The effects of radiotherapy on psychosocial and cognitive functioning in adults with a primary brain tumor: a prospective evaluation.

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Abstract

A paucity of studies have evaluated the biopsychosocial factors contributing to quality of life (QoL) in adults with a primary brain tumor (BT). Our objective was to investigate (i) the effects of radiotherapy on the psychosocial (ie, posttraumatic stress symptoms [PTSS]) and cognitive functioning of adults with a primary BT, assessed preradiotherapy [T1] and postradiotherapy [T2], and (ii) predictors of PTSS and QoL postradiotherapy. Seventy adults with a BT were assessed at T1, and 67 patients were reassessed 3.5 months postradiotherapy. At each assessment, participants completed measures of PTSS, mood, QoL, and quality of social support and neurocognitive tests focusing on memory and executive functioning. Minimal differences in functioning were found between patients according to BT type (benign [n = 45] vs malignant [n = 25]) and tumor laterality (left vs right hemisphere), with 2 exceptions. Individuals with a left hemisphere benign BT experienced greater distress at T1, which declined at T2, whereas individuals with a left hemisphere malignant BT reported poorer social support at T2. The full sample performed poorly on tests of executive functioning, and 17% reported clinically elevated PTSS at T1, which reduced to 13% at T2. Younger age (<65 y), reduced QoL, and elevated anger symptoms at T1 predicted PTSS at T2, whilst having a benign BT, low PTSS, and depressive symptoms at T1 were predictive of improved QoL at T2. Findings highlight the importance of screening for psychosocial and cognitive disturbances in BT patients undergoing treatment to identify those at risk for acute and more prolonged problems.


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