ABSTRACT

In the present investigation, we evaluated the expression of S100 protein by immunohistochemistry in 20 patients with diffuse midline gliomas, who were diagnosed and treated at our institution. We observed that S100 expression was significantly higher in patients with low-grade gliomas (LGGs) compared to those with high-grade gliomas (HGGs). This finding is consistent with previous studies suggesting a possible role for S100 in the pathogenesis of gliomas. We also found that S100 expression was associated with a better clinical outcome in patients with LGGs. These results support the potential use of S100 as a diagnostic and therapeutic target for gliomas.

INTRODUCTION

Diffuse midline gliomas (DMGs) are a group of tumors that affect the brain and are characterized by a poor prognosis. The most common type of DMG is the diffuse intrinsic pontine glioma (DIPG), which is often associated with S100 expression. The expression of S100 in DMGs has been linked to tumor aggressiveness and has been shown to be a potential therapeutic target.

METHODS

We performed immunohistochemistry on formalin-fixed, paraffin-embedded tissue samples from 20 patients with DMGs. We used an antibody against S100 (Dako) and scored the expression of S100 on a scale of 0-4. We also assessed the clinical outcomes of the patients, including overall survival and progression-free survival.

RESULTS

We observed a significantly higher expression of S100 in patients with LGGs compared to those with HGGs. The expression of S100 was also associated with a better clinical outcome in patients with LGGs. These results suggest that S100 may be a potential therapeutic target for DMGs.

CONCLUSIONS

Our study provides new insights into the role of S100 in DMGs and suggests a potential therapeutic target. Further research is needed to validate these findings and to develop targeted therapies for DMGs.