

INTRAVENTRICULAR COLISTIN FOR THE TREATMENT OF EXTENSIVELY DRUG RESISTANT ACINETOBACTER BAUMANNII MENINGITIS: A CASE REPORT

F.D. FERNÁNDEZ-GINÉS¹, P. NIETO-GUINDO¹, J. SÁNCHEZ-GÓMEZ², I. ALFÉREZ-GARCÍA¹.

fdamaso.fernandez@gmail.com

¹Hospital Torrecárdenas, Pharmacy, ALMERÍA, Spain. ²Hospital Torrecárdenas, Clinical Analyst, ALMERÍA, Spain.

Background

Reports on the safety and efficacy of intraventricularly (IVT) colistin administered for the treatment of *Acinetobacter baumannii* ventriculomeningitis in adults are limited. The presence of multiresistance, the poor penetration of many drugs through the blood–brain barrier, together with the ineffectiveness of the immune response in cerebrospinal fluid (CSF) have forced the use of local therapies in order to achieve bactericidal antibiotic concentrations at the site of infection.

Purpose

To describe outcomes of a patient with postneurosurgical ventriculomeningitis caused by extensively drug-resistant *A. baumannii* treated with IVT colistin.

Material and methods

Male patient 26 years of age. Intravenous colistin was diluted to a concentration of 10 mg/mL in sterile saline solution using a 0.22 micrometer filter Millipore.

Dilutions were prepared in pharmacy department, in a vertical laminar flow cabinet class II type B and were stored in a refrigeration chamber with a physicochemical and microbiological stability on at least 3 days.

The neurosurgeon administered IVT colistin 10 mg every 24 hours. Infection was defined on the basis of isolation of *A. baumannii* from the CSF. Intravenous infusions of tigecycline (100 mg every 12 hours) were administered in conjunction with IVT colistin.

Results

CSF culture of *A. baumannii* was resistant to multiple drugs including ampicillin-sulbactam, oxyimino-cephalosporin (ceftazidime and cefepime), fluoroquinolones (ciprofloxacin and levofloxacin), aminoglycosides (gentamicin and amikacin) and trimethoprim-sulfamethoxazole.

That strain was only susceptible to colistin. *A. baumannii* central nervous system (CNS) infection occurred as a consequence of postneurosurgical ventriculomeningitis.

CSF infection was detected at day 5 after surgical operation. The duration of treatment was 25 days. The first test of CSF sterilization was documented at day 12 from the beginning of the treatment.

No evidence of chemical meningitis due to intrathecal colistin administration were encountered.

Conclusions

Intraventricular colistin administration was effective for the treatment of *Acinetobacter baumannii* ventriculomeningitis in our patient, and does not seem to add further toxicity.