The Mount Fuji Sign on MRI

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An 86-year-old woman presented with headache and somnolence two days after her successful surgical resection of a Rathke’s cleft cyst by basal-frontal craniotomy. Axial view of fluid attenuated inversion recovery (FLAIR) images of magnetic resonance imaging (MRI) of the brain revealed collapsed frontal lobes and widening of the interhemispheric space between bilateral tips of the frontal lobes (Picture 1). This finding is called ‘the Mount Fuji sign’ because of the appearance of the silhouette of Mount Fuji (1, 2). Coronal view of FLAIR images of cranial MRI revealed massive amount of air that markedly compressed her whole brain (Picture 2). The diagnosis of tension pneumocephalus was made. Emergency decompression by craniotomy to alleviate pressure on the brain parenchyma was performed. After the operation, however, the patient only gradually recovered and remained apathetic until her discharge from our hospital.

The presence of air between the frontal tips is a characteristic finding of the Mount Fuji sign, which means that there is greater pressure of air than that of surface tension of cerebral fluid between the frontal lobes. Bilateral compression of the frontal lobes without separation of frontal tips is called ‘peaking sign’, which was previously linked to tension pneumocephalus (3). Actually, the Mount Fuji sign indicates more severe pneumocephalus than the peaking sign and the necessity of emergent decompression.
References


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