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Case Report

Child with community acquired staphylococcal pneumonia complicated by bilateral pneumothorax

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ABSTRACT

Community acquired Methicillin-resistant *Staphylococcus aureus* (MRSA) pneumonia usually present in children with some comorbidity and may have fulminant course in these children. In this case report authors have described a healthy child with MRSA pneumonia complicated by bilateral pneumothorax.

Keywords: Bilateral pneumothorax, Community acquired staphylococcal pneumonia, MRSA

INTRODUCTION

Community-acquired staphylococcal pneumonia runs an extremely fulminant course. Though not a rare condition, it usually presents in a patient with an underlying predisposing factor. Described in this report is a healthy young child who presented with complicated *staphylococcal pneumonia*, but had no underlying predisposing factor.[1-4]

CASE REPORT

A one year old child was brought with history of fever and cough of five days duration. The child was treated elsewhere with oral Amoxyclav and symptomatic treatment for last five days. The child was in severe respiratory distress, he was irritable, cyanosed, the respiratory rate was around 90/min with sub costal retraction, nasal flaring, had HR of 180/min, SPO2 was 60-70% on room air. On auscultation, breath sounds were absent on bilateral lung field with distant heart sounds. Chest X-ray was done (Figure 1), which showed bilateral pneumothorax. Immediate needle thoracocentesis was done followed by bilateral chest tube placement (Figure 2 and Figure 3). The child's anthropometric measurements (weight, height, head circumference) were appropriate for the age. There was no other focus of infection present. Subsequent investigations revealed a positive CRP, microcytic hypochromic anemia, and polymorphnuclear leukocytosis. Throat swab for H1N1 was negative. The blood culture grew methicillin resistant *Staphylococcus aureus* (MRSA) sensitive to vancomycin. He was given IV fluids/IV vancomycin 15 mg/kg at every six hours for 14 days/packed RBC transfusion. Chest tube was removed after 72hrs. Our patient had a complete recovery and was discharged after 14 days of PICU care.

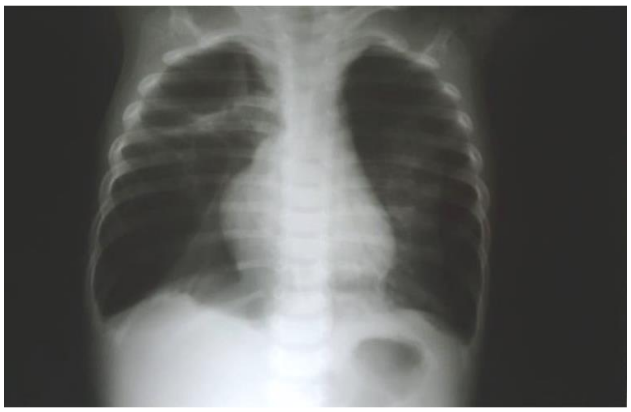

Figure 1: X-ray chest showing bilatral pnumothorax.

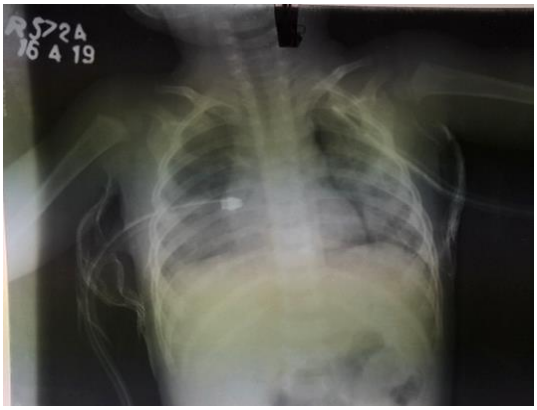

Figure 2: X ray post chest tube placement.

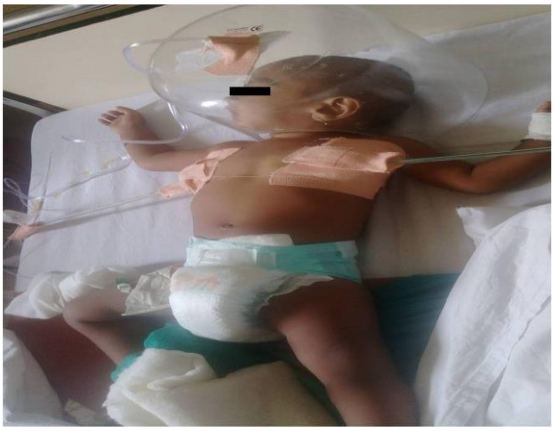

Figure 3: The child with bilateral pnumothorax.

DISCUSSION

Staphylococci are gram positive bacteria and are ubiquitous in the environment. *S. aureus* strains resistant to β-lactam antibiotics, typically referred to as MRSA, have become a significant problem in both community and hospital settings.[1] Community-associated Methicillin-resistant *Staphylococcus aureus* (CA-MRSA) strains are primarily associated with skin and soft tissue infections; however, they are increasingly causing more invasive infections including severe community-acquired pneumonia. But it is uncommon for CA-MRSA to cause complicated pneumonia in a one year old healthy child.

The usual underlying factors for invasive staphylococcal disease are extremes of ages, influenza and measles infection, hospitalized patient, and underlying comorbidity.

The most striking clinical/radiological features of staphylococcal pneumonia are presence of multilobar consolidation, cavitation, pneumatoceles and spontaneous pnemothorax.[2, 3]

In cases of MRSA associated infections Vancomycin is recommended in children. MRSA isolates in the bloodstream with vancomycin MIC greater than or equal to 2 micrograms/mL may not respond adequately to vancomycin. Therefore, in these cases, linezolid, tigecycline, quinopristin-dalfopristin can be used after consultation with infectious disease specialist.[1,5]

CONCLUSION

Community associated MRSA pneumonia should be suspected in any patients with severe community-acquired pneumonia. Care needs to be taken in clinical practice for early recognition and prompt treatment.

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