



Klebsiella Ozaenae Causing Health Care Associated Pneumonia and Bacteremia

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INTRODUCTION

Klebsiella ozaenae is a subtype of *Klebsiella pneumoniae*, a gram-negative, nonmotile, aerobic, encapsulated rod bacterium. It is a primary colonizer of the oral and nasopharyngeal mucosa and has been related to atrophic rhinitis. Serious invasive infection secondary to *Klebsiella ozaenae* is a rare clinical problem. The number of cases relating this subspecies to pneumonia is limited.

CASE PRESENTATION

A 68-year-old man with a history of hypertension and cervical spinal stenosis, who was referred from an inpatient rehabilitation facility with complaints of shortness of breath, cough, jelly-like yellowish sputum production, fever, periods of confusion, and disorientation for two days. Patient denied history of smoking, alcohol intake, or illicit drug use. The patient denied any chest pain or night sweats.

Physical examination revealed a temperature of 101.3 °F; pulse rate 94; respiratory rate 20; blood pressure 123/70 mm of Hg; and oxygen saturation was 94% on room air. There were bronchial breath sounds over the right upper lung.

Chest x-ray revealed right upper zone consolidation. The leukocyte count was 15.8 K/uL and hematocrit was 35.5%. Other laboratory data were within normal limits.

The patient was treated with Vancomycin and Levofloxacin for presumed HCAP. Sputum and blood cultures grew *K. ozaenae* resistant to ampicillin, but susceptible to fluoroquinolones. Gradually, the patient's condition improved and he was discharged on oral Levofloxacin (750 mg) for two weeks duration.

RADIOLOGY



Portable chest X Ray demonstrating right upper lobe opacity.

DISCUSSION

K. ozaenae causing bacteremia and health-care associated pneumonia is very rare. Few cases of bacteremia secondary to this organism have been previously reported. This case illustrates that the pathogenicity of *K. ozaenae* is not limited to atrophic rhinitis and infections of upper airways. The bacterium can cause nosocomial acquired infections including HCAP and bacteremia and can be associated with increased morbidity and mortality.

CONCLUSION

Patients who reside in skilled nursing facilities with certain risk factors including old age, chronic rhinitis, prior antibiotics usage, history of alcoholism, immunosuppression, and the presence of underlying malignancy are at increased risk for gram-negative bacterial colonization or infection. Clinicians should be aware of *K. ozaenae* as a potential cause for HCAP which can lead to serious adverse outcomes.

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