Re-do Craniotomy for Recurrent Grade IV Glioblastomas: Impact and Outcomes from the National Neuroscience Institute Singapore.

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Abstract

AIM: We hypothesize that re-do craniotomy for recurrent grade IV glioblastomas improves survival while preserving outcome in selected patients.

METHODS: A retrospective analysis was conducted of 141 patients, from a prospectively collected database from 2004 to 2014, with grade IV glioblastomas who underwent craniotomy and excision. 65 patients were included in our analysis. 20 patients underwent re-do craniotomy at recurrence and were compared to 45 patients who received non-surgical therapy for recurrences. Primary end-point was overall survival from time of diagnosis. Demographic and disease factors were analysed using Cox regression analysis for significance.

RESULTS: The median survival for those with re-do craniotomy was 25.4 months compared to 11.6 months (p <0.001) in the group which underwent non-surgical therapy. The mean age for this group was 53.5 years. This group had a higher post-surgical/treatment median KPS of 80 compared to 60 (p <0.001) showing better functional outcome. A cox regression analysis of factors determined that age, KPS at recurrence, extent of resection at initial surgery and re-do craniotomy were significant for positive outcomes.

CONCLUSION: Our results show that in a select group of patients with recurrent grade IV glioblastomas, repeated excision, aiming for gross total resection where safely possible, has significant survival benefit without severely compromising functionality and should be considered.

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KEYWORDS: High Grade Glioma; Overall Survival; Re-do Craniotomy; Recurrent

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