

A Rare Case of Community Acquired Cavitory Lung Disease Caused by Group F Streptococcus

Nishant Tripathi^{1*}, San Diego Warren¹, Niki Koirala PharmD²

¹Brookdale University Hospital, Brooklyn, NY

²Covenant Medical Center, Waterloo, IA

*Corresponding author: nishant55@icloud.com

Abstract Many organisms previously considered non-pathogenic are the causative agents of many fatal diseases. Considered to be non-pathogenic, Group F streptococcus is increasingly being implicated in several disease conditions. Streptococcus F can have different forms of hemolysis and presence of carbohydrate antigens that are not routinely tested. As a result they might be wrongly classified as other type of Streptococci or dismissed as contaminant. Here we describe a rare presentation of Cavitory lung disease caused by Group F Streptococcus.

Keywords: *Streptococcus F, caviatary lung disease*

Cite This Article: Nishant Tripathi, San Diego Warren, and Niki Koirala PharmD, “A Rare Case of Community Acquired Cavitory Lung Disease Caused by Group F Streptococcus.” *American Journal of Medical Case Reports*, vol. 5, no. 1 (2017): 25-28. doi: 10.12691/ajmcr-5-1-7.

1. Introduction

Many organisms previously considered non-pathogenic are the causative agents of many fatal diseases. Considered to be non-pathogenic, Group F streptococcus is increasingly being implicated in several disease conditions. Streptococcus F can have different forms of hemolysis and presence of carbohydrate antigens that are not routinely tested. As a result they might be wrongly classified as other type of Streptococci or dismissed as contaminant.

2. Case Summary

A 48 year old man presented with progressively worsening fever, chills, night sweats, shortness of breath, and cough productive of yellowish colored sputum, nausea, vomiting, weight loss and malaise for 3 weeks that started while taking care of his ex-wife’s dogs. A nonsmoker, he had no history of asthma, pet allergy, recent travel or sick contacts. On examination, he was febrile to 102 F, sweaty, and had mild respiratory distress. Pulse 110/min, BP 132/78 mmHg, and respiratory rate 25/min. He had bilateral nasal polyps, and lung crepitation prominent in left upper lobe and right lower lobes. Labs showed WBC 22,600/ μ L with neutrophilia, anemia, and thrombocytosis, ESR 91mm/hr, CRP 32mg/dL. CXR revealed left basal opacity and Left upper lobe (LUL) opacity.

Admission diagnosis was community-acquired pneumonia (CAP). He was treated empirically with ceftriaxone and azithromycin, pending cultures, and placed on respiratory isolation to rule out TB. Three blood

cultures yielded no organisms. Three separate sputum cultures grew beta hemolytic Group F streptococcus. The CT chest, abdomen, and pelvis showed mass-like left upper lobe opacities, complete left lower lobe consolidation, patchy right basilar opacities, and hilar, mediastinal lymphadenopathy. CT guided LUL lung biopsy showed acute fibrinous and organizing pneumonia. The antibiotic treatment was changed to ampicillin/sulbactam. After clinical improvement the patient was discharged on oral amoxicillin/clavulanic acid for 1 week. Follow-up chest X-ray two months later showed resolving pneumonia, and repeat CT chest six months later showed resolution of pneumonia with stable hilar, mediastinal lymphadenopathy.

His clinical presentation and investigation finding made a diagnosis difficult as Tuberculosis and Lung neoplasm were high on differentials initially.

3. Conclusion

In view of Streptococcus F as an important pathogen, laboratories should make effort to identify these organisms. These organisms are increasingly being recognized as a cause of different types of infection. However, we still lack a proper identification for this organism. Since antibiotic coverage for infection with all these strains is easily achieved, there has been very limited incentive to appropriately identify these organisms. Not enough is known about the distribution and pathogenic potentials of these streptococci in humans. As drug resistance is a growing concern, it would be helpful if we know the virulence and pathogenesis of disease caused by these organisms so that we can identify different avenues for treatment.

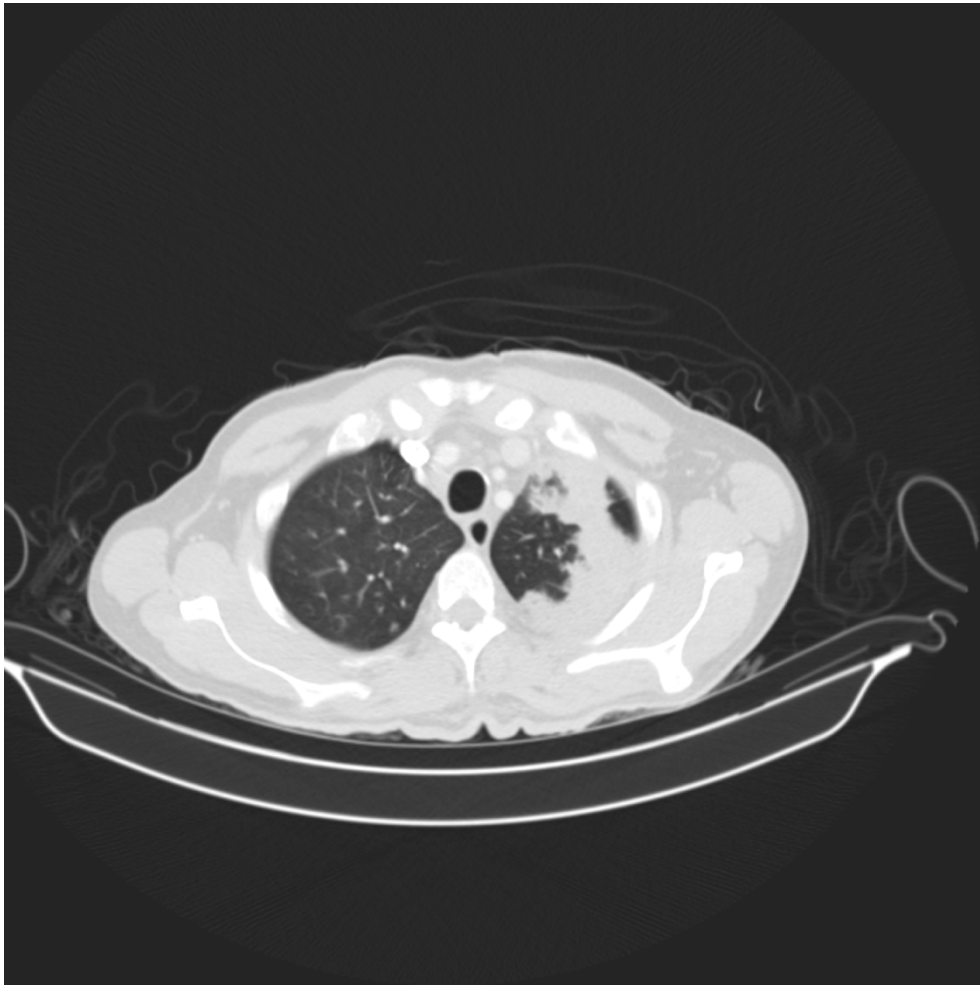


Figure 1. ct chest 1

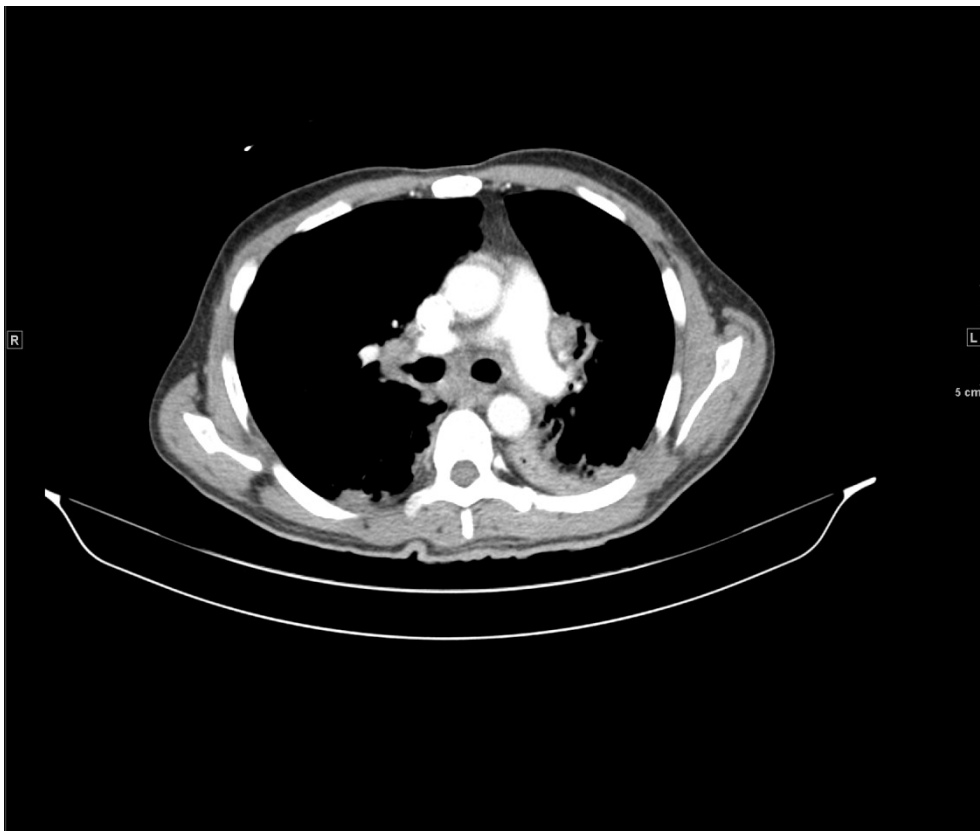


Figure 2. ct chest 2



Figure 3. ct chest 3

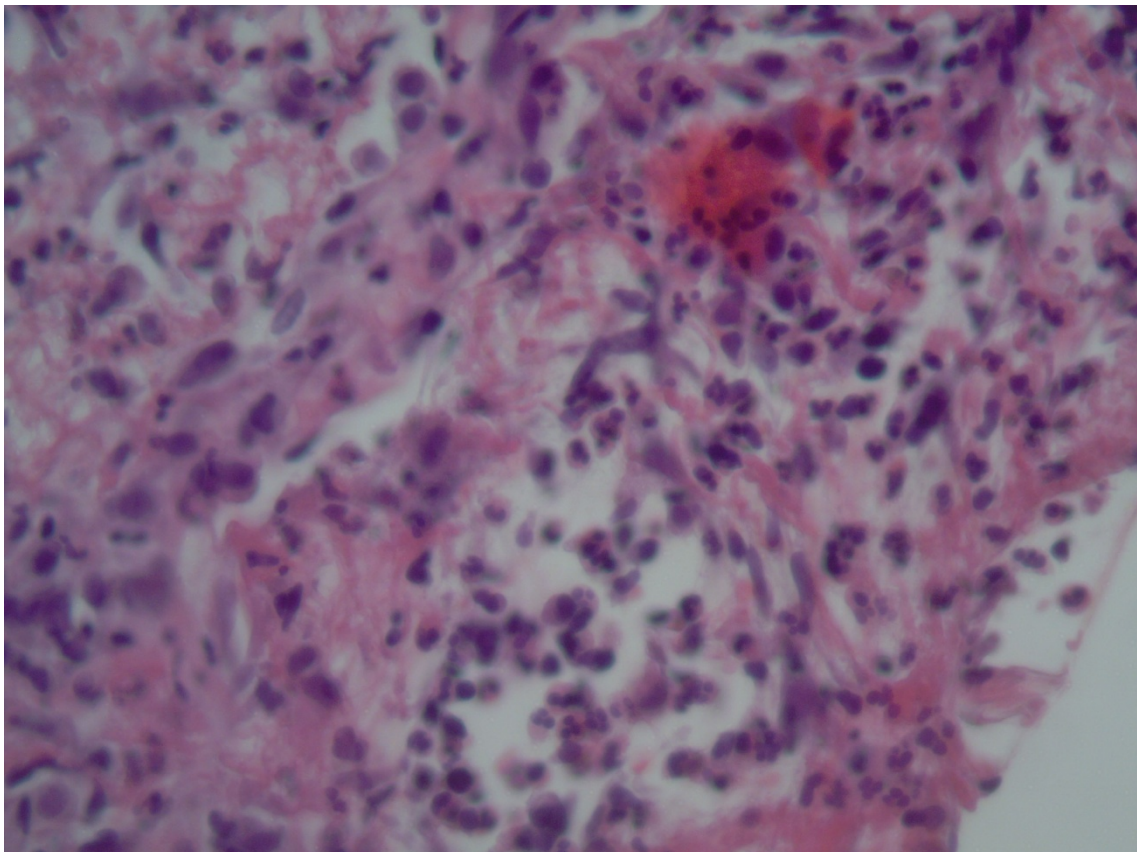


Figure 4. lung biopsy image

Fund

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Statement of Competing Interests

The authors declare no conflict of interest in preparing this article.

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