Journal of the Formosan Medical Association (2014) **113**, 571–572

Available online at www.sciencedirect.com

SciVerse ScienceDirect

journal homepage: www.jfma-online.com

CORRESPONDENCE

Cavum septum pellucidum and vergae in an elderly man

Yat-Fung Shea*, **Christie Wing-Man Li**, **Richard Shek-Kwan Chang**

Department of Medicine, Queen Mary Hospital, The University of Hong Kong, Hong Kong, China

Received 28 April 2012; received in revised form 1 May 2012; accepted 3 May 2012

An 88-year-old man, who was a chronic smoker with history of chronic obstructive pulmonary disease, cervical myelopathy, hypertension, pulmonary tuberculosis, myocardial infarction, and peripheral vascular disease, was admitted because of an episode of chronic obstructive pulmonary disease exacerbation and non-syncopal fall with head injury. Upon admission, the Glasgow Coma Scale was full, there was no focal neurological deficit, and respiratory examination revealed diffuse wheezing. Because of the head injury, computed tomography of the brain was performed and incidentally revealed the presence of intracranial midline cystic structure, namely, cavum septum pellucidum (CSP) and cavum vergae (CV) (Fig. 1). Upon review of his history, the patient declared that he was not a boxer, nor did he suffer from schizophrenia, obsessive–compulsive disorder, or posttraumatic stress disorder. The patient was prescribed with bronchodilator

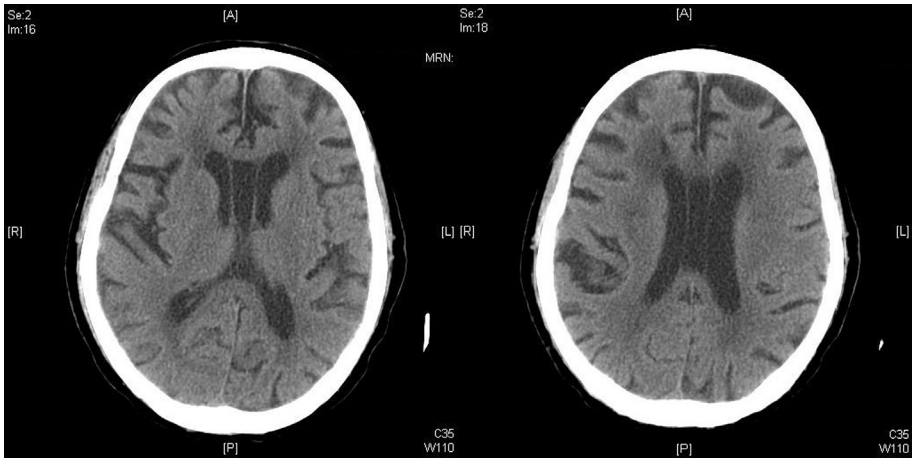

Figure 1 Axial plain computed tomography of the brain showing cavum septum pellucidum and cavum vergae.

Conflicts of interest: The authors have no conflicts of interest relevant to this article.

* Corresponding author. Department of Medicine, Queen Mary Hospital, University of Hong Kong, 102 Pok Fu Lam Road, Hong Kong, China.
E-mail address: elphashea@gmail.com (Y.-F. Shea).

http://dx.doi.org/10.1016/j.jfma.2012.05.002

puffs and amoxicillin—clavulanate, and was discharged uneventfully.

CSP refers to the separation between the two leaflets of septum pellucidum. It is bounded on all sides: anteriorly by the genu of corpus callosum, superiorly by the body of corpus callosum, posteriorly by the fornix, and inferiorly by the anterior commissure and the rostrum of corpus callosum. It is lined with glial, neuronal, and ependymal cells. Overall, 85% of them fuse about 3—6 months after birth, but the structure may persist in up to 20% of adults.[1] It has been described as a marker of abnormal growth of the limbic system[2] and was associated with obsessive—compulsive disorder[2] and schizophrenia.[3] CSP has also been associated with posttraumatic stress disorder[1] and chronic brain trauma (e.g., in boxers).[1] CV is an extension of CSP posteriorly beyond the columns of the fornix and foramina of Monro. CV is present in up to 30% of newborns but persists in less than 1% of individuals.[1] CV is bordered anteriorly by the posterior border of CSP, inferiorly by the fornix and superiorly, and posteriorly by the corpus callosum. The two cavities are in connection. During development, CV normally closes followed by CSP.[1]

Our patient illustrates the concomitant presence of CSP and CV without association with any clinical conditions. They have been referred to in the past as the fifth and sixth ventricles, but strictly speaking they are not ventricles because they do not contain choroid plexuses.[1] From the clinical point of view, there has been a case report of abscess arising from CSP due to the stagnant flow of cerebrospinal fluid within.[4] In addition, the presence of CSP and CV may affect the choice of route for intracranial endoscopic surgery with the transcavum interforniceal path being more preferred rather than the transforaminal approach into the third ventricle.[1]

References

1. Tubbs RS, Krishnamurthy S, Verma K, Shoja MM, Loukas M, Mortazavi MM, et al. Cavum velum interpositum, cavum septum pellucidum and cavum vergae: a review. *Childs Nerv Syst* 2011; **27**:1927—30.
2. Chon MW, Choi JS, Kang DH, Jung MH, Kwon JS. MRI study of the cavum septum pellucidum in obsessive—compulsive disorder. *Eur Arch Psychiatry Clin Neurosci* 2010;**260**:337—43.
3. Trzesniak C, Oliveira IR, Kempton MJ, Galvão-de Almeida A, Chagas MH, Ferrari MC, et al. Are cavum septum pellucidum abnormalities more common in schizophrenia spectrum disorders? A systematic review and meta-analysis. *Schizophr Res* 2011;**125**:1—12.
4. Akansel G, Dalbayrak S, Yilmaz M, Yavuzer D, Seymen M, Gurel I, et al. Abscess of the cavum septum pellucidum. *Pediatr Radiol* 2003;**33**:503—5.