

Session: OS025 Current issues in bacterial meningitis

Category: 2e. Skin, soft tissue, bone & joint & central nervous system infections

22 April 2017, 14:54 - 15:04
OS0118

Pseudomonas aeruginosa meningitis in neurosurgical patients with intraventricular catheters : comparison between aminoglycosides or colistin intrathecal treatment

Carlos Rodríguez Lucas¹, Jonathan Fernandez-Suarez², Jose Boga³, Fernando Vazquez³, Mauricio Telenti¹, Azucena Rodriguez-Guardado^{*4}

¹*Hospital Universitario Central de Asturias*

²*Hospital Universitario Central de Asturias; Huca _; Microbiología Y Parasitología*

³*Hospital Universitario Central de Asturias; Microbiology*

⁴*Hospital Universitario Central de Asturias; Infectious Diseases*

Background: The treatment of *Pseudomonas aeruginosa* meningitis is a serious therapeutic problem due to the emerging resistance. We compared the clinical features and the outcome of a group of patients with nosocomial neurosurgical meningitis treated with intrathecal aminoglycosides vs intrathecal colistin.

Material/methods: All patients adults with nosocomial postsurgical meningitis due to *P. aeruginosa* diagnosed at the Hospital Universitario Central de Asturias (Oviedo, Spain), between 1990 and 2014 were retrospectively reviewed. Nosocomial meningitis was defined according to the CDC definitions. Continuous values were expressed as mean and compared using Student t test or U of Man-Whitney. Categorical values were expressed as absolute and relative frequencies and were compared using Fisher's exact test or χ^2 test. A p value less than to 0.05 was considered as statistically significant. A binary logistic regression analysis using a step-wise (Wald) to determine the factors influencing the mortality of the infection was performed.

Results: *P. aeruginosa* was isolated from 14 CSF cultures (57% women, mean age of 48 [18] years. The mean time elapsed between the surgery and the onset of the infection was 18[7] days. The most frequent underlying diseases were neoplasm (35.7%), head trauma (35.7%) and hemorrhage (28.6%). All of the patients received a combined intravenous and intrathecal therapy with colistin (5 (35.7%) patients) or cephalosporin or carbapenems plus aminoglycosides (9 (64.3%) patients). There were no *statistically significant differences* in age, sex, underlying diseases or mixed culture and catheter removal between the different treatments. In 11 (78.6%) cases, treatment was associated with

removal of the intraventricular catheter. Only one patient, who was included in aminoglycosides group, died as a direct consequence of the infection.

Conclusions: Intrathecal therapy is a safe option in the treatment of nosocomial meningitis by *P. aeruginosa* associated a very low mortality. The treatment with colistin is as safe and useful option as the treatment with aminoglycosides.