Case 407

1. abc

【Progress】

He was transported to the hospital where he had undergone medical treatment for urinary cancer in the past.

【Discussion】

Ring-enhanced space occupying lesions of brain with contrast enhancement CT or MRI are found in various diseases: brain abscess, metastatic brain tumors, glioblastoma, brain infarction, multiple sclerosis (Neuromyelitis optic spectrum disease NMOSD, acute disseminated encephalomyelitis ADEM) malignant lymphoma. Namely, this type-SOL includes malignant disease irrespective primary or metastatic, vascular, inflammation, and autoimmune disease.

In our case, the space occupying lesion (SOL) is found in deep white matter of posterior part of temporal lobe called associated area between temporal lobe and occipital lobe. Our patient had no marked deficit of motor function but suffered from recalling names of people, cities and things from the past three months.

Clinical symptoms are sometimes useful to differentiate from various diseases. For example, past illness history is useful to suspect metastatic tumors, acute symptoms imply the vascular disease, gradually worsening symptoms indicate tumor or immune disease. Laboratory tests are also useful to distinct: Tumor markers such as CEA, CA19-9 for metastatic tumors, LDH and Interleukin2 for malignant lymphoma, CRP, procalcitonin, white blood cell for brain abscess.

ADC values of Diffusion WI MRI are also useful to narrow down the solutions. ADC values for metastatic tumor are 0.7 to 1.1 level, those for glioblastoma, 0.9 to 1.1, those for malignant lymphoma, 0.5 to 0.7, brain abscess, 0.3 to 1.4 or greater depending on fresh to edematous absorbing, brain infarction, 0.2 to 1.4 or greater depending on fresh to absorbing (1-7).

In our case, although no ring SOL was found on T1WI, T2WI, FLAIR, a ring SOL was found on Diffusion WI whose ring ADC values are 0.665 and inside area within a ring are 1.440. The low ADC values below 0.7 correspond to malignant lymphoma, the absorbing process of infarction or abscess. Autoimmune diseases of NMOSD or MS are negative for our case because the ring formed by these diseases are not complete, then called open ring sign. Our case had the brain SOL with complete ring, then autoimmune diseases can be excluded.

【Summary】

We presented an eighty-five-year-old male presented in our hospital for memory loss, not coming out names of persons, cities and things for the past three months. It is borne in mind that when brain space occupying lesions are depicted on CT or MRI, although patient ill history and laboratory tests are useful for narrowing down the exact diagnosis solutions, MRI ADC values are also useful: ADC values for metastatic tumor are 0.7 to 1.1 level, those for glioblastoma, 0.9 to 1.1, those for malignant lymphoma, 0.5 to 0.7, brain abscess, 0.3 to 1.4 or greater depending on fresh to edematous absorbing, brain infarction, 0.2 to 1.4 or greater depending on fresh to absorbing.

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