

R695

Publication Only

Clinical ID: Paediatric infections

Bloodstream infection due to *Oligella ureolytica* in a newborn infant

T. Demir<sup>1</sup>, N. Celenk<sup>2</sup>, F. Milletli Sezgin<sup>1</sup>

<sup>1</sup>Clinical Microbiology, Ahi Evran University Research and Teaching Hospital, Kirsehir, Turkey ;

<sup>2</sup>Pediatrics, Ahi Evran University Research and Teaching Hospital, Kirsehir, Turkey

**Objectives:** *Oligella* species are small, Gram-negative, aerobic rods/ coccobacilli that are catalase and oxidase-positive, mostly isolated from urinary tract and rarely from wounds, bloodstream infections, septic arthritis. In this study, we report a case of *O.ureolytica* related bloodstream infection in a newborn.

**Methods:** A 24 hour-old female, full term infant was admitted to Pediatrics Intensive Care Unit ward of Ahi Evran University, Training and Research Hospital, Kirsehir, with the symptoms of poor feeding, jaundice, fever with presumptive diagnosis of sepsis. There was no need for resuscitation and baby was breastfed after delivery. Respiratory, cardiovascular and abdominal examination were unremarkable but weakness in newborn reflexes and icterus were observed. On admission, acute phase reactants, total cell count, urine culture and two sets of blood cultures were send to the microbiological laboratory.

**Results:** Platelet, white blood cell count (20.4% neutrophils and 68.3% lymphocytes) and hemoglobin level was normal. Low levels of RBC ( $3.38 \times 10^6$  /ml), hematocrite (35.8%) and high levels of MCV, MCH, MCHC and PDW was observed. Serum electrolyte levels were normal. Minimal decrease in albumin, glucose and increase in bilirubin was detected. CRP was 2.9 mg/dL. Chest radiography and urinalysis were unremarkable and urine culture was sterile. Following two days of incubation small, smooth, nonhemolytic colonies on blood agar was detected in two blood culture samples. Microscopy revealed small Gram-negative coccobacilli. The organism was oxidase-positive, catalase-positive and nonfermentative with positive test results for nitrate reduction, urea hydrolysis and motility and identified as *Oligella ureolytica* by VITEK-2 Compact system (bioMerieux, France). The infant was given an empiric therapy including ampicillin (100mg/kg/day) and netilmicin (5 mg/kg/day) on the day of admission. As there is no standardized antimicrobial susceptibility testing for *Oligella* spp., cut-off values of Gram-negative bacteria other than *Enterobacteriaceae* on CLSI were used for interpretation. The organism was susceptible to amoxicillin-clavulanic acid, gentamicin, cefuroxime, ceftriaxone, ceftazidime, ciprofloxacin, carbapenems and intermediate resistant to ampicillin and resistant to cotrimoxazole. The infant was given a ten-day course of netilmicin (5 mg/kg/day) after susceptibility testing. Additionally, phototherapy was performed for hyperbilirubinemia. The patient's condition improved gradually after four days of treatment and was discharged with complete cure.

**Conclusions.** *Oligella* spp. infection has rarely been reported in the literature probably due to misidentification or uncertainty of the pathogenicity of the organism. To our knowledge, this is the first reported case of *O.ureolytica* related bacteremia in a newborn infant. Urinary tract obstruction is a predisposing factor for bacteremia. In our case, urine culture was sterile and there was no clinical/ laboratory evidence to suggest any abnormality of the urinary tract thus the mechanism of infection remains unclear. In conclusion, this case has emphasized the potential role of *O. ureolytica* as an infectious agent related with bacteremia.