BURKHOLDERIA CEPACIA SEPSIS: A NEONATAL CASE

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Introduction

- The *B. cepacia*, formerly known as *Pseudomonas cepacia* was assigned to a new genus *Burkholderia* in 1992, in honor of its discoverer. Currently BCC comprises seventeen closely related species (formerly genomovars), belonging to the phylum Proteobacteria. *Burkholderia cepacia* is a gram-negative bacillus commonly found in soil and moist environments and capable of surviving and growing in nutrient-poor water.

- The main cause is the contamination of ventilation equipment.
- The pulmonary tropism of this bacterium is great, bacteremia is rare.

- *B. cepacia* infections are sometimes dramatic, leading to a deterioration of general condition and even leading to death. In addition, the risk of transmission from patient to patient is very high, which leads to taking drastic hygiene measures.

Case report

- He was a male newborn; he was a pre-term with intrauterine growth retarded.
- He was born from unrelated marriage, of 24-year-old mother, poorly followed pregnancy estimated at 36 weeks of amenorrhea.
- Infectious anamnesis was positive: premature rupture of membranes greater than 24 hours with a tinted amniotic fluid.
- The patient was hospitalized at the first hour of life for a respiratory distress scored at 3 / 10th according to the Silverman score.
- The patient was treated by non-invasive ventilation and placed on antibiotic therapy with the third-generation cephalosporin associated with gentamicin.
- The evolution was marked by the aggravation of his respiratory distress and the appearance of signs of sepsis.
- The diagnosis of BCC [Multi-drug-resistant](#) was made by blood culture.
- The patient was sedated, intubated with Carbapenem associated with Amikacin.
- The newborn had died after 9 days of hospitalization.

Discussion

Burkholderia cepacia (fig.1) is mainly involved in two groups of infections, first nosocomial infections (bacteremia, respiratory and urinary infections) occurring most often in patients with invasive maneuvers (intravenous catheterization, intubation / ventilation, urinary catheterization) and secondly respiratory infections in cystic fibrosis, the severity of which is highly variable.

Burkholderia Cepacia Bacteremia is rare and is reported mainly in immunocompromised patients.

Currently, *Burkholderia Cepacia* is recognized as an important nosocomial pathogen due to its ability to survive and multiply in the environment for long periods and persist in antiseptic solutions and in hospital materials and also because of its high antibiotic resistance.

Burkholderia Cepacia is intrinsically resistant to aminoglycosides, polymyxins and variable resistance to β -lactams, chloramphenicol, fluoroquinolones and trimethoprim.

Some antibiotics such as carbapenems and ciprofloxacin show some activity in vitro against this bacterium, this resistance is essentially related to the AmpC β -lactamase-producing which alters the membrane permeability and affects the penicillin binding protein. (Fig. 2)

Conclusion

Nosocomial *B. cepacia* infections occurred mostly in intensive care unit patients associated with invasive procedures. Its potential to cause fatal infections in the ICUs and its multidrug resistance makes its presence dangerous in hospital settings. Clinicians, especially from the tropics and the developing nations, must be made aware as to how to detect and combat this emerging infection with a potentially fatal outcome.

Figure 1: A digitally colored electron micrograph of *B. Cepacia*.

Figure2: antibiotic resistance mechanisms of *B.Cepacia*