



# Mycotic aneurysm rupture: a sunken rock of central nervous system infection

Keun Tae Kim, MD

Department of Neurology, Keimyung University School of Medicine, Daegu, Korea

IMAGES IN  
NEUROCRITICAL CARE

Received: March 20, 2024

Revised: May 28, 2024

Accepted: June 11, 2024

Corresponding Author:

Keun Tae Kim, MD

Department of Neurology, Keimyung  
University School of Medicine, 1095  
Dalgubeol-daero, Dalseo-gu, Daegu  
42601, Korea

Tel: +82-53-258-4379

Fax: +82-53-258-4380

E-mail: 6k5upa@gmail.com

An 81-year-old male with a history of diabetes mellitus and consequent retinopathy visited our emergency department. Six months prior, he developed otitis media due to gram-positive cocci and was treated with vancomycin. However, progressive confusion over 2 months prompted his family to bring him to our emergency room. Upon examination, he was drowsy and repeatedly stated “okay” in response to every question. Laboratory tests revealed leukocytosis (12,730/ $\mu$ L), C-reactive protein levels of 10.3 mg/dL, cerebrospinal fluid (CSF) red blood cell levels of 0/ $\mu$ L, CSF pleocytosis (white blood cell levels of 6/ $\mu$ L; a differential count was not provided), and protein elevation (57.0 mg/dL). CSF and serum glucose levels were 62 mg/dL and 122 mg/dL, respectively. Brain magnetic resonance imaging showed no significant abnormalities (Fig. 1). Consequently, combination therapy with vancomycin (1 mg q 12 hr) and ceftriaxone (2 mg q 12 hr) was initiated for bacterial infection of the central nervous system.

Computed tomography revealed infection of the right inner ear (Fig. 2). On the fifth day of admission, the patient became alert and followed a one-step command. CSF culture identified a *Staphylococcus warneri* infection. Three days later, the patient was found to be comatose. Brain computed tomography revealed a subarachnoid hemorrhage with an aneurysm in the right posterior communicating artery (Fig. 3). The patient died

the following day.

In this case, sequential neuroimaging demonstrated the sudden

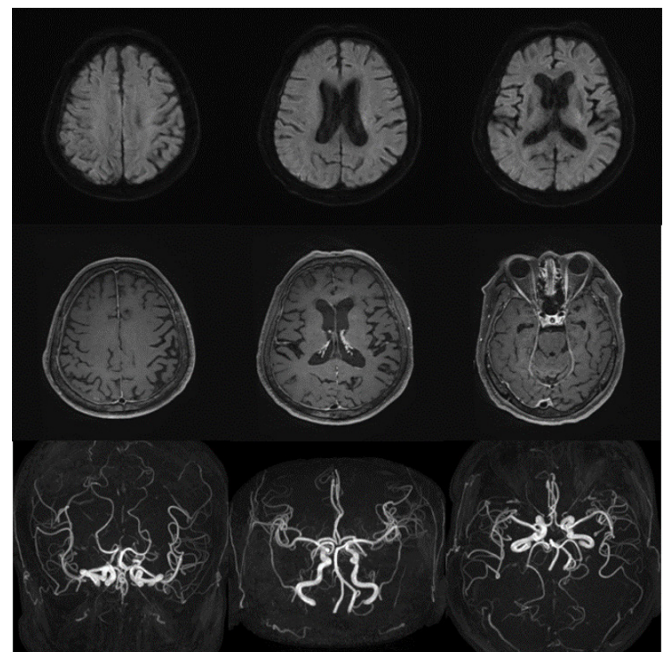
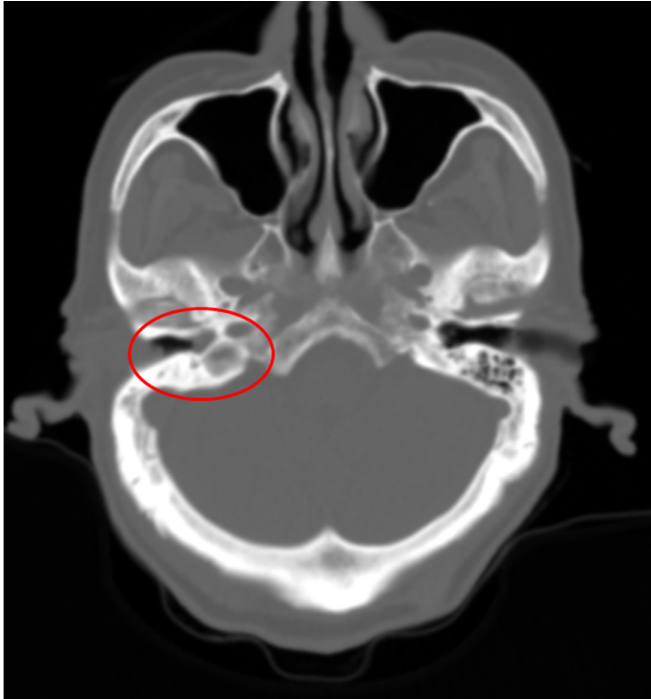
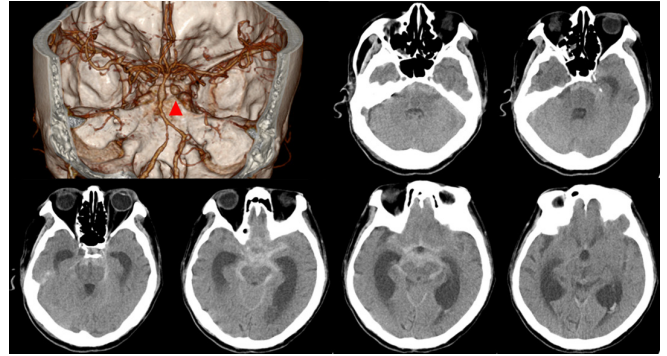


Fig. 1. Normal brain magnetic resonance imaging and magnetic resonance angiography on the first day.



**Fig. 2.** Paranasal sinus computed tomography shows middle ear effusion (circle).

rupture of a mycotic aneurysm within only 8 days. Since mycotic aneurysms can be asymptomatic but fatal, short-term follow-up angiography after central nervous system infection should be considered.



**Fig. 3.** Brain computed tomography on post-admission day 8 shows a subarachnoid hemorrhage around the basal cistern and newly developed cerebral aneurysm (arrowhead).

## ARTICLE INFORMATION

### Ethics statement

This study was approved by the Institutional Review Board of Keimyung University Dongsan Medical Center (No. 2019-07-002). Written informed consent was waived due to the retrospective design of this study.

### Conflict of interest

No potential conflict of interest relevant to this article.

### ORCID

Keun Tae Kim

<https://orcid.org/0000-0002-7124-0736>

### Author contributions

All the work was done by KTK.