

Brain Abscesses: Clinical Experience and Outcome of 52 Consecutive Cases

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Abstract

Background: Brain abscesses are still a very important pathology, with high mortality and morbidity, even with the advancement of imaging technologies and antibiotic treatment. In this study, we analyzed the relationship between clinical, biological and therapeutic features at admission and clinical outcome in patients with brain abscesses.

Material and method: This is a retrospective study over 52 consecutive patients with brain abscesses treated in our Neurosurgical Department during 8 years, between January 2003 and December 2011. Laboratory tests, cerebral CT or MRI scans, blood and urine cultures were performed. Surgical treatment consisted of either CT guided stereotactic aspiration or craniotomy with the resection of the abscess. Materials from the brain abscess were cultured for aerobic and anaerobic bacteria. Parenteral antibiotic therapy usually lasted between 6 to 8 weeks.

Results: Clinical outcome was assessed at 6 months endpoint by using Glasgow Outcome Scale (GOS). The most common cause of brain abscess was hematogenous spread. There were 41 patients with solitary and 11 with multiple brain abscesses. Regarding microbiological findings, we obtained positive cultures from brain materials in 41 patients. Stereotactic aspiration was performed in 33 patients, surgical excision in 15 and medical therapy alone in 4 patients. As clinical outcome, 84.6% patients had a favorable outcome (GOS 5 and 4) and 15.4% had an unfavorable outcome (severe disability – 4 and death – 4).

Conclusions: Early diagnosis, optimal surgical intervention and timely use of appropriate antibiotics are essential for a good outcome. No significant difference in outcome was found among various surgical treatment modalities. For mortality, initial Glasgow Coma Score (GCS) < 8, associated predisposing factors and systemic infections were significant contributing factors.

Key words: cerebral abscess, cerebral abscess treatment, cerebral abscess outcome

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