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RESEARCH ARTICLE

SEPTIC SHOCK ATELIZABETHKINGIA MENINGOSEPTICA IN A NEWBORN AT TERM : ABOUT A CASE

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Abstract

Elizabethkingia meningoseptica (E.meningoseptica) Gram-negative bacterium present in water and soil, it causes serious nosocomial infections in very elderly and immunocompromised patients and in critically ill patients in intensive care units (ICU).In this article We report the case of a newborn in septic shock secondary to bacteremia caused by Elizabethkingia meningoseptica agent . The treatment is based on the detection of sensitivity and resistance profile on the antibiogram for a good adaptation of the treatment.

Introduction:-

Elizabethkingia Meningoseptica is a ubiquitous germ responsible for heavy mortality in hospitals, due to its multi-resistant phenotype to antibiotics. Responsible for nosocomial infections mainly affecting premature babies and immunocompromised people and a very, high cause of mortality. It is now emerging as a serious nosocomial pathogen, inherently resistant to several commonly used antibiotics .

Case report:
Age :
Newborn at D1 of life.

History :
a poorly followed pregnancy carried to term ; a cesarean delivery without fetal-maternal incidents.

History of the disease:
-Occlusive syndrome on day 1 of life consisting of fecaloid vomiting, absence of meconium emission and abdominal distension.
-The diagnosis of atresia of the small intestine was made, on an ASP objectifying small water-aeric levels.
- Patient was operated on day 2 of life.

The immediate post-operative follow-up was simple
On postoperative day 3, he presented with septic shock, retained in front of:- Febrile plateau at 39°C
- Axial and peripheral hypotonia, then deterioration of the state of consciousness.
- polypnea with chest indrawing, put under O2 goggles, then ventilated intubation.
- hydrops condition,

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- Arterial hypotension controlled by norepinephrine.
- Preserved diuresis.

Paraclinical:

1. Blood count:
   Hg=8 g/dl , MCV=101fl , TCMH=34pg
   GB=5150 elements/mm³, PNN=3640 elements/mm³, Lym=1090 elements/mm³, Plq= 40,000/mm³
2. CRP= 146
3. Albumin =22
4. Calcemia = 64
5. Fasting blood glucose =0.67
6. Bicarbonates:12
7. Urea=0.83; Creatinine =17
8. Infectious assessment (done before the start of treatment):

Chest X-ray: Normal, ECBU=without anomalies, PL: Without anomalies, Blood culture: Direct examination: Colonies of Gram Negative Bacillus.

Treatment:

A probabilistic antibiotic therapy with imipineme, Amikacin and Vancomycin is started after having carried out all the infectious assessment.

Evolution :

The patient died well before the results of the antibiogram.

The culture result is positive after 5 days for Elizabethkingia Meningoseptica, sensitive to Ciprofloxacin, Levofloxacin and Trimethoprim-sulfamethoxazole, resistant to colistin, cefotaxime, gentamicin, imipineme, Tobramycin, piperacillin-tazobactam, ceftazidime, aztreonam, cefepime, meropenem.

Discussion:-

Elizabethkingia meningoseptica is a gram-negative bacillus, strict aerobic, non-fastidious, non-spore forming, non-fermenting, positive oxidase, demanding and therefore requiring culture in a chocolate agar medium, and ubiquitous in the environment. It is isolated by the American bacteriologist Elizabeth O. King, in 1959, in a child with meningitis (1).

1. Bacterial infections with E. meningoseptica , although rare, have been shown to be mainly nosocomial, largely responsible for epidemics of meningitis, especially in premature and immunocompromised neonates, and less frequently pneumonia, endocarditis and sepsis(2).
2. In case of sepsis or septic shock in newborns, fever is the first symptom to appear, this 5 days after birth, as shown in the study by Arbune et al (3), which is consistent with the results of our case .
3. According to a study by Lin et al (4), the predictive risk factors for a poor prognosis are: immunosuppression, prematurity, intensive care, recent surgery and inappropriate antibiotic therapy. In our case, the newborn is at term, operated for atresia of the small intestine, having benefited from an inadequate antibiotic therapy given the context of the septic shock which he presented well before the results of the blood culture and the antibiogram.

E. meningoseptica infections have a particular antibiotic profile: resistance to carbapenems , aminoglycosides and beta-lactams, with sensitivity to fluoroquinolones, piperacillin-tazobactam and trimethoprim-sulfamethoxazole (5). Hence the interest awareness of clinicians to this bacterium as well as correct identification by the microbiology laboratory to reduce the fatal outcome associated with this type of infection (6).

Conclusion:-

E. meningoseptica septicemia is rare but fatal. The detection of gram-negative bacilli on Gram stain or culture should always lead clinicians to suspect E. meningoseptica infection in neonates, even those at term and without obvious risk factors. A good knowledge of antibiotics is necessary to reduce the high rates of morbidity and mortality.

Declarations

Conflicts of interest

The authors have declared no potential conflict of interest with respect to the research, writing and/or publication of this article.

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Author contributions

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