

Giant perivascular space in the anterior superior temporal gyrus: Imaging characteristics to avoid misdiagnosis

Charlie Chia-Tsong Hsu, Dalveer Singh, Gigi Nga Chi Kwan, Sandeep Bhuta

Department of Medical Imaging, Gold Coast University Hospital, Gold Coast, Queensland, Australia

For correspondence:

Dr. Charlie Chia-Tsong Hsu, Department of Medical Imaging,
Gold Coast University Hospital, Gold Coast, Queensland - 4215, Australia.
E-mail: charlie.ct.hsu@gmail.com

Ann Indian Acad Neurol 2015;18:454-454

Clinical Case

A 36-year-old female with migraine underwent magnetic resonance imaging (MRI) brain evaluation. An incidental subcortical cystic lesion was detected in the right anterior superior temporal gyrus [Figure 1]. Follow-up MRI confirmed stability over 3 years.

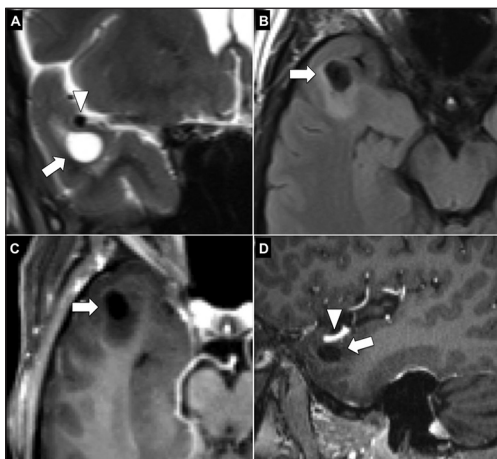


Figure 1: Magnetic resonance imaging (MRI) revealed a T2 hyperintense (a) subcortical cystic lesion (arrow) in the right anterior superior temporal gyrus inferior to the middle cerebral artery (arrow head). It is of cerebrospinal fluid signal intensity (suppressed on fluid-attenuated inversion recovery (FLAIR), b) and showed minor perilesional edema but no gadolinium enhancement was seen (c and d). FLAIR = Fluid-attenuated inversion recovery

Giant perivascular spaces (PVS) may mimic cortically-based neoplasm such as dysembryoplastic neuroepithelial tumor. The recently recognized location in the anterior superior temporal gyrus adjacent to the middle cerebral artery is an important diagnostic clue.^[1,2] Giant PVS follow cerebrospinal fluid signal on all MRI sequences and do not demonstrate contrast enhancement; however, variable perilesional edema is observed, which may relate to adjacent gliosis or several adjacent tiny PVS.^[1,2] Temporal stability is necessary to confirm its benign nature and avoid unnecessary intervention.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

References

1. Rawal S, Croul SE, Willinsky RA, Tymianski M, Krings T. Subcortical cystic lesions within the anterior superior temporal gyrus: A newly recognized characteristic location for dilated perivascular spaces. *AJNR Am J Neuroradiol* 2014;35:317-22.
2. Lim AT, Chandra RV, Trost NM, McKelvie PA, Stuckey SL. Large anterior temporal Virchow-Robin spaces: Unique MR imaging features. *Neuroradiology* 2015;57:491-9.

This is an open access article distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as the author is credited and the new creations are licensed under the identical terms.

For reprints contact: reprints@medknow.com

How to cite this article: Hsu CC, Singh D, Kwan GN, Bhuta S. Giant perivascular space in the anterior superior temporal gyrus: Imaging characteristics to avoid misdiagnosis. *Ann Indian Acad Neurol* 2015;18:454.

Received: 30-05-15, **Revised:** 22-06-15, **Accepted:** 23-06-15

Access this article online

Quick Response Code:



Website:

www.annalsofian.org

DOI:

10.4103/0972-2327.169647