Abstracts

P17.21. TOXICITY AND OUTCOME IN PRIMARY ELDERLY GLIOBLASTOMA PATIENTS TREATED WITH CONCOMITANT CHEMO-RADIATION THERAPY PLUS ADJUVANT TEMOZOLOMIDE VERSUS SHORT-COURSE IRRADIATION: RESULTS OF A SINGLE-INSTITUTION RETROSPECTIVE ANALYSIS

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PURPOSE: To compare clinical outcome and tolerance of two types of treatments in elderly patients affected by newly diagnosed glioblastoma (GBM): temozolomide (TMZ) concurrent to conventional fractionated radiotherapy followed by adjuvant TMZ versus hypofractionated radiotherapy (RT) followed by adjuvant TMZ. PATIENTS AND METHODS: Patients older than 65 years with GBM, who underwent surgical resection/biopsy and treated with short-course radiotherapy or concurrent chemo-radiation therapy, were evaluated. Total doses were 25 or 60 Gy: 25 Gy in 5 fractions (palliative approach) and 60 Gy in 30 fractions (standard approach). In the standard approach, TMZ was administered concomitantly and adjuvantly to RT.

RESULTS: At the time of data analysis, 75 out of 83 patients had died and the tumor progression was the primary cause of death in 71 patients. Median age was 70 years (range 65-82 yrs) with 39 females (46%) and 44 males (54%). Median KPS at time of treatment was 80. The surgery was gross total in 50 patients and subtotal in 8 patients; 25 patients underwent only biopsy. The O6-methylguanine-DNA-methyltransferase (MGMT) methylation status was reported in 55 patients (36 methylated and 19 unmethylated). No patients demonstrated clinically significant acute morbidity, and all patients were able to complete the prescribed radiation dose without interruption. As expected, the most common grade 3-4 adverse events in the standard therapy group were neutropenia (n = 3) and thrombocytopenia (n = 8). The prognostic factors analyzed were gender, age, extent of surgery, performance status before and after radiotherapy, hemoglobin and hematocrit level, and methylation of the MGMT gene. With median follow-up of 14.9 months, the median OS and PFS were 16 and 8 versus 9 and 3 months, in Stupp arm and short course RT, respectively (p = 0.035 and p = 0.055). At Cox Proportional-Hazards Regression analysis, only the extent of surgery and high haemoglobin level correlated with OS and PFS; whereas age (<70 vs. ≥70 years), KPS, diameter of lesion, MGMT methylation status and hematocrit level did not influence outcome. CONCLUSION: Our data suggested that standard approach was acceptably tolerated and prolonged survival of glioblastoma patients aged > or = 65 years. The extent of surgery remains independent prognostic factor. In this research, it was found that a low hemoglobin level before radiotherapy can adversely influence the prognosis of elderly patients with glioblastoma.