Glioblastoma reoperation

The role of reoperation in glioblastoma recurrence is currently unknown. However, multiple studies have indicated that glioblastoma survival and glioblastoma quality of life are improved with a repeat operation at the time of disease recurrence. Prognosis is likely interdependent on several factors, including age, functional status, initial resection status, disease location, and surgical efficacy. However, there are significant data indicating no survival benefit for reoperation [1].

Three hundred and fifty patients with confirmed primary glioblastoma diagnosed and treated between 2005 and 2019 were selected. To examine the role of glioblastoma reoperation, they intended to create comparable groups, previously excluding all diagnostic biopsies and patients who were not actively treated after the first surgery or at disease progression. Uni- and multivariate Cox proportional hazards regression models were employed, considering reintervention as a time-fixed or time-dependent covariate. The endpoints of the study were overall survival (OS) and PPS

At progression, 33 patients received a second surgery and 84 were treated with chemotherapy only. Clinical variables were similar among groups. OS, but not PPS, was superior in the reintervention group. Treatment modality had no impact in a multivariate Cox regression models considering OS or PPS as the endpoint.

The association of reoperation with improved prognosis in recurrent glioblastoma is unclear and may be influenced by selection bias. Regardless of our selective indications and high gross total resection rates in second procedures, we could not observe a survival advantage [2].

Yang et al. performed a single-center retrospective chart review on all adult patients who underwent resection of supratentorial GBM between January 1, 2008 and December 1, 2013 at our center. Patients with repeat resection were manually matched for age, sex, tumor location, and Karnofsky Performance Status (KPS) with patients who underwent single resection to compare overall survival (OS), and postoperative morbidity.

Of 237 patients operated with GBM, 204 underwent single resection and 33 were selected for repeat surgical resections. In a matched analysis there was no difference in the OS between groups (17.8 ± 17.6 months vs 17 ± 13.5 months, P = .221). In addition, repeat surgical resection had a higher rate of postoperative neurological complications compared to the initial surgery.

When compared with matched patients who underwent a single surgical resection, patients undergoing repeat surgical resection did not show significant increase in OS and may have incurred more neurological complications related to the repeat resection. Further studies are required to assess which patients would benefit from repeat surgical resection and optimize timing of the repeat resection in selected patients [3].

For Neville et al. data support the indication of reoperation for GBM, especially for younger patients with good functional status. Under these circumstances, survival can be doubled at 12 and 24 months [4]

1)
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