Pseudoprogression and MGMT Status in Glioblastoma Patients: Implications in Clinical Practice.


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Pseudoprogression (PsPD) is a pathological feature recently reported by some authors in malignant glioma patients treated with radiotherapy in combination with temozolomide. In radiological imaging, it is shown as an increase in the size of the tumor lesion and contrast enhancement occurring within a few months from the completion of radio-chemotherapy without worsening of the neurological signs and symptoms. In 21%-50% of the patients, the same lesion disappears a few months after its appearance. In 12 glioblastoma patients treated with radio-chemotherapy, 4 cases of early radiological progression without discontinuation of temozolomide treatment are reported. At the subsequent tumor assessment, 2 cases (13%) were revealed to be PsPD. The two patients who experienced PsPD had the longest progression and survival times of all patients. In both patients with PsPD, the O(6)-methylguanine-DNA methyltransferase (MGMT) promoter was found to be methylated. The PsPD phenomenon opens the prospect of a new era for the management of glioblastoma patients undergoing radio-chemotherapy.

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