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## **Postoperative Brain Abscess**

Brain abscesses after brain surgery are rare but severe and life-threatening complications. We sought to analyze the clinical aspects of those patients and thereby reveal risk factors and the relevant aspects for their future therapy.

Lange et al. identified 44 patients (23 male, 21 female) undergoing surgery or frameless stereotactic drainage at our center from March 2009 to January 2018. We conducted 12,101 cranial surgeries during that time.

The mean age was 55 years (range 21-82 years). The median duration between brain surgery and the after brain abscess was 1.5 months (range 1-23 months). Previous brain surgeries were emergency procedures in 27% of the cases. The frequency of surgery type was as follows: tumor resection (61%), craniotomy for traumatic brain injury (16%), aneurysm surgery (7%), biopsies (5%), hemicraniectomy after malignant cerebral infarction (5%), and other. We performed 1.3 surgeries per patient followed by antibiotic treatment for 4 weeks (=median) according to the respective germ spectrum. The germ entity was successfully identified in 39 patients (89%). In 18 cases (41%), we identified Staphylococcus aureus. In total, 20.5% of the patients died during the follow-up period. The mortality rate for patients with isolated bacteria was 18% compared with 40% for patients without isolation of specific microorganisms.

Secondary brain abscess is a rare complication and occurs mainly in patients with tumors and patients receiving emergency surgery. In total, 41% of the patients suffered from a S. aureus infection. Isolation of the responsible microorganisms is often possible and leads to improved outcomes <sup>1)</sup>.

1)

Lange N, Berndt M, Jörger AK, Wagner A, Lummel N, Ryang YM, Wantia N, Meyer B, Gempt J. Clinical Characteristics and Course of Postoperative Brain Abscess. World Neurosurg. 2018 Dec;120:e675-e683. doi: 10.1016/j.wneu.2018.08.143. Epub 2018 Aug 27. PubMed PMID: 30165224.

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