

period, using a concomitant boost technique, a dose of 60 Gy and 40 Gy were delivered in 20 fractions prescribed to the periphery of the gross tumor volume and planning target volume, respectively. TMZ was administered according to the regimen of Stupp *et al.*

Results

The median follow-up was 12.6 months. Of the 35 patients, 29 (82.8%) completed the combined modality treatment, and 25 (71.4%) received a median of four cycles of adjuvant TMZ. The median overall survival was 14.4 months, and the median disease-free survival was 7.7 months. The median survival time differed significantly between patients who underwent biopsy and those who underwent partial or total resection (7.1 vs. 16.1 months, $p = 0.035$). The median survival was also significantly different between patients with methylated vs. unmethylated 0-6-methylguanine-DNA methyltransferase promoters (14.4 vs. 8.7 months, $p = 0.049$). The pattern of failure was predominantly central, within 2 cm of the initial gross tumor volume. Grade 3-4 toxicity was limited to 1 patient with nausea and emesis during adjuvant TMZ administration.

Conclusion

The results of our study have shown that hypo-IMRT with concomitant and adjuvant TMZ is well tolerated with a useful 2-week shortening of radiotherapy. Despite a high number of patients with poor prognostic features (74.3% recursive partitioning analysis class V or VI), the median survival was comparable to that after standard radiotherapy fractionation schedules plus TMZ.

Author Keywords: Glioblastoma multiforme; Radiotherapy; Hypofractionation; Intensity-modulated radiotherapy; IMRT; Temozolomide

Article Outline

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- Assessment and treatment technique
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