

Multimodal therapy in elderly patients with glioblastoma

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Age is known to be a significant prognostic factor in patients with glioblastoma. However, data available in the literature suggest that at least part of the negative results obtained in the survival of elderly patients are related to a more nihilistic approach (in all population-based studies, elderly glioblastoma patients are treated less aggressively as compared to younger patients, not always due to the presence of other bad prognosis features).

Elderly patients are known to be more likely to develop treatment-related toxicities such as chemotherapy-induced bone marrow suppression or post-radiation encephalopathy, and this increased vulnerability has been shown also in trials on non-CNS cancers. Exclusion of elderly patients from the majority of clinical trials has so far made it hardly feasible to adopt strong evidence-supported attitudes in the management of these patients. Interpretation of data is rendered even more complicated by the differences in definition of “elderly” in the few trials that have addressed this population. Some authors provocatively suggest that this definition should be limited to patients that are older than the mean life expectancy of the population they belong to (in the case of Italy, this age cutoff would be 79 years for the male population and 82 for the female population).

Despite the paucity of solid data, emerging evidence from phase II studies suggests that elderly patients in good general and neurological conditions may benefit from aggressive treatment, including surgery, radiotherapy and chemotherapy (both locoregional and systemically delivered).

The data from the NOA-08 trial which compared radiation therapy (60 Gy) with dose-dense temozolomide did not show statistically significant differences in survival; however, toxicity was higher in the chemotherapy arm. On the other hand, the Nordic trial, which compared standard 60 Gy radiotherapy to 5/28 temozolomide to short-course hypofractionated radiotherapy, suggested a worse outcome in patients treated with 60-Gy radiotherapy. Differences in patients' selection, in the time from diagnosis to treatment are likely to account for part of these apparent discrepancies.

A large retrospective study on 206 cases of elderly glioblastoma patients (Scott J.G et al. , Neurooncology 2011) confirms that at multivariate analysis, higher performance status score, any surgery vs biopsy, radiation therapy and chemotherapy were all predictive of longer survival. Older patients might also benefit from locoregionale chemotherapy, as suggested by Chaichana (Chaichana K.L. et al., Neurol. Res. 2011).

More prospectively collected data from population studies and controlled clinical trials are needed to delineate the optimal and tailored treatment in elderly patients with glioblastoma.