

A 5th Cerebral Ventricle in an Aged Woman: Pictorial Neurological Disease

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Figure 1. Computed tomography shows the 5th cerebral ventricle is 12.2 mm transversely and 23.2 mm longitudinally (arrow). It connects the 3rd ventricle and is not an absolutely isolated space.

A 77 year-old robust woman came to our emergency because of a sliding down accident. Dizziness was complained. There was no headache, vertigo, paresthesia, hearing block, ataxia or other neurological signs. She was alert and oriented to time, place and people. Glasgow scale was E4V5M6. Emergent computed tomography did not reveal any remarkable lesion, but

the 5th cerebral ventricle was found between the right and left cerebral lateral ventricles. Then conservative treatment and bed rest were recommended. Although it was uneventful over the following half a year, the 5th cerebral ventricle came into our notice afterward.

The 5th cerebral ventricle is defined as a crevice-like space of variable width between the left and right

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transparent septum and is also named cavum septi pellucidi. The 6th cerebral ventricle is defined as a horizontal cleft between the commisura fornicis (or psalterium) and the corpus callosum, and is also named cavum vergae⁽¹⁾. The 5th cerebral ventricle has the neuroradiologic prevalence of 0.7%-37% in the Western⁽²⁾. However, reviewing all 9,074 Chinese computed tomographies, Lin et al.⁽³⁾ found 0.51%(n=46) has a 5th cerebral ventricle, 0.08%(n=7) has a 6th cerebral ventricle, and 0.65%(n=59) has both 5th and 6th cerebral ventricles. Among them, the oldest is 75 years old. The width of 5th cerebral ventricle was between 6 mm and 20 mm, and that of 6th cerebral ventricle was between 6 mm and 19 mm. Our patient has a 5th cerebral ventricle, and is older than the case studied by Lin et al⁽³⁾.

In the fourth embryologic month, a pellucid space develops in the pellucid septum. Although the pellucid space is expected to degenerate in the infant stage, a few cases would persist as they grow, so a 5th and/or 6th cerebral ventricle resulted^(3,4). Although a 5th or 6th cerebral ventricle does not connect the ventricular system, it might compress surrounding structures or act as a valve inducing intermittent intracranial hypertension.

Therefore, as the size of 5th or 6th cerebral ventricle increases, it can possibly cause clinical significance⁽³⁾, and presumably contributes to headache or epilepsy^(3,4). However, most 5th or 6th cerebral ventricles are incident findings and not of any clinical significance, such as our patient. So a further treatment is not necessary. Herein, we report the rare curious image for neuroradiological interest.

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