A Pneumonia Case Caused By Cedecea Lapagei

Cedace Lapagei'nin Neden Olduğu Bir Pnömoni Olgusu

Cedecea Lapagei ve Pnömoni / Cedecea Lapagei and Pneumonia

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Özet

Enterobacteriaceae ailesi üyesi olan Cedecea cinsi bakteriler, çoğunlukla balgamdan izole edilmelerine karşın klinik önemleri tam olarak bilinmemektedir. Bu raporda Cedecea lapagei' nin etken olduğu bir pnömoni olgusu sunulmaktadır. 18 yaşında kaşektik, spastik ve epileptik hasta oral ve nazal kanama şikayetiyle hastaneye kabul edildikten sonra gelişen epileptik konvülziyonları sonrasında suni solunum cihazına bağlandı. Hastaneye yatışının 3. gününde çekilen göğüs filminde sağ lobda opasite gözlendi. Trakeal aspiratın direkt mikroskopik incelemesinde lökositler ve Gram negatif basil görüldü. Trakeal aspirat kültüründen izole edilen bakteri BBL Crystal Enteric/ Nonfermenter ID kiti (Becton Dickinson, USA) ile Cedecea lapagei olarak identifiye edildi ve bu sonuç Vitek identification system (Biomerieux, France) kiti ile doğrulandı. İntravenöz sulbaktam/sefoperazon ve amikasin kombine tedavisi ile enfeksiyon belirtileri azaldı. Bu vakada trakeal entübasyon ve sekresyonların aspire edilmesi bakterinin pnömoni oluşturmasına neden oldu. Bu rapor literatürdeki nadir vakala rda gösterildiği üzere Cedecea lapagei'nin pnömoni etkeni olduğu bulgusunu desteklemektedir.

Anahtar Kelimeler

Cedecea; Cedecea Lapagei; Pnömoni

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

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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 cultures are lipase positive and resistant to colistin and cephalothin. Unlike Serratia strains, Cedecea strains do not hydrolize 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 38 ºC and white blood cell count was 2600/ml. Chest X-ray revealed infiltation 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 by the conventional methods. Identification of the bacteria was confirmed by the Vitek identification system (Biomerieux, France). The bacteria was found to be resistant to amoxicillin, amoxicillin/clavulonic acid, cefuroxime, ceftazidime, ceftriaxone, imipenem, ciprofloxacin, gentamicin, amikacin and susceptible to sulbactam/cefoperazone. The patient was treated with sulbactam/cefoperazone (2 gr/day) and amikacin (1000 mg/day) combination therapy. Along the antibiotherapy the patient was also treated with erythrocyte suspension, fresh fozen 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.

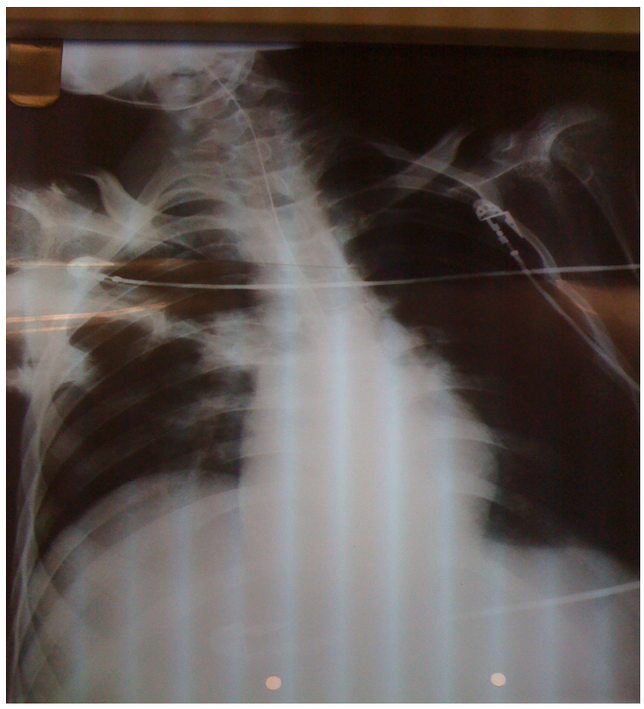


Figure 1. Chest radiogram of the patient, reflecting infiltration in the right lobe

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.

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