

ABSTRACT

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Brain low-grade gliomas with high-grade spinal localization. Report of a clinical case and systematic literature review.

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INTRODUCTION: Oncological aggressiveness and the ability to present distant localizations are known in high-grade gliomas (HGGs), but the knowledge about the possible aggressiveness of LGGs is scarce, especially concerning possible spinal localization.

EVIDENCE ACQUISITION: A systematic search of LGGs with spinal localization on the three primary online databases (PubMed/MEDLINE, Embase, and Cochrane) was conducted. We included adult patients with histological diagnosis of intracranial LGG and specified WHO grade showing a remote spinal localization during follow-up. Additionally, we present a case of a left temporal LGG presenting a spinal localization fourteen years after the first appearance. We compared the survival rates of LGGs in our series with those of LGGs without spinal localizations.

EVIDENCE SYNTHESIS: Seven articles dealing with the subject and eight patients were considered (including our case), with a mean age at diagnosis of 42.25 years (range 26-69 years). The mean latency between a diagnosis of intracranial LGGs and a spinal localization occurrence was 7.37 years (range 2-14 years), and an increased WHO grade of the spinal localization compared to the brain LGG was observed in all patients. There was no sign of intracranial progression at the time of spinal glioma diagnosis in four cases, including ours. Survival at ten years was 28% against a 10-year survival rate of 65-71% for LGGs without distant localization, as reported in the literature.

CONCLUSIONS: Spinal metastasis of intracranial LGGs is an adverse prognostic factor. Surgical violation of ventricles can play a role in the pathophysiology of CSF spread of tumor cells in LGGs.

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