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Case Report

Spontaneous Regression of Low-Grade Gliomas in Pediatric Patients without Neurofibromatosis

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Key Words

- Spontaneous regression
- Pediatric brain tumors
- Glioma
- Pilocytic astrocytoma
- Neurofibromatosis

Abstract

Objective: Pediatric low-grade gliomas comprise a diverse range of central nervous system tumors, sharing the usual course of a slow progression in growth. In individual cases however, the natural history can be variable, and rarely spontaneous regression has been described. This paper describes factors associated with spontaneous regression. **Methods:** A literature review was performed to identify factors associated with spontaneous regression. A unique case is described to contribute to the findings. **Results:** Low-grade gliomas occurring in association with neurofibromatosis are more likely to spontaneously regress. Only 14 cases of spontaneous regression of low-grade gliomas in patients without neurofibromatosis have been described, and of these, the vast majority regress in association with optic chiasm gliomas. We describe the first documented case of spontaneous regression of a temporal lobe pilocytic astrocytoma in a patient without neurofibromatosis. **Conclusion:** Spontaneous regression of low-grade gliomas can occur for tumors in a diversity of anatomical locations, at varying ages and in both sexes. This may have implications for management. As such, spontaneous tumor regression is an important outcome to be considered for pediatric low-grade gliomas and pilocytic astrocytomas.

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