

## 75. BACTERIAL NEUROINFECTIONS: PROGNOSTIC FACTORS, CLINICAL AND EVOLUTIVE FEATURES

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**Introduction.** We conducted a study in the National Institute of Neurology and Neurosurgery from Chisinau, to determine clinical and evolutive features, and major prognostic factor in adults with bacterial neuroinfections.

**Materials and Methods.** A descriptive study was performed based on the analysis of clinical cases with bacterial neuroinfections (BNI), admitted in Neuroemergency Unit (NU) during the period from Jan 2014 to Dec 2015. Selection criteria were clinical symptoms compatible with a diagnosis of neuroinfections, laboratory exams and imaging confirmation, while exclusion criteria were patients with noninfectious neurological manifestations and other etiology. The study included 29 cases selected from the total of 1745 patients. Outcomes were classified as unfavorable (defined by a Glasgow Outcome Scale score of 1 to 4 points) or favourable (a score of 5).

**Discussion results.** BNI accounted for 2% of all patients admitted in NU, and 55% of the total of neuroinfections of any etiology. All cases of BNI were grouped into four nosological forms: meningitis – 25 cases (87%), brain abscess – 1 case (3%), cerebral venous thrombosis – 2 cases (7%), and bacterial myelitis – 1 case (3%). Examination of cerebrospinal fluid (CSF) by Gram stain was performed in 45% of episodes (13 of 29 cases), of which 9 cases were negative, and only 4 positive with different types of bacteria. Acute onset of BNI was in 41%, and subacute in 59% of cases. The mean duration of time interval from onset of BNI symptoms and admission was 9 days, patients who were admitted after 5 days of onset had a poor outcome. The classic triad of fever, neck stiffness, and altered mental status was present in only 48%, being more specific to meningitis; however, 84% had at least two of the four symptoms of fever, neck stiffness, headache, and change in mental status. On admission, 17% of patients were comatose and 31% had focal neurologic deficit. The mortality rate was 28%. The outcome was unfavorable in 76 of episodes (22 patients). Risk factors for an unfavorable outcome were advanced age (> 60), presence of sinusitis or otitis (30%), pneumonia (34%), immunodeficiency (56%), a low score on the Glasgow Coma Scale on admission and an elevated ESR.

**Conclusion.** In adults presenting with BNI, the sensitivity of classic triad is low, but almost all patients present at least two of those four symptoms. Meningitis obviously predominates. The mortality associated with BNI remains high, an unfavorable outcome is more likely to occur in patients of advanced age, in the absence of meningismus, and in the presence of pneumonia, other extraneural complications, or a prolonged duration of illness prior to therapy (5 days).

**Key Words:** bacterial neuroinfections, unfavourable outcome, meningitis