The survival impact of postoperative infection in patients with glioblastoma multiforme.

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OBJECTIVE: The capacity for local infection to prolong survival in patients with cancer is a widely accepted but unsubstantiated principle. The neurosurgical literature contains anecdotal reports of patients with malignant gliomas who experienced prolonged remission of their tumors after a bacterial infection. This association has not been explored in a larger series of patients with malignant glioma with postoperative infections. METHODS: A single-center operative experience accumulated over 10 years was examined to evaluate whether postoperative infections conferred a survival advantage in patients with glioblastoma multiforme. A total of 382 patients were examined, and 18 bacterial infections were identified. Cases were compared with age-matched controls. Survival differences were evaluated using Kaplan-Meier curves, and other differences were tested using the Mann-Whitney U test. RESULTS: Cases and controls were younger and survived longer than the overall study sample, but cases and controls were similar at baseline. A moderate, statistically insignificant survival advantage was seen in the case group (Kaplan-Meier P = 0.27). However, when patients with infections in the first quarter and first half of their postoperative survival were examined, this survival advantage disappeared. There was no significant survival difference in any subgroup analyzed, including deep infections, bone flap infections, or infections caused by any specific organism. CONCLUSION: In this single-center study, postoperative infection did not confer any survival advantage in patients with glioblastoma multiforme.

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