

# Otogenic brain abscess

Otogenic [brain abscesses](#) are one of the most significant life-threatening [complications](#) of otologic [infections](#). Given their low [prevalence](#), otogenic brain [abscesses](#) require a high index of [suspicion](#) for [diagnosis](#).

In a [systematic review](#), Duarte et al. from the [Massachusetts General Hospital](#) Boston and the University of Pennsylvania, Philadelphia, aimed to provide an analysis of otogenic brain abscesses and describe common clinical [signs](#) and [symptoms](#), [bacteriology](#), location, [treatment](#) options, [morbidity](#), and [mortality](#).

DATA SOURCES: [PubMed](#), [Cochrane](#) CENTRAL database, [Google Scholar](#), and [Scopus](#).

The systematic review of [literature](#) was performed using the Preferred Reporting Items for Systematic Reviews and Meta-analyses recommendations. Variables assessed included clinical signs and symptoms, bacteriology, location, treatment, morbidity, and mortality.

Twenty-nine studies met inclusion and exclusion criteria, corresponding to a total of 1307 otogenic abscess cases for review. Fifty-five percent of abscesses were found in the temporal lobe and 28% in the cerebellum. Most patients (88.3%) had a history of suppurative chronic [otitis media](#). The most common symptoms were headache, altered mental status, papilledema, and meningeal irritation. Fever, nausea, and vomiting affected about 40% of patients. The most commonly cultured bacterial species was [Proteus mirabilis](#). In addition to [antibiotics](#), most otogenic brain abscesses were treated by [burr hole aspiration](#). Average mortality following advent of computed tomography was 8.11%.

Although rare, otogenic brain abscesses may occur as a complication of suppurative otitis media and require a high index of suspicion. Appropriate imaging studies and multidisciplinary expertise are crucial in the diagnosis and management <sup>1)</sup>.

## Case reports

A case of a 36-year-old non-diabetic male patient with an otogenic [cerebellar abscess](#), who presented with no cerebellar signs and unique intraoperative ossicular chain status was successfully managed by a combined approach of otolaryngology and neurosurgery, is presented in this report <sup>2)</sup>.

<sup>1)</sup>

Duarte MJ, Kozin ED, Barshak MB, Reinshagen K, Knoll RM, Abdullah KG, Welling DB, Jung DH. Otogenic brain abscesses: A systematic review. *Laryngoscope Investig Otolaryngol*. 2018 Apr 25;3(3):198-208. doi: 10.1002/lio2.150. eCollection 2018 Jun. PubMed PMID: 30062135; PubMed Central PMCID: PMC6057212.

<sup>2)</sup>

Sunnychan S, Deshmukh P, Gaurkar SS, Panicker A, Vijayappan A. Otogenic Brain Abscess: Judicious Management in a Case of Chronic Suppurative Otitis Media. *Cureus*. 2022 Oct 18;14(10):e30430. doi: 10.7759/cureus.30430. PMID: 36407212; PMCID: PMC9671137.

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