



# NATIONAL VETERINARY LABORATORY

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## NEWSLETTER

### Clinical Practice and *Bartonella* Testing:

### Experience from Practitioners in North Carolina and Massachusetts<sup>©</sup>

Evelyn E. Zuckerman, Editor

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#### In This Issue:

For this issue we invited two practitioners, who have tested numerous cats for *Bartonella*, to share their clinical experience and their interactions with the clients of infected cats. Dr. Jack Broadhurst, Cat Health Clinic from Pinehurst, NC (high *Bartonella* prevalence area) and Dr. Ronald Hirschberg, Brockton Animal Hospital, from Brockton, MA (moderate *Bartonella* prevalence area) kindly agreed to submit articles for our summer Newsletter. Dr. Broadhurst has tested only sick cats whereas, Dr. Hirschburg, and his associates, have tested sick cats and many healthy cats, especially cats from shelters. Dr. Broadhurst is the first veterinarian to find a strong association of *Bartonella* with chronic GI disorders: IBD and chronic vomiting and diarrhea.

only a small percentage will present with a true *Bartonella*-associated disease. In the future, the successful veterinarian will be the one who can identify those cases in which *Bartonella* is the primary pathogen. For like the foxtail, until *Bartonella* is identified and treated, the presenting disease will not be resolved.

We have only tested cats with clinical disease during the past 9 months. Our clinical cases are divided into four categories based on their *Bartonella* test results: 1) cats with diseases that were not infected; 2) cats with diseases where 40-50% were infected; 3) cats with diseases where 60-70% were infected and; 4) cats with diseases where 90-100% were infected.

#### The Cat Health Clinic Experience:

The recent introduction of the FeBart<sup>®</sup> *Bartonella* test has given veterinarians the ability to identify cases in which *Bartonella* is either the primary or a contributing pathogen. The Cat Health Clinic began *Bartonella* testing in November of 2001.

We have found that 50-60% of cats with inflammatory bowel disease and moderate gingivitis without halitosis were infected, whereas 90-100% of cats with uveitis, chronic conjunctivitis/blepharitis, chronic vomiting and diarrhea and chronic gingivitis/stomatitis with halitosis were infected.

#### A Practitioner's Experience with Feline *Bartonella* Diseases

**Dr. Jack Broadhurst**  
Cat Health Clinic  
Pinehurst, NC

#### Background:

Veterinarians in the western states have learned to live and work with the *Hordeum jubatum* (foxtail) plant. This plant's awn has been associated with just about every clinical problem in their practices. New graduates are taught that they must consider the foxtail in every case that they handle. Successful veterinarians have learned to accept the foxtail as part of their practice, and understand that when a foxtail is involved, the case will not be resolved until the awn is removed.

Veterinarians living in areas where there is a high prevalence of *Bartonella*-infected cats need to follow the example set by the western states veterinarians. While 35% of a clinic's healthy feline patients may test positive for *Bartonella*,

#### CAT HEALTH CLINIC BARTONELLA TEST RESULTS

**Total: #Infected / #Tested= 35/55 64%**

**Healthy cats: None tested, Expect 31%**

#### Sick Cats:

##### Bartonella-Associated Diseases:

|               |       |      |
|---------------|-------|------|
| Oral Disease: |       |      |
| Gingivitis    | 18/28 | 64%  |
| Oral Ulcers   | 2/3   | 67%  |
| Stomatitis    | 1/1   | 100% |

|                       |     |      |
|-----------------------|-----|------|
| Respiratory Diseases: |     |      |
| URI                   | 1/2 | 50%  |
| Conjunctivitis        | 2/2 | 100% |

|                      |     |      |
|----------------------|-----|------|
| Intestinal Diseases: |     |      |
| IBD                  | 1/2 | 50%  |
| Diarrhea (chronic)   | 1/1 | 100% |
| Vomiting (chronic)   | 5/5 | 100% |
| Uveitis              | 1/1 | 100% |

**Totals: 32/45 71%**

##### Non-Bartonella-Associated Diseases:

|                       |     |     |
|-----------------------|-----|-----|
| Anemia                | 0/3 | 0%  |
| Anorexia              | 2/3 | 67% |
| Cardiomyopathy        | 0/1 | 0%  |
| Eosin granuloma       | 0/1 | 0%  |
| Spleen- Mast Cell Sa. | 0/1 | 0%  |
| Urinary blockage      | 0/1 | 0%  |

**Totals: 2/10 20%**

#### Therapy results:

The clinical response to azithromycin (10mg/kg once daily for 21 days) in infected cats has been remarkable. By the third day, the clinical signs resolved or greatly improved in many cases. In each case, the results were so dramatic that the client readily accepted our recommendations for treatment and flea control to prevent re-infection.

Recent cases include: 1) A cat that vomited every day for 6 1/2 years. The cat stopped vomiting after only 3 days of azithromycin. 2) A cat with chronic conjunctivitis/blepharitis, previous therapies included topical drugs, systemic antibiotics/steroids, hyposensitization for a year, and surgical corrections for corneal sequestra and entropion. After 3 days of azithromycin, the cat opened its eyes for the first time in years. 3) A cat with non-responsive diarrhea/weight loss where the signs resolved in 1 week. All of these cases had been to multiple veterinarians due to the chronic non-responsive nature of their problems. Some of these clients spent years seeking a solution to their cat's problems. The fact that they received a diagnosis and resolution in such a dramatic manner made a lasting impression that has been repeated many times.

## **Bartonella: Effect On The Practice:**

Once we learned that *Bartonella* causes several chronic problematic diseases in cats the nature of our practice began to change. Instead of accepting treatment failures as a part of clinical practice, we now test for *Bartonella* and treat all infected cats. Just as the western veterinarian has learned to identify and remove the foxtail awn before he or she can proceed with the case, we have started to identify and treat *Bartonella*-infected cats.

Being able to identify true *Bartonella* problems within a large population of cats with subclinical bartonellosis has greatly increased the public's awareness of our practice. The FeBart® *Bartonella* test has given us an opportunity to introduce the public health aspects of bartonellosis to our clients. The average age of a person living in Pinehurst, NC is 62 years, and several of our clients have been hospitalized with cat scratch disease. Given this environment, bartonellosis is an easy subject to discuss and testing is readily accepted.

### **About the Author:**

Dr. Broadhurst is the owner of the Cat Health Clinic in Pinehurst, NC. Jack is a 1970 graduate of the Univ. of Georgia College of Veterinary Medicine where he received the Outstanding Senior in Small Animal Medicine Award. He did a small animal internship at the Univ. of Minnesota followed by a residency in medicine and pathology at the Univ. of Georgia. From 1973-76 Jack was an Assistant Professor in Small Animal Medicine at the Univ. of Missouri where he received the Norden Award for Outstanding Teacher. From 1979-80 he was Head of Medicine at the Veterinary Hospital for Special Services, Mt. Kisco, NY and from 1979-87 he founded and was Director of Omni Diagnostics, Inc., Mt. Kisco, NY, which later became part of ANTECH Diagnostics. In 1995 he established the Cat Health Clinic in Pinehurst, NC and presently serves as a board member for the local humane society. Jack summarizes his 32-year career: "I have been there and done that!"

## **Feline *Bartonella* and Public Health**

**Dr. Ronald Hirschberg**  
**Brockton Animal Hospital**  
**Brockton, MA**

### **Introduction:**

The responsibilities of the veterinary practitioner are two-fold. Promoting and assisting in the health of our patients is foremost, yet informing clients of potential human health risks is often of equal importance. Our education emphasizes zoonoses, such as rabies and Leptospirosis, but occasionally falls short with concern over less known transmissible diseases. Bartonellosis is

one of the less known transmissible disease that now requires our attention. We are all aware of the traditional manifestation of feline *Bartonella* as "cat scratch fever," but the list of *Bartonella*- related diseases is ever expanding.

### **The Brockton Animal Hospital Experience:**

At the Brockton Animal Hospital concern for the health of our patients, staff, and clients directed us to baseline testing of all cats for *Bartonella*. Our results are dramatic. To date we have logged 462 patients tested with 159 (34 %) testing positive. We define a positive test as any cat who tests +3 or greater according to the FeBart® test.

### **BROCKTON ANIMAL HOSPITAL BARTONELLA TEST RESULTS**

**Total tests: No. Infected/No. Tested=  
159/462 34%**

**Healthy cats: Total 80/304 26%**

**Healthy cat with: No risk factors:  
10/62 16%**

**Baseline *Bartonella* prevalence for  
Brockton Animal Hospital= 16%**

#### **Healthy Cats with: Risk Factors:**

|                         |               |            |
|-------------------------|---------------|------------|
| Exposed to infected cat | 0/3           | 0%         |
| Fleas                   | 1/3           | 33%        |
| Multi cat household     | 18/51         | 35%        |
| Shelter cats            | 39/133        | 29%        |
| Stray                   | 12/52         | 23%        |
| <b>Totals:</b>          | <b>70/242</b> | <b>29%</b> |

**-Double baseline infection rate**

**Sick Cats: Total 79/158 50%**

#### **Bartonella-Associated Diseases:**

|                        |               |            |
|------------------------|---------------|------------|
| URI                    | 3/7           | 43%        |
| Conjunctivitis         | 1/2           | 50%        |
| Lymphadenopathy        | 0/1           | 0%         |
| Fever                  | 3/4           | 75%        |
| Oral Disease:          |               |            |
| Gingivitis             | 70/137        | 51%        |
| Oral Ulcers            | 1/1           | 100%       |
| Valvular heart disease | 1/1           | 100%       |
| <b>Totals:</b>         | <b>79/153</b> | <b>52%</b> |

**Triple baseline infection rate**

**Non-Bartonella Diseases: 0/5 0%**

### **Our Client's Reaction:**

The client reaction to our program is very positive. Clients who are medical professionals are anxious to learn new information regarding human health implications of any animal disease. The general public, many of whom are familiar with "cat scratch fever" from years ago, is interested in updating their own knowledge. Additionally, households with members that suffer from undiagnosed conditions find the information useful in pursuing their own healthcare.

At our hospital the information regarding *Bartonella* is presented in a precautionary rather than a hysterical manner. Our goal is

to educate and raise awareness, not to shock or scare our clients. We advise our clients that their cats are at considerable risk for three common infectious disease organisms; feline leukemia virus, feline immunodeficiency virus and feline *Bartonella*. We contrast the serious and potentially fatal nature of the first two organisms for cats while explaining that feline *Bartonella* are a group of bacteria that have human health implications and cause curable non-fatal chronic inflammatory feline diseases.

### **Therapy and Public Health:**

A positive FeBart® test will require a 21 day course of an antibiotic (in our hospital we use Rifampin- 10mg/kg once daily), and we request any client with a positive pet to alert all family members and friends who have had significant contact with this pet. Furthermore, if anyone has been ill with an undiagnosed condition, they are advised to inform their physician that they had contact with a cat carrying *Bartonella*. To reinforce the discussion, written materials on *Bartonella*, provided by the National Veterinary Laboratory (see list below), are sent home with the client, and telephone conversations to further clarify concerns are encouraged.

### **Human *Bartonella* Diseases (Feline Origin):**

Cat Scratch Disease  
Bacillary angiomatosis  
Bacillary peliosis  
Febrile bacteremia  
Lymphadenopathy  
Endocarditis & vegetative valvular disease  
Uveitis & neuroretinitis & disciform keratitis  
Cutaneous granuloma & rash  
Neurological disorders- meningoencephalitis  
Osteomyelitis  
Inflammatory bowel disease  
Mononucleosis-like syndrome  
Lyme/*Bartonella* coinfection of CNS

### **Bartonella: Effect On The Practice:**

Our client compliance rate in *Bartonella* testing is extraordinary. There are a multitude of risk factors in our daily environment. While many go unnoticed, those that we can mitigate require our utmost diligence. Several of our clients have been diagnosed with *Bartonella*-related diseases and they find our concern for their families reassuring. The service we provide the community is invaluable.

### **About the Author:**

Dr. Hirschberg is a 1977 graduate of the Ohio State University, College of Veterinary Medicine. He is Hospital Director of the Brockton Animal Hospital in Brockton, MA, an AAHA certified hospital and is co-director, with Dr. Mark Goldberg, of the Easton Veterinary Clinic in Easton, MA. Both practices are full service facilities that provide complete medical and surgical services. Additionally, the practices have strong relationships with local shelters thereby treating a large number of cats with unknown medical histories. Dr. Hirschberg has lectured extensively and provides consulting services for veterinary practices in the areas of practice efficiency and financial management