A Pneumonia Case Caused By Cedecea Lapagei

Cedecea Lapagei’s Neden Olduğu Bir Pnömoni Olguşu

Cedecea Lapagei ve Pnömoni / Cedecea Lapagei and Pneumonia

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Abstract

Cedecea spp., which are the member of Enterobacteriaceae family, is frequently isolated from sputum, but their clinical importance is not clear. This report presents a pneumonia case caused by Cedecea lapagei. An 18 year old, cachectic, spastic and epileptic male patient with oral and nasal bleeding was admitted to the hospital and underwent artificial respiration after epileptic convulsions. On the third day of hospitalization Chest X-ray revealed opacities in the right lobe. Tracheal aspirate's direct microscopic examination revealed leukocytes and gram-negative bacilli. Bacteria isolated from tracheal aspirate culture was identified as Cedecea lapagei by the BBL Crystal Enteric/ Nonfermenter ID kit (Becton Dickinson, USA) which was confirmed by the Vitek identification system (Biomerieux, France). Upon the initiation of intravenous sulbactam/cefoperazone and amikacin combination therapy, the signs of infection decreased in intensity. In this case, tracheal intubation and aspiration of the secretions let the bacteria cause pneumonia. This report supports the fact that Cedecea lapagei is a causative agent of pneumonia as shown in rare cases in the literature.

Keywords

Cedecea; Cedecea Lapagei; Pneumonia
Introduction

The name Cedecea was proposed in 1980 for a new genus, in the family Enterobacteriaceae, formerly designated as CDC Enteric Group 15. The genus Cedecea is phenotypically distinct from other genera in the family Enterobacteriaceae. Like Serratia cultures, Cedecea species are lipase positive and resistant to colistin and cephalothin. Unlike Serratia strains, Cedecea strains do not hydrolyze gelatin or DNA. Cedecea species are composed of three groups called C. davisae, C. lapagei, C. neteri [1]. Cedecea species are rarely isolated from clinical samples as pathogen and there are only a few Cedecea infections reported [2-4]. In this report a case with C. lapagei pneumonia is presented.

Case Report

An 18 year old male patient with oral and nasal bleeding was admitted to the hospital. The patient was cachectic, spastic from the birth and epileptic since 2004. The patient had subarachnoid bleeding 8 months ago. There were several ulcers and contractures in his body. After he was admitted to the intensive care unit, the patient had epileptic convulsions which depressed his respiration and underwent artificial respiration. The patient's hemoglobin was 5.5 g/dL, international normalized ratio (INR) was 3.4 on hospitalization. On the third day of hospitalization his temperature was 37 ºC and white blood cell count was 2600/ml. Chest X-ray revealed infiltration in the right lobe (Figure 1). Tracheal aspirate's direct microscopic examination revealed leukocytes and gram-negative bacilli. Bacteria isolated from tracheal aspirate culture was identified as Cedecea lapagei by the BBL Crystal Enteric/ Nonfermenter ID kit (Becton Dickinson, USA). The bacteria was oxidase negative, methyl red positive and Voges-Proskauer weakly positive.

The bacteria was found to be resistant to amoxicillin, amoxicillin/clavulonic acid, cefuroxime, ceftriaxone, imipenem, ciprofloxacin, gentamicin, amikacin and susceptible to sulbactam/cefoperazone. The patient was treated with sulbactam/cefoperazone and amikacin (1000 mg/day) combination therapy. Along the antibiotherapy the patient was also treated with erythrocyte suspension, fresh frozen plasma, vitamin K and human albumin. Two days after the antibiotic treatment his temperature was 37 ºC and white blood cell count was 5080/ml. The patient's urinary analysis and culture was normal. No bacteria grown on control tracheal aspirate culture after three days of treatment.

Discussion

Although Cedecea strains are frequently isolated from sputum, their role in clinical infections is not clear. C. davisae and C. neteri were reported to cause bacteremia, ulcer, abscess, wound and ophthalmic infections and C. lapagei was reported to cause pneumonia [2-6].

Pneumonia was thought to be related with ventilation in this patient. As C. lapagei is found in the upper respiratory tract, tracheal intubation and aspiration of the secretions let the bacteria cause pneumonia. Ventilator- associated pneumonia is one of the major reasons of mortality and morbidity in intensive care units [7]. Patient's underlying disease and flora of the intensive care unit determines the causative agent. The most common isolated bacteria from the nosocomial pneumonia are Acinetobacter baumannii, Pseudomonas aeruginosa, Klebsiella pneumonia and Staphylococcus aureus [8]. This report supports the fact that Cedecea lapagei is a causative agent of pneumonia as shown in rare cases in the literature.

Competing interests

The authors declare that they have no competing interests.

References