



Cognitive failure in sellar-suprasellar lesion patients

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Abstract:

Patients with lesions in the sellar and suprasellar regions often have subjective cognitive and memory complaints but these have rarely been studied systematically in a large group of patients. Involvement of local structures such as the hypothalamus, mammillary bodies and projections from these areas provide a basis for these concerns that affect patients' quality of life. We used the Cognitive Failures Questionnaire (CFQ) to assess the nature and prevalence of reported cognitive failure (CF) in a group of sellar-suprasellar lesion patients prior to surgery. Wallace et al. (2002) (DOI:10.1080/00221300209602098) identified a four-factor model using CFQ responses from healthy participants for possible use in understanding CF, but this model has not been statistically fitted to tumor patients. A CFQ item analysis and categorical analysis with tumor compression, sex, tumor volume and affective disorder comorbidity was performed in 114 sellar-suprasellar lesion patients to identify factors which may increase cognitive failure. A confirmatory factor analysis (CFA) was assessed along with an exploratory factor analysis with oblique geomin rotation to identify stable factors of CF report for this patient sample. Memory, emotional control and concentration were most severely affected. Paradoxically, females with small tumors (< 1.0 cc) reported significantly greater overall CF than males and females with tumors ≥ 1.0 cc. Women with anxiety or depression comorbidity reported significantly greater CF compared to men without affective disorder comorbidity. Wallace et al.'s (2002) four-factor CFQ model did not meet sufficient CFA criterion in our patient sample. A stable two-factor model of cognitive failure in this patient group was identified, with the majority of items loading on the first factor. Tumor volume, sex, and affective comorbidity are associated with more cognitive failure and this cognitive failure is best represented by two factors in sellar-suprasellar tumor patients. We are undertaking more studies in these patients to better understand the basis of CF. Themes of concentration, memory and emotional control should be the primary focus in educational materials distributed prior to neurosurgery to enhance patients' understanding of their neurocognitive concerns.