P06.05. A CASE OF RADIATION-INDUCED MENINGIOMAS

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Meningiomas are known to be induced by low and high-dose radiotherapy and several studies suggest an inverse relationship between dose administered and time of tumor development. Radiation-induced meningiomas have been usually reported to be histologically atypical, multiple, associated with a poor clinical outcome. We report a case of a young woman operated upon in 1990 at the age of 18 years old for ependymoma in the 4th ventricle. Three years later a local recurrence was detected, and a chemotherapy was began. During follow-up, MRI revealed a meningeal dissemination and the patient was treated with whole brain radiotherapy and intrathecal chemotherapy. She was radiologically stable for 10 years, then she presented another new mass, an acoustic neurinoma, treated with radiosurgery. In August 2010 the patient complained headache which gradually increases over the preceding weeks. A new MRI revealed the presence of multiple meningeal nodules, rapidly growing in a couple of months. The largest one (30 mm diameter) grew from the falx, in right parieto-occipital lobe; this mass was isointense in T1-weighted images, with a definite uptake of contrast enhancement. Histopathological examination showed a transitional meningioma with dural infiltration consistent with radiation-induced meningiomas. Lesions remained unchanged for several months, and, despite of number of nodules, the patient was almost asymptomatic. In our case report, many evidences, such as the younger age, the radiotherapy treatment and the latency interval between radiotherapy and lesions finding, suggest that the multiple meningeal nodules were radiation-induced meningiomas. The lack of information about the clinical and biological features of radiation-induced meningiomas does not actually allow to understand the clinical behavior of these lesions. Considering the increasing number of patients treated with radiotherapy, we believe it is essential to understand which patient features are linked to the development of radiation-induced meningiomas, in order to identify a subset of patients with higher risk.

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