

**Pre-Quiz: Fever in the Returning Traveller
McMaster Emergency Medicine AHD April 2016**

ITEMS: (TICK-BORNE)

Q1: A patient presents to the ED after camping near Long Point Provincial Park with a rash concerning for Erythema Migrans. How would you manage this patient?

A1: Treat empirically with a 2 week course of Doxycycline (100mg PO BID)

Q2: You see a patient who removed a tick from their skin 6 weeks ago, developed a rash shortly thereafter, and has now presented to the ED with a CN VII palsy. Lyme disease is on your differential, so you decide to refer the patient on to an ID specialist. What test would you consider ordering?

A2: ELISA (if this test is negative, there is no need for further testing. It has a 89% sensitivity and 72% specificity)

Q3: A 7 year old child presents with fever and a petechial rash on his hands and feet after returning from a vacation in the U.S. What region of the United States would be most concerning for RMSF, and how would you manage the patient?

A3: Southeastern U.S., Treat empirically with doxycycline (DO NOT wait for testing results prior to treatment)

Q4: List five manifestations of early disseminated Lyme disease

A4:

Neurologic: Meningoencephalitis, Cranial neuropathy, peripheral neuropathy, transverse myelitis.

Cardiac: AV block, pancarditis.

Arthritis: Monoarticular, large joints. Ophthalmologic: keratoconjunctivitis, optic neuritis etc.

Q5: List eight tick-borne illnesses

A5: Lyme disease,
Tularemia,
Relapsing fever,
RMSF,
Q fever
Ehrlichiosis,
Anaplasmosis,
Babesiosis,
Colorado Tick Fever,
Tick Paralysis

ITEMS: (PARASITES)

Q1: An 8 year old male presents to MUMC with bilateral periorbital edema after visiting his relatives in South America. What concerning infection is on your differential? What test could you order to help rule this out?

A1: Chagas disease (starts with Chagoma, normally periorbital from bite of the kissing bug → fever, facial swelling, painless periorbital edema, HSM, pedal edema).
Thick and Thin smears

Q2: Name three parasites that can cause anemia AND what type of anemia they cause

A2:

Malaria (hemolysis),
Whip worm (trichuris trichuria) & Hookworm (Necator americanus) → intestinal blood loss,
Fish tapeworm (diphyllobothrium latum) → pernicious anemia

Q3: List five parasites that can cause diarrhea:

A3:

E.histolytica,
Balantidium coli (pig feces,)
G.lambliia,
Cryptosporidium/Cyclospora,
Isospora/Microsporidia,
Schistosomiasis,
Strongyloides,
Trichurus trichiura (whipworm),
T.spiralis

Q4: What nematode is classically acquired through consumption of raw or undercooked pork?

A4: Trichinella spiralis

Q5: List five parasites than can cause neurological symptoms:

A5:

Cerebral malaria,
cysticercosis,
echinococcosis,
African trypanosomiasis (african sleeping sickness),
Trichinella spiralis (pork roundworm),
E. histolytica,
strongyloides

ITEMS (FIRT):

Q1: What are three reasons that chemoprophylaxis does NOT rule out malaria infection:

A1:

Antimalarial resistance in travel area,
non-compliance while abroad,
premature termination of prophylaxis after returning (some require 1 month course after returning from abroad).

Q2: List eight potential exposures you should ask about when taking a history from a febrile traveller

A2: Food, Sexual, Drugs, Environmental, Accommodations, Sick contacts, Animals/Insects, Trauma/Assault, Health Care, Tattoos/Piercings

Q3: List eight etiologies you should consider in most febrile returning travellers:

A3:

Malaria,
UTI,
respiratory illness,
Diarrheal disease,
Dengue fever,
Typhoid fever,
Rickettsial infection,
mononucleosis,
pharyngitis

Q4: List the five species of malaria. Which one is the most deadly? Which two can cause relapsing infections?

A4:

P. falciparum = most deadly,
P. vivax & *P. ovale* = relapsing infection,
P. malariae,
P. knowlesi

Q7: List eight features of severe malaria:

A7: Coma/seizures,
prostration,
severe anemia,
acidosis,
hypoglycemia,
ARF, jaundice, ARDS/Pulmonary Edema, DIC/hemolysis

Q8: How is typhoid fever diagnosed? What medications can be used to treat it?

A8: Blood cultures + for salmonella typhi. Can also grow in urine and stool, but less sensitive. Treat with Cipro, Ceftriaxone or Azithromycin.

Q9: From a public health perspective, what is the most important aspect of managing a returning traveller infected with Zika virus or Chikungunya?

A9: Prevent any exposure to mosquitos during the first week of infection to prevent local transmission.

Q10: What is the most worrisome manifestation of a Dengue infection and what are its symptoms?

A10: Dengue Hemorrhagic Fever/Dengue Shock Syndrome: massive bleeding, fluid shifts → shock, metabolic derangements, coagulopathy