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Glioblastoma multiforme. An advanced analysis of 153 patients and review of the literature**Mohammad Sadegh Nikdad^{1,2}, Farshid Farhan³, Milad Shafizadeh^{1,2}, Atefeh Sadat Mirmohseni^{1,2}, Mohsen Afarideh^{1,2}, Shabnam Asadi Komeleh^{1,2}, Marzieh Lashkari³, Morsaleh Ganji^{1,2}, Alireza Ghajar^{1,2}, Saeed Shafiei^{1,2}, Yalda Shafizadeh⁴, Ali Kazemian³ and Hooshang Saberi^{1,2}**¹Neurosurgery Research Center, Tehran University of Medical Sciences, Iran²Department of Neurosurgery, Tehran University of Medical Sciences, Iran³Department of Radiation Oncology, Cancer Institute, Tehran University of Medical Sciences, Iran⁴Department of Pathology and Laboratory Medicine, Emory University School of Medicine, USA

*Correspondence to: Farshid Farhan MD, Cancer Research Center, Cancer Institute, Tehran University of Medical Sciences, Iran

Glioblastoma multiforme (GBM) is an aggressive primary tumor with frequent recurrences that leaves patients with a short survival time and a low quality of life. The aim of this study was to review prognostic factors in patients with glioblastoma multiforme. The focus of this retrospective study was a group of 153 patients with supratentorial GBM tumors, who were admitted in a tertiary-care referral academic center from 2005 to 2013. Factors associated with survival and local recurrence were assessed using the hazard ratio (HR) function of Cox proportional hazards regression and neural network analysis. Of the 153 patients, 99 patients (64.7%) were male. The average age of patients was 55.69 ± 15.10 years. The median overall survival (OS) and progression-free survival (PFS) were 14.0 and 7.10 months, respectively. In the multivariate analysis, age (HR =2.939, $P < 0.001$), operative method (HR =7.416, $P < 0.001$), temozolomide (TMZ, HR =11.723, $P < 0.001$), lomustine (CCNU, HR= 8.139, $P < 0.001$), occipital lobe involvement (HR =3.088, $P < 0.001$) and Karnofsky Performance Status (KPS, HR=4.831, $P < 0.001$) were shown to be significantly associated with a higher OS rate. Furthermore, higher KPS (HR=7.292, $P < 0.001$), operative method (HR =0.493, $P =0.005$), the use of CCNU (HR=2.047, $P =0.003$) and resection vs. chemotherapy (HR =0.171, $P < 0.001$) were the significant factors associated with local recurrence of tumor. Our findings suggest that the use of CCNU and TMZ, operative method and higher KPS readings are associated with both higher survival and lower local recurrence rates.

Biography

Mohammad Sadegh Nikdad is currently working in the department of neurosurgery at Tehran University of Medical Sciences, Iran. He has published several original research papers in reputed and peer reviewed journals and also participated into several scientific meetings.

samannikdad@gmail.com

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