What is Francis' Disease?

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28 Year old Caucasian male with no PMH presented with 2 weeks of:

- Fever, night sweating, and headache
- Non-healing ulcer on the right shin and right hip pain
- Traveled to Mobile AL (worked in marsh land) 1 week prior to symptoms
- Bitten by yellow fly
PMH, PSH: None

Allergy: NKA

Meds: Clindamycin and Rocephin

SH: Lives in Huntsville, has dog and cat
Denies drugs or alcohol, Monogamous,
Works as a meterrial engineer
Physical exam:

- Vital signs: within normal limits
- HEENT, Heart, and Chest: no abnormal findings.
- Lymph: Right inguinal lymph node enlargement, tender
- Skin: see image
Differential Diagnosis

- Staph. aureus skin infection
- Sporotrichosis
- Anthrax
- Nontuberculous mycobacterial infections
- Autoimmune disease
- Rickettsia
- Catscratch disease
- Ulceroglandular Tularemia
Tularemia

- Uncommon but potentially severe zoonosis caused by the gram-negative coccobacillus *Francisella Tularensis*

- Causes illness with exposure to as few as 10-50 organisms

- During 2006 – 2015, a total of 1,584 cases were reported in the United States
Mode of Transmission
Clinical Presentations

- Ulceroglandular Tularemia
- Glandular Tularemia
- Oculoglandular Tularemia
- Pharyngeal (oropharyngeal) Tularemia
- Typhoidal Tularemia
- Pneumonic Tularemia
Diagnosis:

- Serology: Antibody agglutination titers > 1/160
- Gram stain and Culture (NOTIFY Lab)
- PCR: Fast, more sensitive, less exposure, limited availability.
Treatment:

- First line: Aminoglycosides, Tetracycline, chloramphenicol (approved by FDA), Streptomycin is the drug of choice
- Second line: Doxycycline, and Fluoroquinolones.

Post Exposure Prophylaxis:

- Doxycycline or Cipro for 14 days (high-risk exposure)
Back to our Patient

- Treated empirically with Azithromycin and Doxycycline
- Culture: POSITIVE for *Francisella Tularensis*
- Doxycycline continued for 14 days
- Follow up: No relapse after 3 months
Conclusion

- Many cases of Ulceroglandular Tularemia are misdiagnosed
- Early treatment is associated with less morbidity and Mortality
- Promising success with Doxycycline could provide an acceptable alternative to intravenous /intramuscular aminoglycosides
- Yellow fly (Deer fly) Could be a potential vector for Tularemia in south-central states
References

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