Overall survival benefit from surgical resection in treatment of recurrent glioblastoma

ESMO Clinical Practice Guidelines on high-grade gliomas: impact of surgical resection on overall survival (OS) in treatment of recurrent glioblastoma (GBM), citing two pooled analyses as evidence of an effect. Neither analysis considered one critical factor in analyzing efficacy of re-resection—the extent of resection (EBR)—known to be important at first surgery. Furthermore, only 12% (19/151) and 27% (29/107) of patients underwent surgery at all, respectively [1,2]. Even if surgery had an effect on OS in these series, driven by higher small tumors, and surgical heterogeneity would hardly provide sufficient power to detect any difference. Several recent series with higher numbers of patients, reporting EOR at surgery for recurrent GBM, demonstrated no clinical benefit from extended resection as measured by OS or other outcome measures [3-5].

Flottes et al. reported that 38% (69/186) EOR in GBM resections during their study period were treatment of recurrent disease—less than half of the patients underwent postoperative MRI to estimate EOR, impact of EOR, classified as gross total resection (GTR) or subtotal resection (STR), at both initial surgery and surgery for recurrence was analyzed. Median survival for patients with GTR followed by EOR was 25 months; for STR followed by EOR 19 months, and for STR followed by STR 15.9 months. STR at recurrence in patients with initial STR demonstrated significantly decreased survival compared with GTR at recurrence (15.5 versus 19 months, P = 0.004). For patients with initial STR, survival following re-resection significantly increased with GTR compared with STR 15.7 versus 9.4 months, P = 0.001.

Oppenlander et al. analyzed 78 consecutive patients and demonstrated EOR threshold for recurrent GBM. Significantly improved OS was attained beyond 40% EOR—significantly similar to newly diagnosed GBM. Median PFS following resection was 5.2 months, median OS 19 months for re-resection procedures, and remarkable 28 months in subset with EOR 52%. Co-propositional hazards analyses showed age, Karnofsky Performance Scale score, and 50% predilection of re-resection following re-resection (P = 0.001).

Quick et al. achieved radiologically confirmed complete resection in 29/40 patients (72.5%). Median survival after re-resection was 15 months for subtotal; EOR 25% and 9 months for

less; significantly correlating with survival after re-resection in multivariate analysis [5].

Surgical series have patient selection and segmenting surgery versus tumor resection on OS in GBM is difficult. Adequate studies comparing resection versus observation are hard. An ANOCOF trial randomized elderly patients with good performance status to GTR or biopsy. Small advances in imaging and surgical techniques, the number of patients able to undergo re-resection for recurrent GBM is increasing [5]. Role of surgery in recurrent GBM cannot be simply dismissed, especially tumors herniated to many patients. Moreover, ignoring it, e.g., as a stratification factor in randomized clinical trials leads to subsidies in treatment arm and methods. In single-arm studies with non-compact resection or eligibility criteria, of effect of added experimental treatments gets inflated. ESMO should consider all available and published data in a new revision of the guidelines rating necessary current.

B. S. Marri*  
Audi Verse and GI Cancer Therapeutics, Clinical Investigations Branch, Cancer Therapy Evaluation Program, Division of Cancer Treatment and Diagnosis, National Cancer Institute, NCI, Bethesda, USA  
*Corresponding author (email: marri@mail.nih.gov)

disclosure

The author has declared no conflicts of interest. Views are those of the author and not of the National Cancer Institute.

references


doi: 10.1007/s12032-014-2639-1
Overall survival benefit from surgical resection in treatment of recurren...