Glioblastoma Multiforme: A Single Hospital Experience

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Abstract

Background & Aim: Glioblastoma multiforme (GBM), the highest grade glioma (grade IV), is the most malignant form of astrocytoma in adults. This study aimed at evaluating the relationship between demographic, clinical and medical factors with GBM outcome.

Methods & Materials/Patients: Through a cross-sectional design, 58 patients with newly diagnosed GBM were studied from 1999 to 2015 in Guilan province (North of Iran). Demographic, clinical and medical data including age, gender, score of Karnofsky Performance Scale (KPS), status at discharge, extent of resection (EOR) and administration of post-operative radio-chemotherapy were recorded in an individual questionnaire. The data were analyzed using chi-square and fisher exact tests.

Results: Of all patients, 35 (60.3%) cases were men and 23 (39.7%) were women. Age range (at the time of diagnosis of GBM) was 18-82 years (54.86±16.34). The most common side and location of tumor were left hemisphere and frontal lobe, respectively. 41 (70.7%) patients received total surgical resection. Half of patients were treated with simultaneous post-operative radiation therapy and chemotherapy. 11 (19%) of all cases died. About 41 (70.6%) of patients demonstrated KPS 50-70.

Conclusion: GBM is a frequent malignant brain tumor with male predominance and high occurrence in age range of ≥50 years. The number of dead patients increases with decreased KPS. Total surgical resection followed by concomitant radiation therapy and chemotherapy were common standard therapeutic regimens.

Keywords: Glioblastoma Multiform; Extent of Resection; Radiotherapy; Chemotherapy