Effectiveness of radiotherapy for elderly patients with anaplastic gliomas.

Mukherjee D, Manuel Sarmiento J, Nosova K, Boakye M, Lad SP, Black KL, Nuño M, Patil CG.

Abstract

Postoperative radiotherapy (RT) is utilized routinely in the management of anaplastic World Health Organization Grade III gliomas (AG), including anaplastic astrocytoma (AA) and anaplastic oligodendrogloma (AO). However, the optimal role of RT in elderly AG patients remains controversial. We evaluated the effectiveness of RT in elderly AG patients using a national cancer registry. The USA Surveillance, Epidemiology, and End Results database (1990-2008) was used to query patients over 70 years of age with AA or AO. Independent predictors of overall survival were determined using a multivariate Cox proportional hazards model. Among 390 elderly patients with AG, 333 (85%) had AA and 57 (15%) had AO. Approximately two-thirds of AA patients (64%) and AO patients (65%) received RT. Most AO patients (58%) and many AA patients (41%) underwent surgical resection; the remainder had biopsy. The median overall survival for all patients who underwent RT was 6 months (95% confidence interval [CI], 5-7 months) versus 2 months (95% CI 1-6) in patients who did not have RT. Patients who had gross total resection (GTR) plus RT had a median overall survival of 11 months (95% CI 7-14). Multivariate analysis for all patients showed that undergoing RT was significantly associated with improved survival (hazard ratio [HR] 0.52, p<.0001). AA tumor type (HR 1.37, p=.03) was associated with worse survival than AO tumor type; female sex (HR 0.59, p<.0001) and being married (HR 0.66, p=.002) significantly improved survival. Patients that underwent GTR had a significant reduction in the hazards of mortality compared to biopsy (HR 0.72, p=.04). Elderly AG patients undergoing RT had better overall survival compared to patients who did not receive RT. Treatment strategies involving maximal safe resection plus RT should be considered in the optimal management of AG in elderly patients.

Copyright © 2013 Elsevier Ltd. All rights reserved.

KEYWORDS: Anaplastic astrocytoma, Anaplastic glioma, Anaplastic oligodendroglioma, Elderly, Radiotherapy, Survival

PMID: 24355207 [PubMed - as supplied by publisher]
Effectiveness of radiotherapy for elderly pa... [J Clin Neurosci. 2013] ...