

BRAIN ABSCESS

INDICATIONS AND PATIENT SELECTION

Brain abscess is an ominous complication that can still be fatal despite modern antibiotics and aggressive surgical treatment. The British writer Oscar Wilde died of an otogenic brain abscess near the turn of the last century; the postauricular Wilde incision is named for his father, Sir William Wilde, one of the founding fathers of otology.^[39] Most recent case series are from developing countries because this complication is less frequently seen in wealthier societies with greater access to health care. A recent series of 41 patients from a university center in Turkey found approximately one case per year, with almost all patients having a history of cholesteatoma.^[40] Another similar series of 36 patients from India reported that all patients had cholesteatoma at surgery, although one third had only granulation tissue on otoscopy.^[41] A series of 20 patients with brain abscesses in an Italian center over a 16-year period, reported in the German literature, noted that 12 of them were of otogenic origin.^[42]

Many patients with an otogenic brain abscess will have additional intracranial complications of otitis media, including meningitis and epidural abscess. The abscess usually forms by direct extension via osteitic bone. If there is a defect in the tegmen tympani, an abscess may form in the temporal lobe (Fig. 120-9); if there is a defect over the sigmoid sinus, an abscess may form in the cerebellum. The previously mentioned Indian series noted a larger prevalence of cerebellar abscess (17 versus 9), and the Turkish series reported 54% in the temporal lobe and 44% in the cerebellum. Patients will usually have a headache of several days' duration, along with foul-smelling otorrhea and often mental status changes. Temporal bone CT may miss a brain abscess, so imaging should also include brain CT with contrast enhancement.

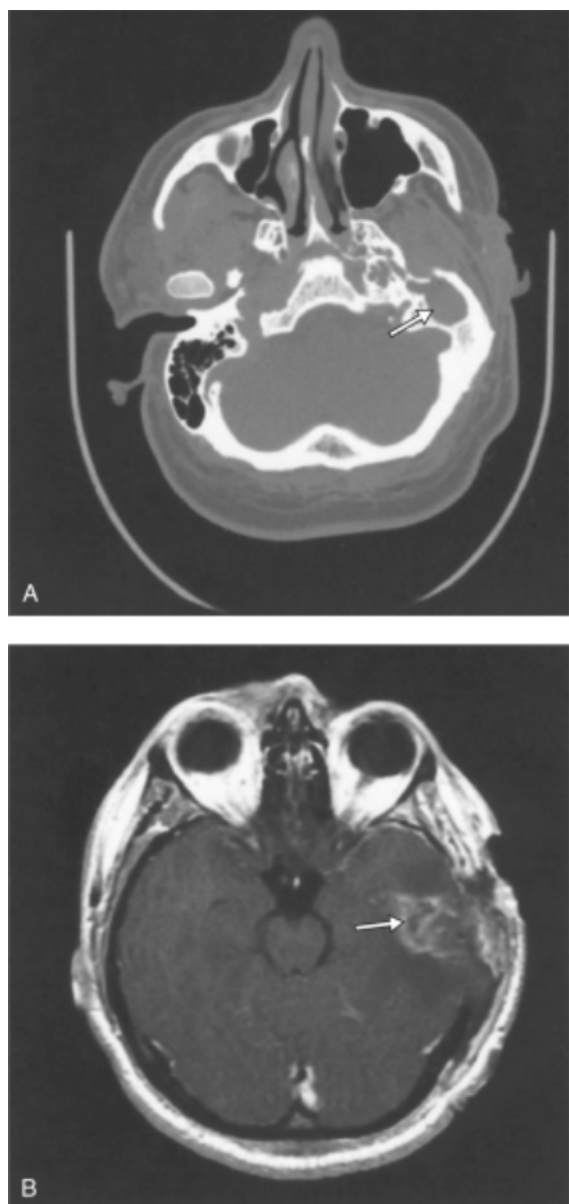


Figure 120-9 A, Computed tomography scan demonstrating a left-sided cholesteatoma (*arrow*) in a patient with canal atresia who had a brain abscess (*arrow*) as seen on magnetic resonance imaging (B).

SURGICAL TECHNIQUE

The abscess itself must be addressed on an emergency basis before rupture, which can lead to septicemia and death. Mastoidectomy is necessary to remove any precipitating cholesteatoma, and in some cases the abscess cavity itself may be drained through this approach. A multidisciplinary approach is coordinated with the neurosurgical service, and patients generally undergo craniotomy in conjunction with mastoidectomy. Sennaroglu and Sozeri^[40] reported aspirating the abscess via mastoidectomy after preparing the dura with povidone–iodine, followed by irrigation and placement of drainage tubes, which are used for ongoing irrigation until the cavity shows collapse on follow–up CT. Antibiotics are adjusted to culture results of the aspirate. A similar approach was reported in a series of eight patients in rural India, where neurosurgical consultation was not available.^[43] In a series of eight patients from Germany, two abscesses were drained by the neurotology team via a mastoid approach alone, and two other cases required a neurosurgical approach (all patients underwent mastoidectomy).^[44] In the Italian series of 20 patients noted earlier, 17 underwent neurosurgical intervention.