



Craniotomy for Recurrent Glioblastoma: Is it Justified? A Single Centre Experience with Outcomes Over 10

Years and a Review of the Literature

Soumya Mukherjee MA, MBBS, MRCS

Introduction

The role of repeat resection for recurrent glioblastoma multiforme (rGBM) is unclear. We studied the overall survival (OS), survival since tumour recurrence (SSR) and complications of patients undergoing repeat resection versus non-surgical treatment of rGBM

Methods

Of all patients with rGBM between July 2003 and June 2013, who were discussed by our institution's neuro-oncology multi-disciplinary team, two groups were compared: patients who did and did not undergo repeat resection. Collected data included demographics, Karnofsky Performance Status (KPS), oncological treatment, imaging, extent of resection, complications and mortality. Survival and prognostic factors were analysed using Kaplan-Meier and Cox regression methods.

Results

112 patients (repeat resection, n = 35; no repeat surgery, n = 77) were analysed. Median SSR was 10.8 months (95% CI 7.0–17.0 months) and 6.9 months (95% CI 3.0–12.6 months) in the reoperated and non-reoperated groups respectively (Log-rank test: p = 0.02). Median OS was 24.1 months (95% CI 18.5–28.1 months) and 20.4 months (95% CI 16.9–24.0 months) in the reoperated and non-reoperated groups, respectively (Log-rank test: p = 0.04). Age < 60 years, KPS = 80, recurrence = 9 months and methylguanine methyltransferase (MGMT) promoter methylation, each were significant predictors of SSR and OS. Complication rates were 26% and 17% following repeat resection and primary resection, respectively (p > 0.05).

Conclusions

Repeat resection for rGBM confers a small but significant survival benefit over non-operative treatment. Best prognosis is associated with: younger age, KPS = 80, late recurrence, and MGMT promoter methylation.

Learning Objectives

By the conclusion of this session, participants should be able to: 1) Discuss the overall survival benefit of patients who undergo re-do craniotomy for rGBM versus patients with tumour recurrence who do not undergo repeat surgery; 2) Discuss whether survival benefit from re-do surgery outweighs the risks by reviewing the complications of re-do craniotomy; 3) Identify potential factors that may affect survival from re-do surgery, and 4) Understand the literature on the outcomes of repeat resection of recurrent GBM

[Default Poster]