

# Socio-demographic, tumor characteristics and psychiatric diagnosis in patients with primary brain tumor

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## Introduction

Patients with brain tumor present high risk of emotional, cognitive, psychiatric and behavioral symptoms. In these patients we can find not only a stress reaction towards the health and life threatens but also towards the loss in their neurologic and cognitive function. Moreover, further burden is added by the direct effect of the tumor and the side effects of neurosurgery, chemotherapy, radiotherapy and pharmacological treatments. Also some associations between the location of the tumors and the psychiatric manifestation have been proposed (Madhusoodanan et al., 2010) but, as the affected areas would eventually be part of functional neuronal network a lesion in one region can manifest in variable symptoms (Madhusoodanan et al., 2015). However, observational studies show heterogenic results about the frequency of psychiatric disorders, their characteristics and the relationship with socio-demographic aspects in relationship with the tumor.

## Aim

The aim of this study is to assess the socio-demographic, tumor characteristics and psychiatric symptoms of presentation of the patients with brain tumors diagnosed in Hospital del Mar.

## Methods

A sample of 123 patients with primary brain tumor, considering only cerebral parenchyma tumors and consequently excluding meningioma. The diagnosis, which was established between 2008 and 2011 in Hospital del Mar in Barcelona, was analyzed retrospectively. Socio-demographic data was collected and neuroimaging and histological was conducted. A psychiatric evaluation was carried out by consultation-liaison and psychiatric diagnosis was codified through CIE9. A descriptive approach of the obtained data is presented.

## Results

No great differences were observed in the gender proportion (54,47% men and 45,53% women) and the mean age was of 58,04 years old. The majority of the tumors were located in frontal (39,02%) or temporal (33,33%) areas followed by parietal tumors (16,26%). Occipital and ventricular locations were less frequent. The analyzed tumors were mostly anterior (73,17%). No great difference was observed in the laterality of the tumors. Stage III and IV glioma was the most prevalent histological type of tumor (64,23%), followed by stage I and II (17,97%) and oligodendroglioma (7,32%) while results showed less proportion of other tumors like lymphoma or ependymoma (graphic 1).

A psychiatric diagnosis could be established in 39,83% of the patients with predominance of transient mental disorders (24,49%) including delirium (2,04%) and mood alteration (6,12%), depressive disorders (20,41%) and personality changes (18,37%). Other diagnosis such as adjustment reactions were present but less frequent (6,12%) (table 1). Most psychiatric diagnosis were established concomitantly to the tumor finding.

Graphic 1: Proportion of Histological types of cerebral tumor.

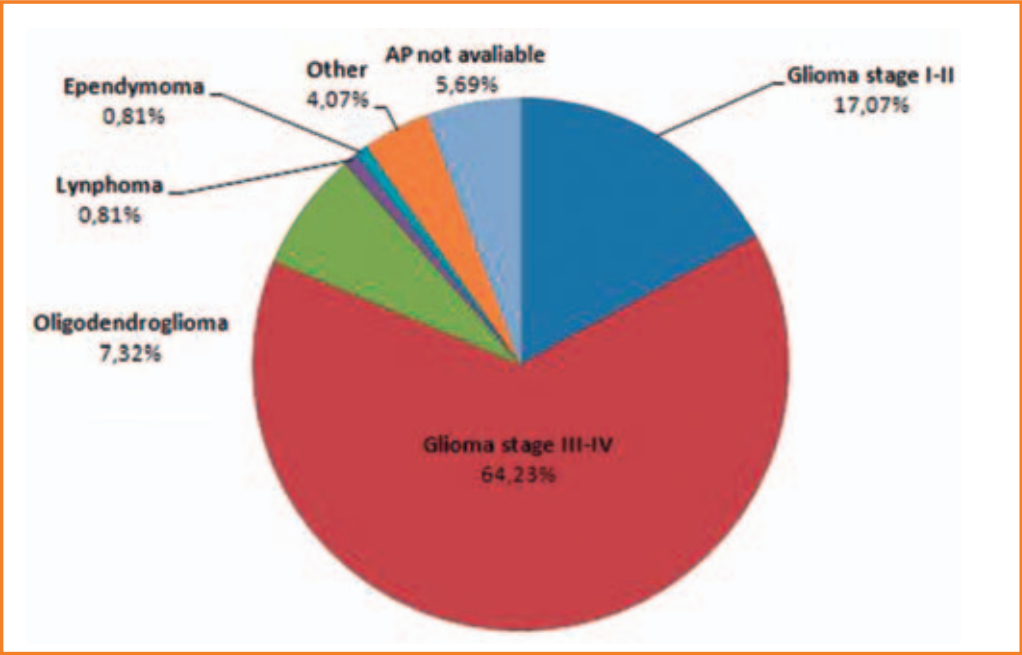


Table 1: Proportion of psychiatric diagnosis in patients with cerebral tumor.

Psychiatric Diagnosis (CIE9)	
Organic Transient Mental disorders [293]	24,49%
Organic Permanent Mental disorders [294]	2,04%
Depressive Disorders, Recurrent [296.3]	4,08%
Depressive Disorders, Single Episode [311]	20,41%
Drug Abuse Disorders [304/305]	8,17%
Adjustment Reactions [309]	6,12%
Personality Changes due to Brain Damage [310.1]	18,37
Non-specific Mental Disorder due to Brain Damage [310]	12,24%

## Conclusions

Our data suggests high prevalence of psychiatric diagnosis in the population with brain tumor with predominance of depressive disorders. Further research to better define the socio-demographic and tumor characteristics in the patients with brain tumor and determine the association between this kind of tumor and psychiatric symptoms would be of great interest not only to improve the management of the emotional distress but also to provide stronger evidence on the importance of suspicion of brain tumors in new-onset psychiatric symptoms.

## References

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