Previous evidence has shown the association of aberrant miR-198 expression with tumorigenesis and progression of many human malignancies. However, its involvement in human glioma is still unclear. Therefore, the aim of the current study was to investigate the expression and function of miR-198 in human gliomas. Using real-time quantitative RT-PCR, we examined miR-198 expression in 122 pairs of human gliomas and matched non-neoplastic brain tissues. The association of miR-198 expression with clinicopathological factors was also analyzed. Then, the effects of miR-198 on the biological behavior of glioma cells in vitro were evaluated. Our results showed that miR-198 expression was significantly downregulated in gliomas compared with corresponding non-neoplastic brain tissues ($P < 0.001$). Furthermore, low levels of miR-198 were associated with a higher WHO grade and lower Karnofsky performance status (KPS) score. A multivariate Cox regression analysis identified decreased miR-198 expression as an independent factor predicting poor prognosis for glioma patients. Lastly, in vitro functional analysis revealed that overexpression of miR- 198 in U87 cells reduced cell proliferation, promoted cell apoptosis, and inhibited cell invasion and migration. Taken together, these findings indicate that miR-198 may act as a tumor suppressor in human glioma, and may serve as a novel target for molecular therapies of this disease [1)].

1)
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