

Chapter 12

Brain Abscess



These can be caused by various microbes including bacteria, fungi, or parasites. They can result from direct or hematogenous spread. They may be single or multiple. They may be of varying sizes. Certain infections, such as parasitic toxoplasmosis, are more likely in patients who are immunocompromised. Usually, the treatment for brain abscesses is with antimicrobial medicines. Surgery for a brain abscess would be appropriate (1) if the organism was not known or (2) there was one large symptomatic and accessible abscess. In the event drainage is sought, entry is normally from a cortical approach. Neuronavigation is often helpful, as is a tubular retractor if the abscess is deep (see Fig. 12.1).

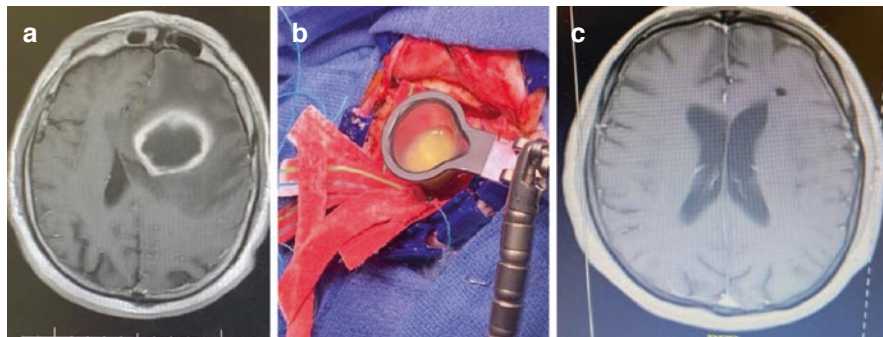


Fig. 12.1 This is a 50-year-old man who last year had undergone a gastrectomy for gastric cancer. He presented now with new onset of lethargy, aphasia (expressive and receptive), and intermittent bradycardia. Brain imaging showed a 3 cm ring enhancing fluid filled mass in the deep left frontal region with significant surrounding edema (a: postcontrast T1 axial MRI image). A left frontal craniotomy was performed, using a transcortical approach with stereotactic neuronavigation, through a tubular retractor. Purulent material was encountered under pressure consistent with a brain abscess (b). The purulent material was fully washed out with gentle irrigation. The patient was treated with several weeks of broad-spectrum IV antibiotics. Gram stains were suspicious for the presence of bacteria (encapsulated cocci). The patient made a full recovery. Follow-up MRI showed complete resolution of the abscess (c: postcontrast T1 axial MRI image)