



Travel Medicine

An Emergency Medicine Approach

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History of Travel Medicine

- Traditionally falls into public health and internal medicine infectious disease subspecialties
- Emergency medicine contributes to travel medicine but often overshadowed
- EP with area of study in infectious disease, disaster medicine, or wilderness medicine may have interest in TM

Military Medicine contribution to Travel Medicine

- Military physicians have long had an interest in Tropical Disease
- Walter Reed AIR laboratory
- WWII and Vietnam experience
- Iraq and Afghanistan have rekindled interest in Tropical Medicine and Parasitology



Traditional TM Approach

- Much time devoted to trip planning
- Travel Med Pharmacology
- Issues of special populations
- Vaccinations
- Post-Travel TM consultations
- Typically take place in outpatient Travel Clinic

Fee for Service Clinics

- Non-hospital based travel clinics have emerged
- Passport Health is a franchise business model that provides pre-travel vaccinations
- Does not address acute disease

Role of Emergency Physician

- Unlike the travel clinic, an EP does not have luxury of a lengthy pre-travel questionnaire
- However, travel medicine patients come to us
- Returned traveler will be most important group

Emergency Physicians likely to have exposure to TM

- Are often expedition doctors
- Well represented in disaster medicine and search and rescue
- Leaders in wilderness medicine development
- Cruise ship medicine

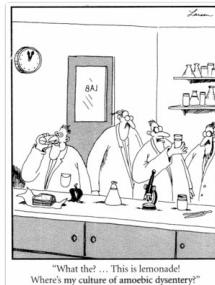


Emergency Travel Med

- Will see many patients post-travel
- Potential poor or misleading history
- History is paramount
- Broad travel med knowledge and resources are important
- ED can be "front-line" in international epidemic disease.

ED Travel Med: more than fever in returned traveler

- Skin: Wounds, Rashes
- GI disease
- Toxidromes
- Chronic parasitic disease
- STDs
- Emerging diseases
- Sequelae of disasters
- Acute vaccinations often required



The SARS experience

- Changed triage in Singapore, elsewhere
- New appreciation of travel related infectious disease
- Avian flu, epidemic influenza
- EP likely to be first provider to see patient



Emergency Providers

- Need to be able to take a directed travel history
- Need to know likely diseases for specific locales
- Need to have resources to update advisories (CDC, WHO, others)
- Should have knowledge of travelers diarrhea, travel pharmacology, vaccinations, tropical and parasitic diseases.

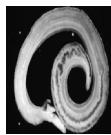
ED General Travel History

- Geographic itinerary
- Time and Duration of travel
- Urban vs. Rural Travel
- Backpack vs. Four Star
- High risk situations and behaviors
- Medical Care encountered during trip



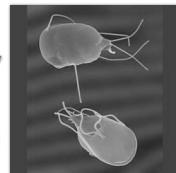
Directed Travel History

- Visit family abroad?
- Adventure travel?
- Freshwater exposure?
- Animal exposure?
- Insect bites?
- Sexual contacts?
- Extreme environments - caving, high alt?
- Other directed queries can be prompted by CDC website: www.cdc.gov/travel/destinat.htm



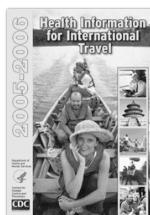
Common Travel Problems

- Salmonella, Shigella, Giardiasis, Amoebiasis, Hepatitis, Gonorrhea, Malaria, Helminth Infestations
- Drug Reactions
- Hypobaric hypoxia-associated cardiac and pulmonary problems



Complaints of Returned Travelers

- Persistent GI Illness 10%
- Skin lesions/rashes 8%
- Respiratory infections 5-13%
- Fever 3%
- Non-tropical = majority of fevers
- Tropical fever = Malaria
- Illnesses present < 12wks, Malaria can be delayed



Source: CDC Yellow Book - www.cdc.gov/travel/yb/index.htm

Can't Miss Diagnoses

- Cannot miss falciparum malaria
90% cases from Subsaharan Africa
& present in less than 30 days
- Malaria and pregnancy
- Hepatitis A,B
- Viral Hemorrhagic Fevers, Dengue Shock Syndrome



Unique features of ED & Travel Medicine

- Rapid assessment of patients required to screen for emerging ID & potential bioterror threats
- Extreme environments: diving injuries, high altitude
- Many patients will not call themselves "travelers"



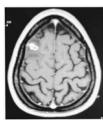
Special travelers encountered in ED

- Recent Immigrants
- Expatriates
- Medical tourists
- Homeless travelers
- Returned Military Personnel
- Disaster Evacuees
- Colleagues may be recently deployed search and rescue or disaster medical personnel



Recent Immigrants

- Disproportionately seen in ED
- Illiteracy common, language barrier
- Diseases will reflect place of origin
- Not so exotic findings, e.g. Chagas disease, Neurocysticercosis
- Potentially toxic traditional remedies



Expatriates

- US citizens live abroad for inexpensive cost of living.
- Public health threats of developing countries
- Return for specialized or subsidized care, e.g. Veterans Administration
- ED is access point for services.



Medical Tourism



- Patients may have recently sought care in developing countries
- Blood-borne disease
- Infections following dental work
- Pharmaceuticals obtained without prescription

Returned Military Personnel

- Leishmaniasis, the "Baghdad Boil"
- Global War on Terror - increasingly exposes Americans to tropical diseases
- Special forces pride themselves on "going native"
- Dengue, Malaria, Chagas disease, Rickettsial diseases



Disaster Evacuees

- Shelter-related Norwalk virus
- Flooding concerns for dengue/malaria
- Contaminated water sources
- Hepatitis
- Skin Infections



Katrina

- First large scale disaster in US to occur with endemic West Nile Virus
- Flavivirus
- Mosquito population in LA areas increased 800% over pre-Katrina



Source: www.promedmail.org

Sick Colleagues

- Many EPs volunteer for disaster medical teams and search and rescue teams.
- Potential environmental toxic exposures
- Infectious disease risks



Regional Travel

- Coccidioidomycosis for Arizona and CA central valley
- Hanta virus for four-corners region
- Lyme Disease in NE
- Likely to seek care in ED first



Need for useful tools

- Emergency Providers need rapid tools for triage and ED use
- Checklists for more serious sequelae
- Updated resources/screening tools for changing conditions, e.g SARS, Katrina.



Triage Travel Checklist for Emerging Threats

Have You Had:

- Fever now, recently
- Travel Internationally (timing important)
- Travel with Ill companions
- Exposure to Ill patients abroad

Location of Travel

- Asia
- International hubs
- Rural Travel Farms/ Animal Markets
- Hospitalization
- More emerging threats: www.promedmail.org/

Checklist for ED Special Travelers

Medical Tourists

- Care sought abroad
- Medications/who prescribed/how taken
- History of transfusions & procedures



Immigrants, Expatriates

- Country last visited
- Family members/ contacts recently abroad
- Illness abroad

Returned Military

- Duration and Location of deployment
- Conditions treated during deployment
- Fever, rashes, GI symptoms

- History of Insect Bites
- Use of repellents, mosquito nets
- High risk environments - local dwellings



Homeless/Disaster Victims

- ◆ Locations visited
- ◆ Shelters visited
- ◆ Environmental risks
 - disaster specific
- ◆ Exposure to Contaminated water
- ◆ Ill contacts
- ◆ Diarrheal disease
- ◆ Vaccinations
- ◆ Wound care
- ◆ Skin infections
- ◆ Potential marine pathogens (Katrina)
- ◆ High index suspicion for arthropod-borne disease

Travel Resources

- CDC Yellowbook, International Bulletins
www.cdc.gov/travel/
<http://www.cdc.gov/travel/yb/index.htm>
www.cdc.gov/mmwr/international/world.html
- Travel Health Info Line 877-FYI-TRIP
- UptoDate Travel Med monograph
www.uptodate.com
- International Society of Travel Medicine
www.istm.org/
- World Health Organization
www.who.int/en/



Summary

- ED is different from Travel Clinic
- Many entities involving extra-local travel will present first to the ED
- Much travel med literature not designed for quick ED reference
- Screening for emerging diseases important
- Rapid tools necessary to identify disease and direct patient care

Questions?

