It is a potentially life-threatening condition requiring prompt radiological identification and rapid treatment.

Significant advances in the diagnosis and management of bacterial brain abscess over the past several decades have improved the expected outcome of a disease once regarded as invariably fatal. Despite this, intraparenchymal abscess continues to present a serious and potentially life-threatening condition [1].

There has been a gradual improvement in the outcome of patients with brain abscess over the past 50 years, which might be driven by improved brain imaging techniques, minimally invasive neurosurgical procedures, and protocoled antibiotic treatment. Multicenter prospective studies and randomized clinical trials are needed to further advance treatment and prognosis in brain abscess patients.

Our understanding of brain abscesses has increased by meta-analysis on clinical characteristics, ancillary investigations, and treatment modalities. Prognosis has improved over time, likely due to improved brain imaging techniques, minimally invasive neurosurgical procedures, and protocoled antibiotic treatment [2].

Current evidences suggest that for encapsulated brain abscess in superficial non-eloquent area, abscess resection compared to abscess aspiration had lower post-operative residual abscess rate; lower re-operation rate; higher rate of improvement in neurological status within 1 month after surgery, shorter duration of post-operative antibiotics and average length of hospital stay. There was no statistically significant difference in the rate of improvement in neurological status at 3 months post-operative and the mortality [3].

Complications

Intraventricular rupture of brain abscess (IVROBA)

Strongly influences poor outcome in patients with cyanotic heart disease. The key to decreasing poor outcomes may be the prevention and management of IVROBA. To reduce operative and anesthetic risk in these patients, abscesses should be managed by less invasive aspiration methods guided by computed tomography. Abscesses larger than 2 cm in diameter, in deep-located or parieto-occipital regions, should be aspirated immediately and repeatedly, mainly using computed tomography-guided methods to decrease intracranial pressure and avoid IVROBA. IVROBA should be aggressively treated by aspiration methods for the abscess coupled with the appropriate intravenous and intrathecal administration of antibiotics while evaluating intracranial pressure pathophysiology [4].

1)
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