Case Report

Pneumococcal Bacteremia Presenting as Acute Parotitis and Sepsis

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Received 9 June 2009; Accepted 6 July 2009

Recommended by Edward Abraham

We report a case of a 33-year-old female with history of Systemic Lupus Erythematosus (SLE) presenting with acute febrile illness and unilateral parotid gland enlargement progressing to septic shock. The chest imaging showed bilateral multilobar infiltrates and Pneumococci were identified in the blood cultures. The patient was treated with broad-spectrum antibiotics. The underlying immunosupression caused by SLE and long-term steroid treatment could have predisposed this patient to invasive Pneumococcal disease.

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1. Introduction

Parotitis is usually a polymicrobial infection caused by Staphylococcal aureus and anaerobic organisms [1, 2]. It is rare for Pneumococci to seed the parotid gland [3, 4]. However, it is important to recognize the bacterial seeding of the parotid gland and its potential to cause sepsis especially in a predisposed individual.

2. Case Presentation

A 33-year-old Indian female with a history of SLE for 5 years presented to an emergency department (ED) after a feeling of neck pain, lump, and fever for 2-day duration. She had been having a mild dry cough for the same duration. The 3–5 cm neck lump was in the left parotid region, and was tender, but not erythematous or fluctuant and was not draining any material. There were bibasilar crackles in the lungs. The abdomen was benign and there were no meningeal signs. Within hours of arrival into the hospital, she became hypotensive and lethargic requiring vasopressor support. The patient was intubated in the intensive care unit (ICU) and started on broad-spectrum antibiotics with Vancomycin, Imipenem, and Mycofungin, in view of her immunocompromised status. The patient had been on oral steroids for the last several years and on infliximab for several months for her lupus nephritis.

3. Hospital Course

The patient had a CT scan of neck and chest in the ED. Complete blood count, metabolic panel blood cultures, urine cultures, and urinalysis were sent at the time of the admission.

The CT of neck (Figure 1) showed findings suggestive of left parotitis and inflammation spreading to left pharyngeal mucosa and parapharyngeal space and retropharyngeal space.

CT chest (Figure 2) showed bilateral multilobar pneumonia. She had an elevated WBC count of around 12 000/mm³ and a platelet count of 129 000 at the time of admission. Her creatinine was 1.55 mg/dL. A metabolic acidosis (pH of 7.2) with bicarbonate measuring 13 mEq/L was noted. Thyroid function tests were consistent with sick euthyroid syndrome. The blood cultures grew Streptococcus Pneumoniae after 18 hours of incubation.

4. Clinical Progress

The patient was continued on Imipenem and Vancomycin in the ICU, and had significant clinical improvement. The Streptococcus Pneumoniae was sensitive to erythromycin, penicillin ceftaxone, levofloxacin, and vancomycin. On day 4 in the ICU, the antibiotic coverage was de-escalated to Vancomycin. She was extubated on day 5 and transferred
A bacterial infection of the parotid gland usually follows patients who are dehydrated, elderly, have poor oral hygiene, in patients receiving intensive care, and in newborns [2]. It has rarely been described in patients who are HIV-positive or other immunodeficiency syndromes [11, 12]. Rarely, parotitis has been described in Lupus patients [13]. Acute bacterial seeding should be considered in a patient who has presents with signs of septic shock and swelling of parotid gland. The abscess might need emergent drainage if any fluctuance is obvious but might not yield much pus in case of Streptococcal infections because of its diffuse spreading nature.

6. Conclusion

Acute bacterial parotitis can initiate the seeding of pneumococci in the blood especially in case of immunocompromised individuals and also may be a presenting feature in an individual as a parotid swelling. Prompt use of imaging studies and blood cultures followed by intravenous antibiotics may be life saving in this regard.

References


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