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Letter to the Editor/ Editöre Mektup

Necrotizing Pneumonia due to Community-Acquired Methicillin-Resistant *Staphylococcus aureus* Infection

Toplum Kökenli Metisiline Dirençli *Staphylococcus aureus* Enfeksiyonuna Bağlı Nekrotizan Pnömoni

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Dear Editor,

Necrotizing pneumonia is a severe and potentially life-threatening serious complication of pneumonia characterized by the necrosis and liquefaction of lung parenchyma. It accounts for approximately 4% of community-acquired pneumonia.[1]

A 10-month-old male patient was admitted with a five-day history of fever and difficulty breathing. He had used oral amoxicillin clavulanic acid for five days before admission. The patient had a history of cesarean delivery at 38 weeks gestation with a birth weight of 3500 grams, and had no history of chronic disease or previous hospitalization. Vaccines were administered following the National Vaccination Schedule. Physical examination revealed a fever, decreased breath sounds in the right lung, and bilateral crackles. The patient also exhibited tachypnea.

In laboratory tests, hemoglobin 9.4 g/dl, leucocyte counts 15010/mm³, absolute neutrophil count 10380/mm³. Acute phase reactants were elevated as C-reactive protein (CRP) was 263 mg/l (normal value 0-5 mg/l). Chest X-rays showed one small cavity within areas of pulmonary consolidation (**Figure 1a**). Cefotaxime treatment was initiated. As the fever persisted on the third day of hospitalization, vancomycin was added to the treatment regimen, and the CRP level was 170 mg/L.

On the sixth day of hospitalization, cefotaxime treatment was discontinued, and meropenem treatment was initiated. The CRP level was 122 mg/L. Chest X-ray and chest tomography revealed cystic and nodular lesions with cavitation containing air and fluid levels, consistent with necrotizing pneumonia (**Figure 1b**).

Thoracentesis was performed but no sample was obtained. On the 10th day of treatment, a lung tissue sample was obtained by the interventional radiology department and methicillin-resistant *Staphylococcus aureus* (MIC value was 0.5 mg/L for vancomycin, 0.25 mg/L for clindamycin) growth was detected in this specimen.

The patient remained afebrile from the eleventh day of treatment onwards. He completed a 25-day course of vancomycin and a 19-day course of clindamycin. Following the discontinuation of intravenous treatment, oral clindamycin was initiated, with the total duration of treatment extending to six weeks.

The Tuberculin skin test was 0 mm while the Interferon-gamma release assay test resulted as indeterminate twice. Acid-resistant bacteria were not detected in the gastric aspirates taken over three consecutive days, and the Mycobacterium tuberculosis complex did not grow. Immunologic examination of the patient revealed normal levels of immunoglobulins, lymphocyte subsets, and a normal dihydrorhodamine test. HIV testing was negative. An echocardiographic examination revealed no abnormalities. The patient's chest X-ray showed progressive improvement, and no problems were encountered during the six-month follow-up after discharge (**Figure 1c**).

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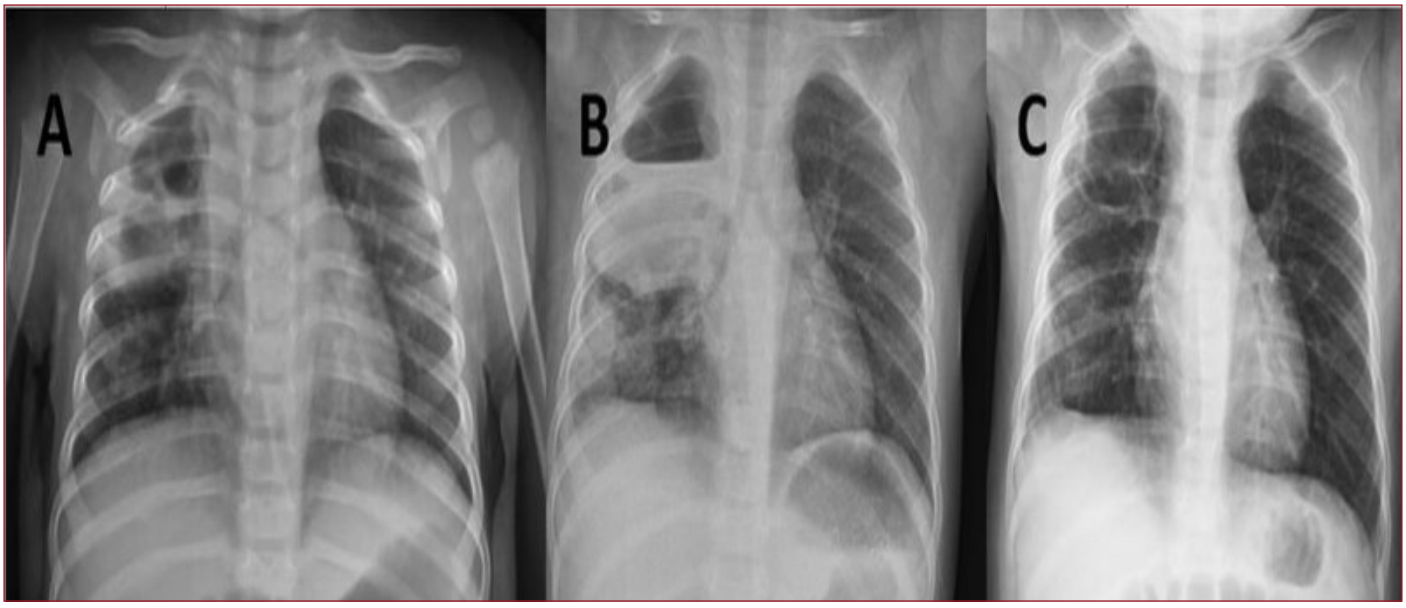

Figure 1. Chest X-ray of patient (A: At admission, B: The 6th day of treatment, C: The 30th day of treatment)

Necrotizing pneumonia is a severe infection that usually affects immunocompetent children, timely and effective treatment is life-saving. Although identifying the causative agent and determining antibiotic susceptibility is the most important step in guiding treatment, the causative agent can be demonstrated in less than half of the cases.[1,2] The lack of an effective vaccine against *S. aureus* increases the importance of early diagnosis and treatment.[3]

Keywords: Child, necrotizing pneumonia, *Staphylococcus aureus*

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