Dengue fever: Case presentation

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Emory TravelWell Center

Case, background

- **32 yo healthy male with febrile illness which started at the end of a 8 day trip to Costa Rica (June)**
  - **Went to area on Pacific coast**
  - **Surfing, hiking, dived off of a waterfall**
  - **Stayed in a hotel with concrete floors and “log walls”**
  - **No animal contact**
  - **Possible insect bites (itchy red bumps on legs)**
  - **Saw a “kissing bug” in his bed**
- **Did not get pre-travel vaccinations or advice**
- **PMH: Asthma**
- **SH: No HIV risk factors**

Case, illness onset

- **On day before return had sudden onset of fevers and body aches (headache, retro-orbital pain, backache, joint aches)**
  - **Fevers as high as 102.6 F in first 48 hrs of illness**
  - **C/O burning of hands and feet**
- **Severe fatigue**
- **Subsequently developed red rash on trunk**
- **Also had loose bowel movements, slight cough (“tickle in throat”)**

Presentation to care

- Illness day 3 (after return), he sought care at an urgent care clinic, and he was prescribed azithromycin
- Day 4, presented to the ED with persistent illness but somewhat lower temperatures with acetaminophen
- PE:
  - VS: T 38.8, BP 108/61, P 94, RR 24 (99% RA)
  - Erythematous macules noted on extremities
- Labs
  - CMP generally normal except Na 134↓, K 3.5↓
    - AST/ALT 32/24 (normal)
  - WBC 2.6↓ (normal differential), Hb 14.2, PLT 79↓
  - Other tests sent from ED
    - Blood cultures x 2
    - RMSF serology
    - Dengue serology
- Chest X-ray normal

- ED assessment/Plan:

"32 y/o male with recent travel history to Costa Rica presenting with fever, rash complaints. Concern for RMSF given platelet and low WBC abnormality vs malaria, dengue fever, chagas disease or other tropical infectious disease process….

Pt started on doxycycline and referred to infectious disease clinic for f/u."

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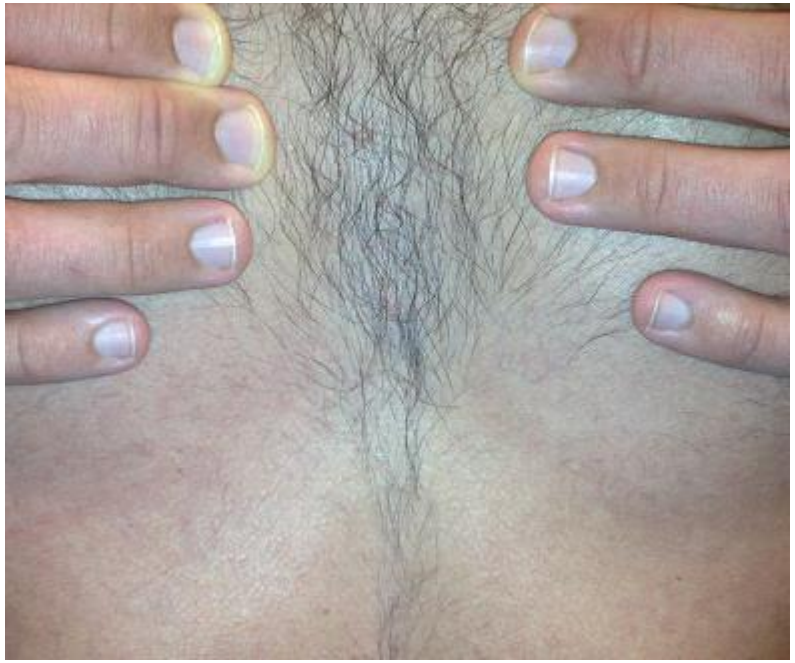
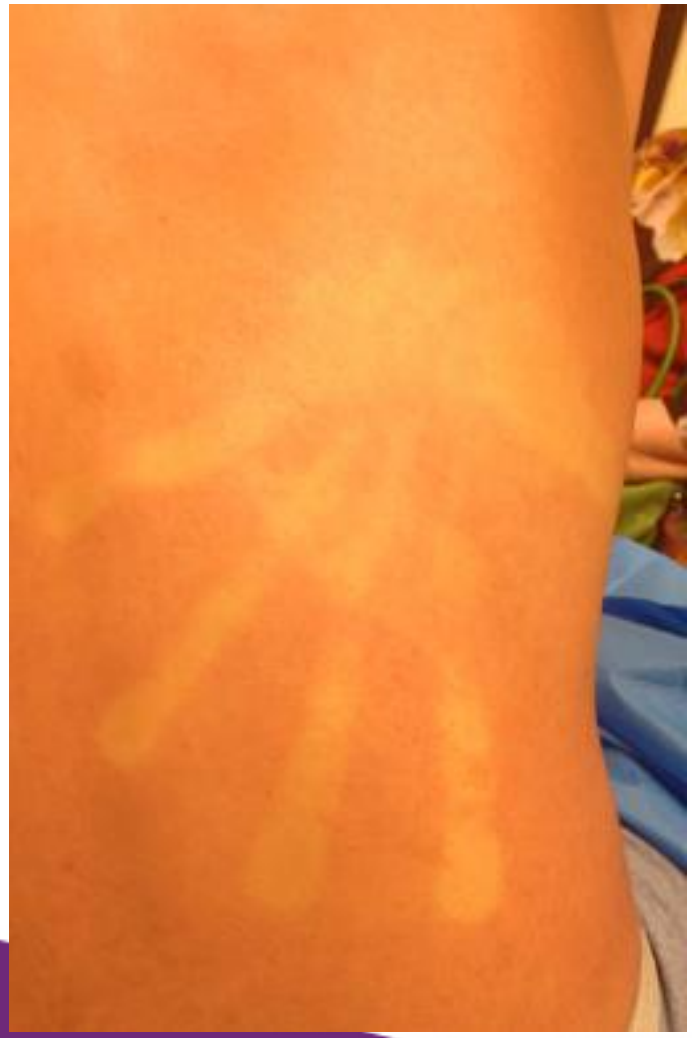
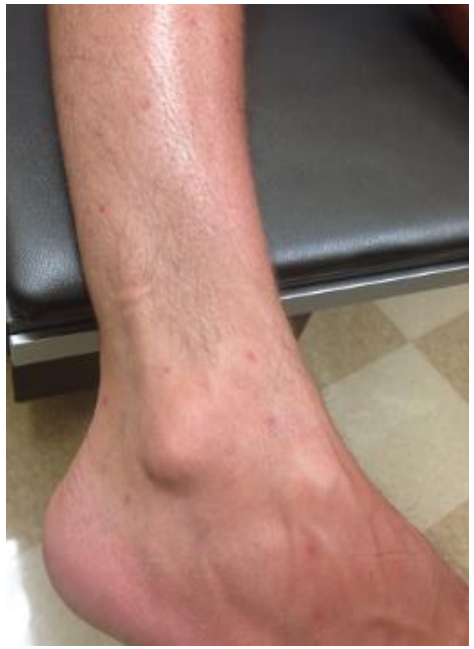
PE at travel clinic (day 5)

- **Adult male appearing to be very fatigued and in moderate discomfort**
- **T 37.9 BP 127/69 P 78**
- **HEENT—conjunctiva, pharynx WNL**
- **LN mild enlarged axillary, inguinal nodes**
- **Chest, CV exams WNL**
- **ABD—Mild RUQ tenderness**
- **Ext—No jt swelling or edema**

PE at travel clinic (day 5)







Skin—Diffuse blanching erythema, some erythematous papules on legs, no petechiae

Differential diagnosis and plan

- **DDX**
  - **Arboviral infection (dengue, CHIKV, Zika)**
    - **Uncomplicated dengue most likely**
    - **Some abd tenderness, but no overt warning signs (bleeding, fluid accumulation, vomiting, etc.)**
    - **Hb, PLT stable over past 24 hrs**
  - **Leptospirosis**
  - **Remotely possible: Malaria, rickettsia infection, acute HIV, other viral syndromes**
- **Plan**
  - **Close clinical monitoring for danger signs**
  - **Avoid NSAIDs**
  - **Return to clinic in 24 hrs**
  - **Other tests to evaluate for other potential causes**

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Illness course

- **Day 6: Increased redness of hands and arms; hands mildly swollen. Fevers down. Overall feels better.**
- **Day 7: On call physician by patient because of widely fluctuating heart rate and pulse ox (he has a home monitor) with associated LH and SOB. Advised to urgently go to ED for evaluation, however patient did not go.**
- **Patient improved symptomatically over the following days, on day 15 of illness only reported mild fatigue**

Lab summary

Day	4 (ED)	5	6
AST/ALT	32/24	81/64↑	64/201↑
WBC	2.6↓	3.1↓	2.4↓
Hb	14.2	14.0	14.7
PLT	79↓	81↓	68↓
Dengue IgG	0.77		
Dengue IgM	1.28		

- **Negative: Blood cultures, CHIKV, RMSF, leptospirosis, HIV (Ag/Ab/PCR), RPR, malaria RDT/smear**

Lab summary

Day	4 (ED)	5	6	14
AST/ALT	32/24	81/64↑	64/201↑	19/18
WBC	2.6↓	3.1↓	2.4↓	5.1
Hb	14.2	14.0	14.7	14.9
PLT	79↓	81↓	68↓	273
Dengue IgG	0.77			2.38↑
Dengue IgM	1.28			22.7↑

- **Negative: Blood cultures, CHIKV, RMSF, leptospirosis, HIV (Ag/Ab/PCR), RPR, malaria RDT/smear**

Case lessons

- **The DDx of returned febrile travelers is broad, even if the presentation fits a specific diagnosis well**
- **Misdiagnosis or no consideration of travel related infections are common at front-line healthcare settings in the US**
- **Post-pandemic travel has resulted in increased numbers of dengue in our clinic, including from Asia and Africa**

Thank you

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