

# A case of an Aqueductal Metastatic Tumor Associated with Obstructive Hydrocephalus

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**Abstract:** A 69-year-old male was admitted to a local hospital for progressive symptoms of dementia and gait disturbance. He was referred to our hospital because of an acute deterioration of consciousness. On admission he was lethargic and a neurological examination disclosed papilledema. A CT scan showed an enhanced mass lesion at the periaqueductal area with obstructive hydrocephalus. Immediately, he underwent a percutaneous third ventriculostomy using flexible neuroendoscope and a reddish mass lesion was observed at the orifice of the sylvian aqueduct. After this procedure, he became alert and his dementia improved gradually. Postoperative Gd-enhanced MR T1-weighted images demonstrated an enhanced small mass lesion in the periaqueductal area, and multiple small ring enhanced mass lesions were demonstrated in the left cerebellum and the left frontal and occipital lobes. His chest X-ray and CT scan showed lung cancer in the right lower lobe and the serum tumor markers were also elevated. Unfortunately, he died due to respiratory failure three months later. Our findings indicate the usefulness of a neuroendoscopic third ventriculostomy for the treatment of patients presenting with acute obstructive hydrocephalus.

**Key words:** Obstructive hydrocephalus, Metastatic brain tumor, Periaqueductal lesion, Flexible neuroendoscope, Third ventriculostomy