OBJECTIVES: Maximal surgical resection of high grade brain tumours is associated with improved overall survival (OS). It carries the risk of neurological deterioration leading to worsening performance status (PS), which may affect overall survival and preclude patients from adjuvant therapy. We aim to review the changes in performance status of patients undergoing resection of high grade tumours and metastases and the impact of changes on overall survival.

PATIENTS AND METHODS: A prospective study of the perioperative performance status of 75 patients who underwent primary resection of malignant primary brain tumour or solitary metastasis in a single centre. Data on patients’ demographics, tumour histology and overall survival were also collected. WHO performance status was recorded pre-operatively and at intervals following surgery.

RESULTS: Of the 75 patients (35 males, 40 females, median age 61 years at diagnosis), 50 had primary malignant brain tumours, 25 had metastasis. Although PS dropped at postoperative day 1 in 14 patients (18.7%), 28% improved by day 5 and there was significant improvement by day 14 (41%, p=0.02). The number of patients with PS 3 or worse changed from 4% pre-operatively (n=3) to 8% (n=6). Overall survival is better in those whose PS remained improved or unchanged at 2 weeks after surgery compared to those whose PS deteriorated; high grade glioma median survival 15.67 vs. 2.4 months (p=0.005) and metastasis median survival 8.53 vs.2.33 months (p=0.001).

CONCLUSION: Our data demonstrates that although PS may deteriorate immediately after surgery, the majority of patients regain their baseline PS or improve by 2 weeks postoperatively; decisions on fitness for adjuvant treatment should therefore be delayed until then. In those patients whose PS declines following surgery overall survival is poor.

Crown Copyright © 2017. Published by Elsevier B.V. All rights reserved.

KEYWORDS: High grade glioma; Metastasis; Outcome; Performance status; Resection

PMID: 29197281  DOI: 10.1016/j.clineuro.2017.11.016