

CME Conference : A Taste of Tropical Medicine 2010

Sponsored by Mayo Clinic and Minnesota Global Health Programs

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Top 5 Academic & Clinical Pearls by Michael Nowak MPAS, PA-C, FAPACVS

I. Malaria

- A. Prevalence: 200-300 million cases per year (1 million deaths/year)
- B. Common symptoms:
 - 1. Cold (shaking chills) →
 - 2. Hot (dry fever) →
 - 3. Sweating (diaphoresis, fever resolves & fatigue)
- C. Diagnosis: Parasitemia on blood smear, hemolytic anemia, mild leukopenia
- D. Treatment
 - 1. Uncomplicated Malaria
 - a. Malarone or quinine; chloroquine (if sensitive)
 - 2. Severe Malaria
 - a. US: IV quinidine + doxycycline or clindamycin
 - b. Africa: IV quinine + doxycycline or clindamycin
 - c. SE Asia: IV Artesunate + doxycycline, mefloquine, clindamycin or atovaquone-proguanil

II. Zinc

- A. Works well in developed countries to decrease acute diarrhea (non-bloody)
- B. Dosage
 - 1. 20mg/day x 10-14 days if > 6 months
 - 2. 10 mg/day x 10-14 days if < 6 months

III. Neglected Tropical Diseases: The UNHOLY Trinity

	Ascariasis (roundworm)	Trichuriasis (whipworm)	Hookworm
Population infected	800 million	600 million	580 million
Mode of transmission	Ingestion of eggs	Ingestion of eggs	Burrow through skin
Size	Largest, up to 40 cm	3-5 cm	0.5-1cm
Adult habitat	Small intestine (jejunum)	Caecum, colorectum	Small intestine
Lifespan	1-2 years	1-3 years	1-7 years
Symptoms	Pneumonitis → abdominal discomfort, malnutrition, obstruction	90% are asymptomatic, stunted growth, anemia, cognitive defects, rectal prolapse	Iron deficiency anemia, failure to thrive, fatigue, decreased IQ
Treatment	Albendazole x 1 dose	Mebendazole, Albendazole x 3 days	Albendazole x 1 dose

IV. Shistosomiasis – the most deadly neglected tropical disease

- A. 200,000 + annual deaths
- B. Venous trematode – bladder venous plexus or bowel/rectum mesenteric venules
- C. Requires fresh water snail host to complete lifecycle
- D. Transmitted by contact with contaminated lakes, ponds, rivers, dams
- E. Symptoms : fever, sweats, chills, myalgia, urticaria, cough, abdominal pain, diarrhea, headache, hepatosplenomegaly, if *S. haematobium* – hematuria, urinary obstruction, renal failure
- F. Chronic schistosomiasis causes fibrosis and tissue injury
- G. Treatment: Praziquantel
 - 1. 40 mg/kg/d in 2 doses x 1 day (*S. mansoni*, *haematobium*)
 - 2. 60 mg/kg/d in 3 doses x 1 day (*S. japonicum*)

V. Travel Medical Kit

- A. Over the counter medications & supplies
- B. Prescription medications & supplies
 - 1. Travelers diarrhea antibiotic, antimalarial, acetazolamide
 - 2. Epi-pen
 - 3. Nausea & anti-emetics
 - 4. Sleeping pills
 - 5. Routine medications
 - 6. Pain medications
- C. Simple First Aid Kit
 - 1. Adhesive bandages of various sizes, gauze swabs, adhesive tape
 - 2. Antiseptic power, solution or wipes
 - 3. Nonadhesive dressings
 - 4. Small scissors (keep in check-in baggage)
 - 5. Thermometer
 - 6. Tweezers for splinters & tics
 - 7. IV fluids, syringes & needles

This was a very good conference and I would recommend it to all interested in global health

The conference was videotaped and will soon be available online at:
www.mayo.edu/msgme/mihp-tropical-medicine.html

Sincerely,

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