Case report: Community meningitis in infant caused by Elizabethkingia meningoseptica

A.Tlemsani1, S.Kermali2, F.djedjig3, S. Bouheraoua3, N.Benamrouche3, H.Tali-maamar3
1. Central Laboratory of Biology, Ain Taya Hospital, 2. Department of Pediatrics, Ain Taya Hospital, 3. Laboratory of Medical Bacteriology, Institut Pasteur in Algeria

Introduction

Called Flavobacterium meningosepticum until 1994 and Chryseobacterium meningosepticum until 2005, Elizabethkingia meningoseptica is a gram-negative bacillus, catalase positive, oxidase positive, and non-glucose fermenting. It was first isolated in 1959 by Elisabeth O King, American bacteriologist who worked at the CDC unclassified bacteria responsible for meningitis in infants. It is an ubiquitous bacteria found on soils, plants, and both fresh and marine water. This Bacteria is exceptionally isolated in humans, it causes neonatal meningitis and less frequently nosocomial pneumonia, sepsis and meningitis in immunocompromised. It is usually found in saline solution used for reconstitution of antibiotics, the water sinks and tanks of the hospital. The immunosuppression, prolonged hospital stay, broad-spectrum antibiotics and invasive devices are the most factors associated with acquisition of this infection.

Patients and methods

We related a case of four months old female infant admitted to the pediatric emergency department in Ain Taya hospital the first march 2014 for sepsis. A lumbar puncture was performed and CSF sent immediately to the laboratory. The patient was treated with association cefotaxime-amikacin. In the laboratory cytobacteriological and biochemical examinations were performed. Antimicrobial susceptibility was done according to the recommendations of the CLSI. Swabs of different sites of the body were made in order to detect E. meningoseptica. The infant had an history of prolonged hospitalization at birth due to extreme prematurity, but without apparent aftermath. On the other hand the clinical examination and mother interrogation reveals that the patient in question had a very bad personal hygiene due to the lack of a proper wash of all parts of the body from birth, lest he falls ill according to the mother.

Results

The CSF Albumin was 4,5g/l, glucose 0,01g/l, white cells 1200/mm³ with 90% neutrophils and 10% lymphocytes. The culture was positive showing colonies of 1 to 2 mm diameter on blood agar and nutrient agar. The Gram stain showed small Gram negative bacilli, the reactions of the oxidase and catalase were positive. The strain showed a resistance to colistin and an inhibition diameter to vancomycin like gram positive bacteria. The identification of genus and species was performed by the VITEK 2 Compact® and allowed the identification of E. meningoseptica. The study of antibiotic susceptibility showed a resistance to ticarcilline, ceftazidime, imipenem, gentamyicine, tobramycicine, netilmicine, colistine, fosfomyicine. Intermediate to ticarcilline+clavulanic acid,cefepime, and sensitive to piperacilline, levofoxacine, amikacine, ciprofloxacine and rifampicine.

Conclusion

E. meningoseptica is an infrequent organism causing infections in neonates and immunocompromised adults in a setting of nosocomial infections. The reported case may have originated an acquired carriage during his hospitalization in intensive care unit. However the time of the onset of meningitis seems to be quite long compared to the date of hospitalization, making it difficult to attribute the nosocomial nature to this infection. On the other hand the bad hygiene of the infant can’t explain alone this serious infection. E. meningoseptica could be a potential risk of infection in hospital in the future due to its resistance to many antibiotics and its fastidious identification, delaying its characterization and introduction of prompt and adequate treatment.

Corresponding author: tlemsaniadel@yahoo.fr