Survival after Total vs. Partial Removal of Low Grade Gliomas

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Description

There has been a recent renewal of interest in the topic of total vs. partial low grade glioma removal, after a Cochrane review has found inadequate evidence and concludes that "physicians must approach each case individually and weigh the risks and benefits of each intervention until further evidence is available" [1].

We have collected a series of 102 operated oligodendrogliomas [2]. Our results confirm that total tumor vs. partial tumor or biopsy removal offered a statistically significant extended survival postoperatively. This survival advantage was lost when we measured survival after first symptoms of the disease: For statistical analysis life table analysis and logrank test have been performed. The results for total vs. partial tumor removal were 0.3049 after first symptoms and 0.0250 postoperatively. The second but not the first result is statistically significant.

There are difficulties in finding time after first symptoms. For example, a patient had epileptic seizures for 14 years. When operated, an anaplastic tumor was found. Where the seizures irrelevant? Has he lived for 14 years with an anaplastic tumor? Has tumor grading increased within this time period? Measurements of survival after first symptoms are not as exact as postoperative measurements. The method is also more demanding in proving statistically significant short increases in survival, because the time periods concerned are longer after first symptoms than postoperatively.

But there is a fundamental advantage in this method: We suppose that we have two patients, and both are to live for five years. One of them goes to medical care immediately, the other one very late, after five years. If we study them after operation, the first patient seems to live for five years, the second one dies immediately. In reality, both patients have survived exactly the same time period after first symptoms. We believe that future research on the topic should include survival not only postoperatively but also after first symptoms of the disease.

References


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