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An enduring debate on gliomatosis cerebri

Jiro Akimoto [1] [2]

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Abstract

Gliomatosis cerebri (GC) is a unique glial tumor that extensively invades the cerebral white matter and has been recognized as an entity of neuroepithelial tumors since the first edition of the WHO classification of brain tumors in 1979. Thereafter, in the fourth edition of the WHO classification in 2007, it was clearly defined as a specific type of astrocytic tumor. However, in the WHO 2016 classification, which was based on the concept of integrated diagnosis using molecular genetics, GC was deleted as it was considered to be only one growth pattern of diffuse glioma and not a specific pathological entity. Since then, there has been criticism by many neuro-oncologists and the establishment of the GC working group at the NIH, and many activities in the world arguing that GC should not be deleted from the clinical discussion of brain tumors. In Japan, positive activities toward multicenter research on GC pathology should be performed, and molecular pathological evidence that can contribute to the WHO classification in the future should be developed. In this article, the author outlined the pathological characteristics of GC, which has been repeated changing since its conception, and also describes his opinion on GC as a neuro-oncologist.

Keywords: Gliomatosis cerebri; Molecular diagnosis; WHO classification.