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The influence of glioblastoma on patients' cognitive and demographic characteristics and psychological well-being of patients and caregivers: a single-centre retrospective study

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Abstract

Background: Glioblastoma, the most aggressive primary brain tumour in adults, poses significant challenges for patients and their caregivers. This study investigates a range of clinical parameters, such as symptoms, tumour characteristics, presence of seizures, mental status, and depression/anxiety, in glioblastoma patients. The rapid deterioration of physical and cognitive functions experienced by patients can have profound effects on both patients and their relatives throughout the course of the disease. The objective of this study was to examine and compare psychological symptoms between glioblastoma patients and their relatives.

Materials and methods: The study included 98 adult patients with glioblastoma who underwent pre- and postoperative cognitive assessments using the Mini-Mental State Examination (MMSE). The Hospital Anxiety and Depression Scale (HADS) was also used to evaluate and compare psychological symptoms of patients and their relatives over time. Seizures were seen in 45.9% of patients, and the mean age of the patients was 60.1 ± 13.8 years. The patients were evaluated at various time intervals before and after surgery, and the data were retrospectively analyzed.

Results: The study found that before surgery, the anxiety levels of caregivers were significantly higher than those of patients during all evaluation periods. Additionally, the depression scores of caregivers were significantly higher than those of patients only in the first month following the operation. There were no significant differences in depression scores between patients and caregivers in the other assessment intervals. The average cognitive level of patients, as assessed by the MMSE scale was 22.4 before the operation and 20.9 after the operation.

Conclusion: Glioblastoma has a significant impact on the mental health and emotional well-being of both patients and their relatives. This study highlights the importance of providing early support to both patients and their relatives before surgery. The study's strength is that it focuses on an early time point, prior to surgery, where both patients and their relatives are already affected and may require additional support. The results of this study can help healthcare professionals to better understand the psychological impact of glioblastoma and provide more targeted support to patients and their caregivers.

Keywords: anxiety; cognitive function; depression; glioblastoma; prognostic factors; seizure.

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