Best Practice Guideline

Evaluation of Tick Bites / Lyme Disease

I. Diagnosis and Screening

a. High Risk Bite – tick identified as Ixodes scapularis, bite estimated to be > 36 hours in duration based on history or engorgement, rate of infected ticks > 20% and treatment within 72 hours of bite

   i. See reference for photos of Ixodes scapularis tick and appearance correlating with hours of engorgement. (pp. 3- 4)

b. Serologic Testing indicated for objective findings that are consistent with Lyme Disease (Bell's palsy, knee arthritis)

   i. Two step testing only (Lyme Ab with reflex WB)

   ii. Note: Direct ordering of WB not indicated

c. The following are not recommended by guidelines

   i. Testing of the tick

   ii. Serology for asymptomatic patients after a bite

II. Treatment

Treatment Indications for Prophylaxis (Bite Treatment)

a. High Risk Bite – identified as above in screening and diagnosis.

   i. Age > 8: doxycycline 4 mg/kg PO x 1 (max dose 200 mg)

   ii. Age < 8: no prophylaxis available, surveillance/observation is recommended

      1. Consider the following, which are not included in the guidelines, to assuage anxiety of parents in children with high risk bite who are under age 8.

         a. Acute and convalescent Lyme titer (baseline and 30 days)

         b. Amoxicillin x 10 days

b. Low Risk – surveillance/observation for 30 days

Treatment of Lyme Disease

c. Treatment of EM rash or Primary (early) Lyme Disease with ORAL regimens

   i. doxycycline

      1. Adults: doxycycline 100 mg po BID x 14-21 days

      2. Pediatrics >8 doxycline 4mg/kg/day divided bid

   ii. cefuroxime (note 1st generation cephalosporins/cephalexin NOT indicated.)

      1. Adults 500 mg po BID x 14-21 days

      2. Pediatrics 30mg/kg/day divided bid

iii. amoxicillin

1. Adults 500 mg TID x 14-21 days
2. Pediatrics 50 mg/kg/day divided tid

d. Treatment of Neurologic Lyme with PARENTERAL REGIMENS

i. Meningitis or Radiculopathy (parenteral treatment indicated)

1. Adults ceftriaxone 2grams IV q 24 hours x 14 days
2. Pediatrics ceftriaxone 50-75 mg/kg/day q 24 hours x 14 days

ii. Cranial Neuropathy (ie Bell's Palsy) Oral regimen (see above) x 14 days

e. Treatment of Late Lyme

i. With Arthritis but no Neurologic Complications--Oral Regimen (see above) x 28 days

ii. Recurrent Arthritis AFTER Oral Regimen—Parenteral Regimen (see above) x 28 days

iii. Post Lyme Disease Syndrome: Consider other Causes, if none found consider treat symptomatically with oral regimen

III. Surveillance / Follow-up Interval

a. High Risk Bite – follow appropriate treatment indications below

b. Low Risk Bite – observation at any age. Observation for 30 days for development of rash at location of bite or viral-like prodrome with education to seek medical attention if this occurs.

IV. Links

a. IDSA guidelines: http://www.idsociety.org/uploadedfiles/idsa/guidelines-patient_care/pdf_library/lyme%20disease.pdf

b. CDC two-step Testing Algorithm: http://www.cdc.gov/lyme/diagnosistesting/labtest/twostep/index.html

c. CDC guideline to tick-borne diseases

http://www.cdc.gov/lyme/resources/tickbornediseases.pdf

d. Orange County Dept of Health on Lyme Disease (includes reporting form)

http://www.orangecountygov.com/content/124/1334/705/1264/default.aspx

References:

Reference: The Clinical Assessment, Treatment and Prevention of Lyme Disease: Clinical Practice Guidelines by the IDSA. Clinical Infectious Diseases 2006; 43:1089-1134.