Introduction:
Central nervous system (CNS) infections constitute a potentially life-threatening neurological emergency. Patients admitted to the intensive care unit (ICU) usually present with a severe disease and organ failure, leading to high mortality and morbidity.

Methods:
We have performed a retrospective analysis during a 5-year period of patients admitted to a polyvalent ICU. Clinical, demographic and outcome data were collected to evaluate its clinical impact on the outcome of patients with CNS infections.

Results:
We identified 30 patients with the diagnosis of meningitis, meningoencephalitis and ventriculitis, where the median age was 57.6 years (range 24-80). Upon clinical presentation, their most frequent signs were fever (70%), meningeal signs (40%), seizures (30%), and a Glasgow Coma Scale score <8 (66%). All needed ventilation support and 66% needed cardiovascular support. A definitive microbiological diagnosis was achieved on 22 patients and antibiotic therapy was adjusted on 18 of them. Most common microorganisms were Streptococcus pneumoniae (n=7), Listeria (n=5) and Pseudomonas aeruginosa (n=4). Other gram negative microorganisms were detected and lead to more adverse outcomes. Meningitis was the cause of admission on 26 patients and on a minority (n=4) meningitis was considered to be a secondary diagnosis on patients admitted for other causes (traumatic brain injury, subarachnoid or intraparenchymal haemorrhage, postoperatively of neurosurgical tumor). Patients that eventually died had at least one risk factor (age>65, immunocompromised due to diabetes, corticotherapy, HIV or heart transplantation).

Conclusion:
Patients admitted to the ICU were not so aged, but had some comorbidities and risk factors leading to more uncommon microorganisms, increasing the risk of adverse outcomes. This lead to an increase of mortality: 23% in the ICU and an overall of 43%.

Image:

![Isolated microorganisms](https://via.placeholder.com/150)