

The Impact of Tick Borne Disease on Domestic Pets



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Affected Animals

- Discussion limited to domestic dogs and cats
- Horses
- Others?



Tick Borne Diseases

Northeast

Lyme

Anaplasma

Ehrlichia

RMSF

Tick paralysis

South

Babesia

Cytauxzoonosis

Tularemia

Feline Infectious

Anemia

(Hembartonellosis)

Europe

Mediterranean
Spotted Fever

Tick Borne
Encephalitis

Is This New?

- Cats and dogs have always been subjected to tick (and flea) infestations
 - Recently, TBDs have become more prevalent
 - Poses real threat to pets and humans



Why?

TBDs are a result of complex interplay of factors

- Increase pet ownership
- Increased # of pets inside/access to human sleeping areas
- Increase pet travel
 - Transports/rescues
 - Movement of ticks to new geographic areas
- Increased travel to countries with endemic vector borne disease



Why?

- Changes in urban planning
 - Increase tick friendly green spaces to urban areas
- Wildlife protection efforts
 - Increases # of alternate hosts for ticks (ie foxes)
- Climate Change
 - Allows disease to travel North to now warmer climates



How Do I Know My Pet Has TBD?

- Challenging
- Vague/Intermittent symptoms



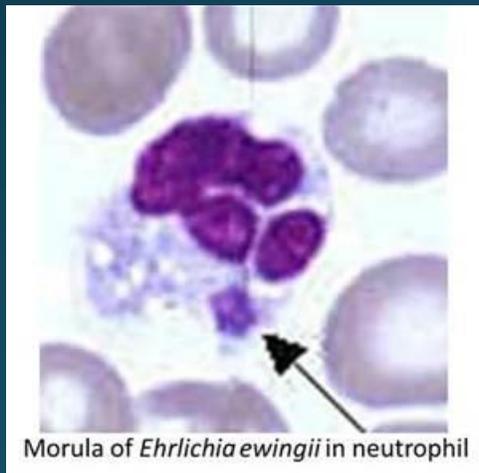
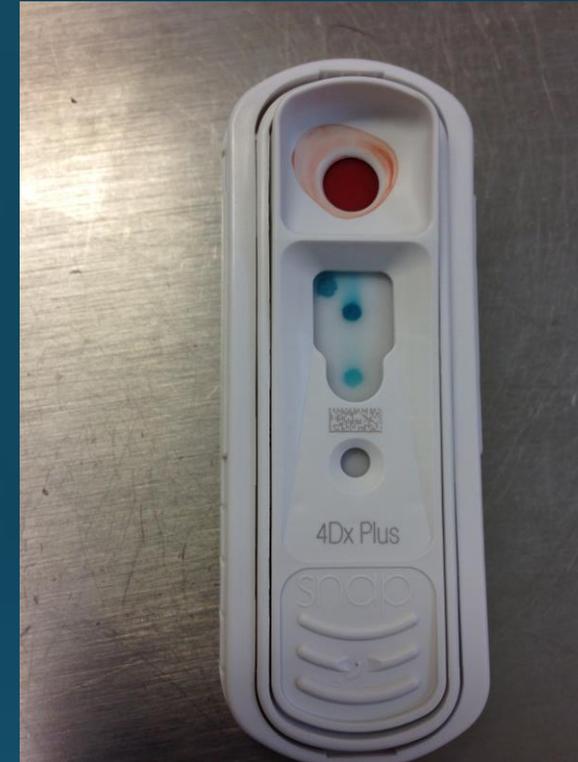
Clinical Signs

- Lethargy
- Fever
- Lameness
- Malaise
- Pale mm
- Vomiting
- ~~Bulls eye rash~~
 - RMSF – only some get spotty rash

WIDE RANGE OF SYMPTOMS

Diagnostics

- 4DX-Idexx Laboratories
- New Vet Scan Lyme and Ehrlichia Rapid Test – Abaxis
- Send out RMSF – Indirect Fluorescent Antibody Titer (IFA)
- Babesiosis, Ehrlichia – blood smear



Positive TBD Test

- Exposure vs actual infection
- Lyme Quant C6
- Controversial
- Yearly screening
 - Most positives don't recall ever seeing a tick
- Treat non-clinical positives?
- In my experience...
 - Therefore, treat all positives



Treatment

- Appropriate Abs
 - Doxycycline/Minocycline
 - Amoxicillin
 - Others
- Pain management for polyarthritis
- Lyme nephritis
- Blood transfusions
 - Severe anemias



Prevention

- Most effective
 - Remember transmission can occur in 3-5 hrs
- Topical spot ons
- New oral meds
- New collars



Prevention

- Lyme vaccination
- No natural/organic methods
- Tick check daily
 - In between toes, ear flaps, base of tail, axillary/inguinal areas



What About Cats?

- Highly resistant to *B. burgdorferi*
 - Rarely show signs of disease
- Hemobartonellosis (Feline Infectious Anemia)
 - Tick vector
- Cytauxzoonosis
 - Protozoal
 - Reservoir host is bobcat
 - Big cats in captivity
- Tularemia
 - Also transmitted by fleas
 - Rabbit fever
- No vax in cats
 - Topical prevention
 - Tick check



Pet TBD Relates to People

- TBD direct transmission only
- Pets are sentinels for TBD infections in people
- Dogs (and cats) increase contact between species
 - Pets sleeping in human beds
 - Pets on furniture
 - Pets have higher exposure and bring ticks in to us
 - Exposure when removing tick?



TBD Impact on Pets

- Canaries in the coal mine
- Effect on human counterparts
- Prevention is the key

