"Gliomatosis encephali" as a novel category of brain tumors by the first autopsy case report of gliomatosis cerebelli.


Abstract

Gliomatosis cerebri is a rare diffuse glioma that is neither mass-forming nor necrotic, and does not disrupt existing structures. Gliomatosis occurring in the cerebellum is known as gliomatosis cerebelli, and only three such cases examined by biopsy have been reported. Here we describe the first autopsy findings of a patient who was diagnosed as having gliomatosis in the cerebellum. Neuropathological examination identified the tumor cells as being positive for glial fibrillary acidic protein, vimentin and nestin, with atypical nuclei that were cashew-nut- or dishcloth-gourd-shaped. These tumor cells were dense in the right cerebellum, but also spread broadly throughout the brain including the left cerebrum and optic nerve. Mitotic figures were frequently seen in the cerebellum, brain stem and cerebrum. Scherer's secondary structures were evident not only in the cerebellum but also the cerebrum. No necrosis, microvascular proliferation or destruction of anatomical structures was detected in the whole brain. Differences in the origin of the tumors of the gliomatoses cerebri and cerebelli suggests these tumors are different types of brain tumors. Thus the findings support that the gliomatosis cerebelli is a novel type of brain tumor classification. Furthermore, by the similarities of the histological features among the tumors, it appears appropriate to establish a novel category of "gliomatosis encephali" which includes both gliomatosis cerebri and gliomatosis cerebelli.


KEYWORDS: Scherer's secondary structure, case report, gliomatosis cerebelli, gliomatosis cerebri, gliomatosis encephali

PMID: 24354431 [PubMed - as supplied by publisher]