Published in final edited form as:

Otolaryngol Head Neck Surg. 2010 August ; 143(2): 311–2.e1. doi:10.1016/j.otohns.2010.04.002.

Tularemia presenting as a cervical abscess

Marcella M. Alsan, MD, MPH and Harrison W. Lin, MD

Division of Infectious Disease (Dr. Alsan), Massachusetts General Hospital, Boston, MA; and the Department of Otolaryngology–Head and Neck Surgery (Dr. Lin), Massachusetts Eye and Ear Infirmary, Boston, MA.

A 40-year-old man presented with two months of progressive left neck swelling, night sweats, and fatigue. He worked as a hunting guide in New Mexico and reported multiple bites from insects, including deer flies, on the job. He had been treated with penicillin, cephalexin, and clindamycin, but his symptoms persisted. On presentation to our institution, his examination was notable for a temperature of 97.4°F, clear throat, and a 4 × 5-cm erythematous, mildly tender mass in the left neck with an area of fluctuance superiorly (Fig 1). Fine needle aspiration revealed necrotizing acute inflammation without granulomas; cultures were negative, and smears were negative for acid-fast bacilli. Chest x-ray was clear, and a tuberculin skin test was negative. A contrast-enhanced computed tomography (CT) scan was obtained shortly after the mass spontaneously drained and revealed a 1.8 × 0.8 × 2.4-cm subcutaneous fluid collection at the level of the platysma, but no lymph-adenopathy (Fig A1, available online at www.otojournal.org). A serum titer for tularemia was sent and returned four days later, and was highly positive at 1:8192 (normal, < 1:128). Following a four-week course of oral ciprofloxacin 750 mg twice daily and doxycycline 100 mg twice daily, his symptoms resolved.

Institutional review board approval was not required for this report.

Tularemia is a rare zoonotic disease of the Northern Hemisphere caused by the gram-negative bacterium *Fran-cisella tularensis*. The organism can infect hundreds of different vertebrates and invertebrates, particularly rabbits and rodents. Transmission to humans in the United States occurs most often by the bite of a tick or deer fly, by inhalation of aerosolized bacteria (e.g., mowing lawns contaminated with the organism), or through contact with contaminated soil or animal products (e.g., skinning rabbits). Tularemia presents in one of six classic forms: ulceroglandular, glandular, oculoglandular, pharyngeal, typhoidal, or pneumonic. After an average incubation period of three to five days, patients typically develop a febrile illness. Treatment is with antibiotics, with intramuscular

Corresponding author: Harrison W. Lin, MD, Massachusetts Eye and Ear Infirmary, 243 Charles St., Boston, MA 02114. harrison_lin@meei.harvard.edu.

Author Contributions

Marcella M. Alsan, conception and design, acquisition of data, analysis and interpretation of data, drafting the article, final approval; **Harrison W. Lin**, conception and design, acquisition of data, analysis and interpretation of data, critical revision, final approval.

No sponsorships or competing interests have been disclosed for this article.

Disclosures

Competing interests: None.

Sponsorships: None.

streptomycin the treatment of choice in severe cases.^{1,2} Our patient presented after a two-month illness with what appeared to be the glandular form of tularemia. However, the CT scan did not show adenopathy but rather a subcutaneous abscess that mimicked a sebaceous cyst. Oztoprak et al also reported cysts and abscesses in their case series on the evaluation of cervical CT findings in oropharyngeal tularemia.³ Recent World Health Organization recommendations suggest that oral ciprofloxacin or doxycycline can be used in less severe cases.⁴ We chose to use both concomitantly, given the high relapse rate with either drug alone.²

Acknowledgments

The authors thank James W. Rocco, MD, PhD, Marlene L. Durand, MD, Hugh D. Curtin, MD, and Betsy Wonderly for their roles in the acquisition of data and manuscript revision.

Appendix

Figure A1.
(A) Axial and (B) coronal CT images revealing a left cervical fluid collection superficial to the platysma muscle at the level of the thyroid cartilage.

References

1. Nigrovic LE, Wingerter SL. Tularemia. *Infect Dis Clin North Am.* 2008; 22:489–504. [PubMed: 18755386]
2. Penn, RL. *Francisella tularensis* (tularemia).. In: Mandell, GL.; Bennett, JE.; Dolin, R., editors. *Principles and Practice of Infectious Disease.* 7th ed.. Churchill Livingstone; New York: 2010. p. 2927-37.
3. Oztoprak N, Celebi G, Hekimoglu K, et al. Evaluation of cervical computed tomography findings in oropharyngeal tularemia. *Scand J Infect Dis.* 2008; 40:811–4. [PubMed: 18609195]

4. Tärnvik, A. WHO Guidelines on Tularemia. World Health Organization Press; Geneva, Switzerland: 2007.

Author Manuscript

Author Manuscript

Author Manuscript

Author Manuscript

Figure 1.
A large erythematous and fluctuant mass in the left neck noted on presentation.