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

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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/μL), C-reactive protein levels of 10.3 mg/dL, cerebrospinal fluid (CSF) red blood cell levels of 0/μL, CSF pleocytosis (white blood cell levels of 6/μL; 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...
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. 2. Paranasal sinus computed tomography shows middle ear effusion (circle).

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.

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Author contributions
All the work was done by KTK.