

Mount Fuji is Not as “Active” as We Think

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Background

A 65-year-old man presented with headache after a minor head injury (slip and fall with head lightly hitting a chair). Computed tomography (CT) revealed pneumocephalus with Mount Fuji sign. The possibility of tension pneumothorax was suspected. Because the patient did not have any signs of raised intracranial tension (ICT), after his proper counseling, surgery was withheld. In addition to this, the patient was not willing for any procedures; hence he was kept under observation. Repeat CT after 3 days and 1 week showed a progressive reduction in extra-axial air. Neurologic status of the patient remained stable, and he was discharged.

Imaging Findings

Plain CT of the brain showed extra-axial accumulation of air that is predominantly seen in the prefrontal subdural space, interhemispheric and sylvian fissures, and basal cisterns. Air in the interhemispheric fissure causing separation of the cerebral hemispheres with a heaped-up appearance of the frontal lobes showed the characteristic Mount Fuji sign (→Fig. 1). No obvious fractures were visualized in the cranium. Follow-up CT of the brain after 3 and 7 days (→Fig. 2)

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showed reduction in pneumocephalus with subdural cerebrospinal fluid (CSF) density fluid.

Discussion

Mount Fuji sign is widely regarded as a radiologic sign of tension pneumocephalus,¹ a neurosurgical emergency. It is documented as a useful sign to differentiate between tension and nontension pneumocephalus.^{1,2} Presence of air in the interhemispheric space between the frontal lobes is considered as a sign of raised ICT, with air pressure at least greater than the CSF pressure.² In spite of all these features, fortunately our patient did not show any signs of raised ICT and was managed conservatively. In the literature, all the cases reporting Mount Fuji sign, due to various causes, have been managed neurosurgically to relieve the raised ICT.^{3,4} To the best of our knowledge, this is the first reported case of the patient with Mount Fuji sign on CT of the brain and was managed conservatively. Also, the case demonstrates that Mount Fuji sign can be seen in nontension pneumothorax that can even be due to trivial trauma to the head. Again, it proves the famous saying by William Osler: “Medicine is a science of uncertainty and an art of probability.”⁵ Nothing in medicine comes without exceptions. Contrary to the popular belief at least among residents and young radiologists,

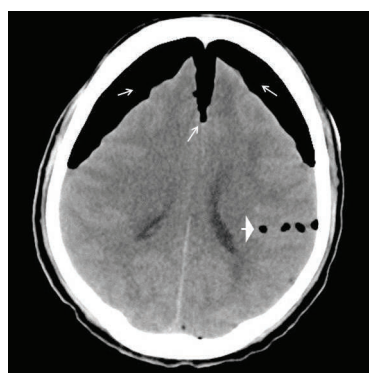


Fig. 1 Nonenhanced computed tomography axial sections of brain showing “Mount Fuji sign.” Air noted in bilateral frontal subdural space and interhemispheric fissure (arrows). Also seen “air bubble sign” (arrowhead) in the left sylvian fissure.

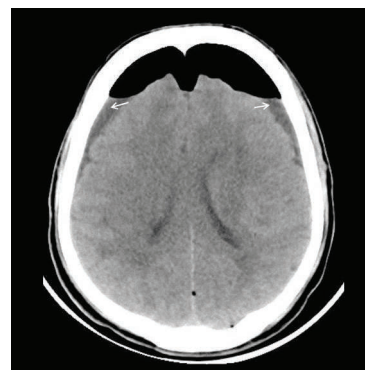


Fig. 2 Follow-up computed tomography axial sections of brain after 7 days showing reduction in subdural and interhemispheric air and minimal subdural hygroma (arrow).

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one should always consider the neurologic condition of the patient before the diagnosis of tension pneumocephalus based on Mount Fuji sign.

Age-related diffuse brain atrophy and volume loss could be the possible reason that helped our patient tide over the pneumocephalus and remain asymptomatic. All cases should be evaluated based on clinical features along with radiologic appearance and then only be considered for conservative management with close monitoring.

Conflict of Interest

None.

References

- 1 Heckmann JG, Ganslandt O. Images in clinical medicine. The Mount Fuji sign. *N Engl J Med* 2004;350(18):1881
- 2 Michel SJ. The Mount Fuji sign. *Radiology* 2004;232(2):449–450
- 3 Ishiwata Y, Fujitsu K, Sekino T, et al. Subdural tension pneumocephalus following surgery for chronic subdural hematoma. *J Neurosurg* 1988;68(1):58–61
- 4 Bremer AM, Nguyen TQ. Tension pneumocephalus after surgical treatment of chronic subdural hematoma: report of three cases. *Neurosurgery* 1982;11(2):284–287
- 5 Bean RB, Bean BW. *Sir William Osler: Aphorisms from His Bedside Teachings and Writings*. New York, NY: Henry Schuman, Inc.; 1950