas Frank,
DVM, PhD
University of
Tennessee, College of
Veterinary Medicine

Emily Graves, VMD
Michigan State
University, College of
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Philip Johnson,
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additional reading suggestions on page 4.

Peripheral Cushing's Syndrome (PCS), or Metabolic Syndrome, appears to be a function of increased cortisol activity in the peripheral tissues

Coming Conferences

We'll See You There!

Minnesota VMA
Bloomington, MN
Feb 5-7

Western Veterinary Conference
Las Vegas, NV
Feb 15-18

MidWest Veterinary Conference
Columbus, OH
Feb 26-29

University of PA Annual Conference
Philadelphia, PA
Mar 10-12

Student AVMA
Knoxville, TN
Mar 11-13

AAHA
Tampa, FL
Mar 20-24

Events of Note

Abaxis is pleased to sponsor:
Dr. Teresa Lightfoot
Emergency Presentations – Avian
Avian Anesthesia
Psittacine Neoplasia

**American Animal Hospital
Association
March 23, 2004**

Looking for CE for your local VMA meeting?

Abaxis Representatives are available to present a one-hour, RACE accredited, presentation on the topic of in-clinic wellness programs and diagnostic testing .

DVM- presented clinical programs are also available. To request a speaker at your event, please contact your Abaxis area sales director, or:
jenniferambra@abaxis.com

Abaxis RACE
Provider Number: 77

**Charitable Donation
Program**

Submit your favorite not-for-profit animal organization (e.g. humane societies, etc) for consideration in our Charitable Donation Program. Abaxis will donate a VetScan each April and October to needy medical facilities.
For additional details visit our website.

www.abaxis.com

**VetScan
Summer Externship**

Abaxis is proud to be partnering with the Avian & Exotic Animal Medical Center of Miami, Florida (Don Harris, DVM) to sponsor a summer externship program in avian and exotic animal medicine.
DVMs interested in applying for the Jun-Aug 2004 course or for additional information visit our website:

www.abaxis.com

or contact:

pamconboy@abaxis.com

**Free
Thyro-Tab® Offer**

Just purchase 20 VetScan T₄-Cholesterol rotors and receive 8 bottles (various strength) Thyro-tabs (levothyroxine).
See the abaxis website for details.
Valid through March 31, 2004

**Vet Connection
NEW
Abaxis
Website
Message Board!**

Be sure to visit our new website feature, the Vet Connection, Vet-to-Vet message board for clinical and business queries.

**Looking for a real
Lab Solution?**

For all non-VetScan clinics looking for a new solution to in-clinic diagnostic needs, we offer a free **Test Drive** of our VetScan for 48 hours! We'll even provide you with diagnostic profiles-just to take us for a spin.
Contact your local sales representative for details.

FREE CE!!

RACE accredited programs available correspondence:

**Practitioners Perspectives
on In-Clinic Wellness
Programs-1 CEU**

**Canine Hypothyroidism
1 CEU**

**Basic Hematology
2 CEU**

to order a CE program, or request a topic for a future program, email:
jenniferambra@abaxis.com

Colleague Referrals

Know someone who would benefit from the VetScan system?

send us a referral!

We will gratefully send you a

10-rotor *Thank You* for any referral who ultimately becomes a VetScan customer!

send referrals to:

pamconboy@abaxis.com



*user thoughts on
VetScan*

"The first time I saw the compact VetScan unit by Abaxis, I almost hugged it.

Finally, a reliable unit was available that could eliminate training and time-consuming steps for our busy staff."

*Dr Alice Villalobos
Animal
Oncology &
Consultation*

**Abaxis Contact
Information**

1-800-822-2947

VetCom Issues

*subscribe, unsubscribe
questions, comments*

Pam Conboy, ext. 6604

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Technical Service EXT 2

*technical issues, training
rotor credits, software queries*

Linda Lang, Manager

Customer Service EXT 3

*direct orders, local representative
and VetScan distributor information*

Valerie Campbell, Manager

SALES

Eastern Area Sales Director
Marty Mulroy, ext. 1500

Central Area Sales Director
Randy Knick, ext. 1509

Western Area Sales Director
Jon Stern, ext. 1462

Authorized VetScan® Distributors

<u>Distributor</u>	<u>Telephone</u>
AVSC-American Veterinary Supply	800-869-2510
Barber	800-552-5698
DVM Resources	877-828-1026
Great Western Animal Health Supply	505-822-0999
IVESCO-Iowa Veterinary Supply	800 831-4828
Merritt	800-845-0411
Miller Veterinary Supply	800-880-1920
Milburn Distributions	800-279-6452
Nelson	800-843-3322
Penn Vet	800 233-0210
TW Medical	888 787-4483
VMS-Veterinary Medical Supply	800-533-8674
Vetpo	800-253-7280
Western Medical Supply	800-242-4415



Further Reading:

Johnson, Philip, Metabolic Syndrome in Horse, ACVIM 2003 (also, reprinted in December 2003 VetCom)

Breuhaus, Babetta, Thyroid Function in Horses-Uncovering the Myths , ACVIM 2003 (also, reprinted in October 2003 VetCom)

Frank, Nicholas, et al, Hypothyroidism and Fat Metabolism in Horses: Recent Research Findings, AJVR, Volume 2, Issue No. 3, June 1999.

Frank, Nicholas, et al, Effects of hypothyroidism and withholding of feed on plasma lipid concentrations, concentration and compositions of very-low-density lipoproteins, and plasma lipase activity in horses, AJVR, Volume 64, No, 7, July 2003.

Oglesby, Robert, various articles:
Horseadvice.com

Considerations for Evaluating In-Clinic Laboratory Options

Fortunately, the veterinary practitioner has a number of systems to select from when evaluating in-clinic laboratory options. Competition has a positive effect on product quality and value so be sure to evaluate your options carefully and take the following aspects into consideration:

-Accuracy

the manufacturer should support your efforts to validate an analyzer's accuracy by comparing results with an established reference method

-Precision

perform repetitive testing to demonstrate the reproducibility of results

-User Friendliness

the manufacturer should allow you and your staff to use the analyzer before

purchase to ensure it is the right solution for your clinic

-Value & Cost Effectiveness

be sure to have a complete understanding of cost per **result**-including all the disposables, reagents, calibrators, controls, etc for the system/s you are considering

-Reliability

be sure to understand the maintenance requirements, warranty details and service procedures of the system you are considering

-References

always speak to user-colleagues of the system you are considering-they will be able to give you a good perspective on how the system will work in your practice