Recurrent Bacterial Meningitis Caused by Transethmoidal Encephalocele

Author(s):
Tian Qiu, B.S.¹; Qian Lei, B.S.²; Dian He, M.D.³

Corresponding Author:
Dian He, hedian@gmc.edu.cn

Affiliation Information for All Authors:
¹ Department of Neurology, The Affiliated Hospital of Guizhou Medical University; ² Department of Neurology, The Zhenyuan County Hospital; ³ Department of Neurology, The Affiliated Hospital of Guizhou Medical University

Equal Author Contribution:
Contributions:
Tian Qiu: Drafting/revision of the manuscript for content, including medical writing for content; Study concept or design; Analysis or interpretation of data
Qian Lei: Major role in the acquisition of data
Dian He: Drafting/revision of the manuscript for content, including medical writing for content; Study concept or design; Analysis or interpretation of data

Figure Count:
2

Table Count:
0

Search Terms:
[ 119 ] CT, [ 138 ] Meningitis

Acknowledgment:

Study Funding:
This study was supported by the National Natural Science Foundation of China (Grant No. 82060235).

Disclosures:
The authors report no disclosures relevant to the manuscript.

Preprint DOI:

Received Date:
2022-06-11

Accepted Date:
2022-08-16
An 18-year-old woman was admitted to hospital with recurrent fever, headache, and vomiting on six occasions over the past seven years. Each time she was diagnosed with bacterial meningitis based on cerebrospinal fluid (CSF) tests, and fully recovered after treatment with ceftriaxone intravenously.

During the current admission, she had nuchal rigidity. Assays of CSF showed decreased levels of glucose and chloride, and elevated levels of protein and nucleated cell counts (mostly polymorphonuclear cells). Bacterial culture of CSF was negative. She was diagnosed with recurrent bacterial meningitis (RBM). To determine the cause, she had a nasal bone CT scan that revealed a transethmoidal encephalocele (Figure 1). The diagnosis was confirmed by nasal fiberscope examination (Figure 2). No anosmia and rhinorrhea were noticed. Following treatment with ceftriaxone intravenously for two weeks, she fully recovered, but refused surgical intervention.

Approximately 5% of cases with RBM are associated with congenital meningocele/meningoencephalocele, and about 80% of them have the first episode in childhood.¹

Reference

Figure legend

Figure 1. The findings of nasal bone CT scan

Nasal bone CT scan shows bony defect in the right lamina cribrosa with herniation of encephalocele into the superior nasal cavity (arrows). A, coronal; B, sagittal; C, axial.

Figure 2. The findings of nasal fiberscope examination

Nasal fiberscope examination reveals a solid mass with complete membrane in the right olfactory cleft region. A, distant shot; B, close shot (the lower part); C, close shot (the upper part).
Recurrent Bacterial Meningitis Caused by Transethmoidal Encephalocele
Tian Qiu, Qian Lei and Dian He

Neurology published online September 20, 2022
DOI 10.1212/WNL.0000000000201335

This information is current as of September 20, 2022

Updated Information & Services
including high resolution figures, can be found at:
http://n.neurology.org/content/early/2022/09/20/WNL.0000000000201335.citation.full

Subspecialty Collections
This article, along with others on similar topics, appears in the following collection(s):
CT
http://n.neurology.org/cgi/collection/ct
Meningitis
http://n.neurology.org/cgi/collection/meningitis

Permissions & Licensing
Information about reproducing this article in parts (figures, tables) or in its entirety can be found online at:
http://www.neurology.org/about/about_the_journal#permissions

Reprints
Information about ordering reprints can be found online:
http://n.neurology.org/subscribers/advertise

Neurology ® is the official journal of the American Academy of Neurology. Published continuously since 1951, it is now a weekly with 48 issues per year. Copyright © 2022 American Academy of Neurology. All rights reserved. Print ISSN: 0028-3878. Online ISSN: 1526-632X.