

## **Delayed diagnosed of brain tumor which is combined with large amount of intracerebral hemorrhage**

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### **Introduction**

Intracerebral hemorrhage (ICH) prevalence is 24.6 per 100,000 person-years in worldwide and 54 per 100,000 person-years in Korea. Brain tumor incidence rate is 10.82 per 100,000 person-years in worldwide, and 2,500~4,500 people are diagnosed as brain tumor every year in Korea. In retrospective reviewed study, the proportion of the hemorrhage caused by brain tumor to spontaneous intracerebral hemorrhage is 5.1%. We report a case of patient who was diagnosed spontaneous ICH and received stroke rehabilitation, and lately discover a brain tumor on the lesion of ICH

### **Case Report**

A 58-year-old man, without a remarkable medical history, experienced confusion, headache and left side motor weakness. Brain computed tomography (CT) scans with contrast and CT angiograms on admission disclosed a lobulated 3.7x5.3 cm sized acute ICH in the right basal ganglia with right ventricle compressing mass effect (Fig. 1A). Stereotactic aspiration and instillation of external ventricle drainage was done (Fig. 1B). The biopsy was not performed. The serial follow-up cranial CT reported resolution of ICH amount and density with decreasing compression effects. The initial value when the patient was transfer in our department, The Mini-Mental State Examination score : 9, he fed using NG-tube, left side muscle strength was grade 2 by MMT. The patient has improved in function after 2 months stroke rehabilitation. The Mini-Mental State Examination score : 18, removal of NG tube, left hip and knee muscle strength grade 4 by MMT, so he could gait with supervision assist but only he had complained headache (VAS 3~4) at times. 3 months later from onset, left upper extremity weakness was occurred, the Brain magnetic resonance image (MRI) was done. That MRI finding was 6.7x5.6cm sized lobulated solid and multi-cystic mass, probably GBM at the hemorrhage site, with tumor spreading onto 3rd ventricle and optic chiasm (Fig. 1C). The patient was transferred to received tumor management, immediately.

### **Conclusion**

We report diagnostic pitfall for spontaneous ICH instead of brain tumor (suspiciously GBM) with intratumoral hemorrhage. According several reports, tumors were found in 2% of the 461 autopsied cases of "spontaneous" intracerebral hemorrhage or 1% of the 225 reported, but it is not easy to detect brain tumor when it is with large amount of hemorrhage by CT scan, so the MRI can be a indispensable diagnostic image for early detection of brain tumor. We suggest early MRI scan in patient with large amount of ICH for excluding brain tumor which is combined with hemorrhage.

**Key Words**

Intracerebral hemorrhage • Tumor bleeding • Brain tumor • Glioblastoma multiforme • MRI

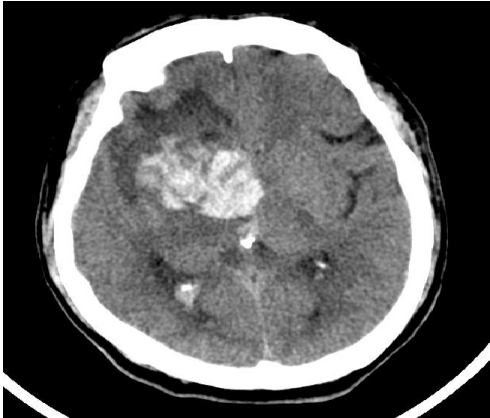


fig1A. acute ICH in the right basal ganglia with right ventricle compressing mass effect



fig1B. aspiration and instillation of external ventricle drainage was done

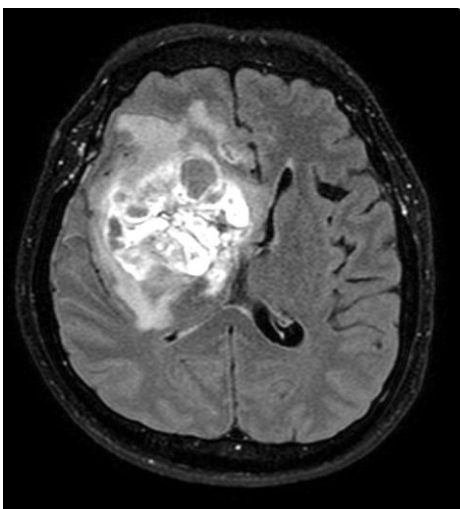


fig1C. 6.7x5.6cm sized lobulated solid and multi-cystic mass, probably GBM at the hemorrhage site, with tumor spreading onto 3rd ventricle and optic chiasm