



Is re operation worthwhile in GBM patients with recurrence?

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Introduction

Glioblastoma multiforme (GBM) is the most common malignant brain tumor in adults. It carries a dismal prognosis with reported median survival of 12–15 months from initial diagnosis.

The disease recurs very quickly post initial treatment and has given rise to significant controversy about the role of repeat surgery in recurrent tumors. .

Our objective was to look at the pattern of survival among GBM patients as well as those who underwent repeat surgery following recurrence of tumor.

Methods

A single centre retrospective analysis of newly diagnosed GBM patients between 2008 to 2019, with a minimum 12 month follow up.

Multivariate Cox regression analysis was used to evaluate predictive factors for survival while overall survival was calculated by Kaplan Meier method.

Results

A total of **138 patients** of confirmed GBM was selected in the study. The median age was 57 (7-83) years old.

47 went for biopsy and 91 went for surgical resection.

The overall survival was 6.4 ±1 months. The resection group had better survival then biopsy group with OS = 7.9±1 vs 4.8±1.6 months, p value 0.04.

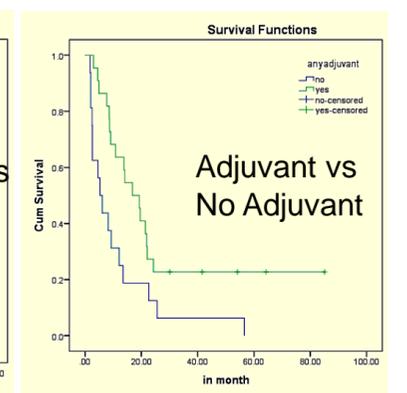
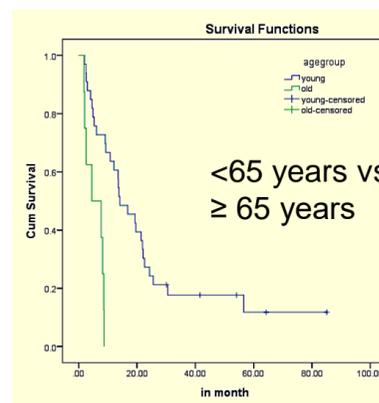
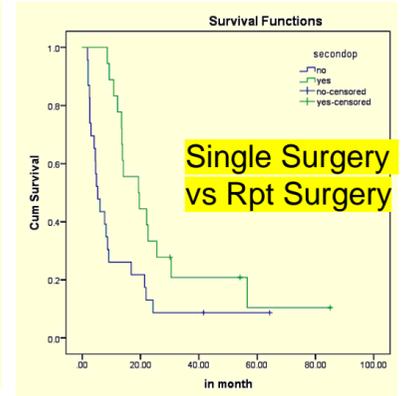
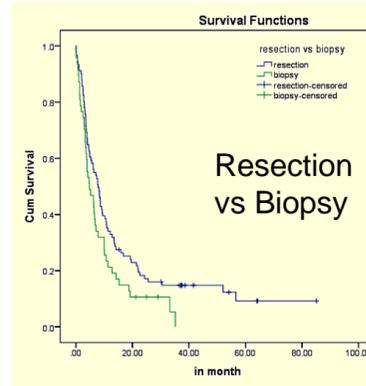
Of these 91, **41** had recurrence with median time between first surgery to recurrence being 4.2 ± 9.6 months.

18 out of these 41 had a repeat surgical resection.

The overall survival for the reoperated group was better compared to the non-reoperated with **OS = 19.3 ± 5.8 vs. 5.3 ± 1.0 months, p = 0.04.**

Mulivariate cox regression analysis shows younger age group, any adjuvant therapy and second operation are good prognostic factors.

Data



N=41	univariate		multivariate	
	P	HR (95% CI)	P	HR (95% CI)
Elderly	<0.001	5.7 (2.2 – 15)	0.009	4 (1.4 – 11.6)
Any adjuvant	0.016	2.3 (1.2 – 4.7)	0.002	3.6 (1.6 – 8)
Repeat surgery	0.012	2.4 (1.2 – 4.7)	0.012	3.1 (1.3 – 7.5)

Conclusion

Our study revealed that re operation for GBM patients provided them with almost 2 times the overall survival of non re operated patients.

Carefully selected patients especially younger patient who are post adjuvant therapy may benefit from repeat surgery during their recurrence.

Future direction

A prospectively conducted trial may be able to shed more clarity into these findings.

References

- Alexander BM, Cloughesy TF. Adult glioblastoma. J Clin Oncol. (2017) 35:2402–9.