
INTERSTITIAL HYPERTHERMIA FOR MALIGNANT GLIOMA PATIENTS WITH POOR PERFORMANCE STATUS

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PURPOSE:

Many investigators have shown that a poor initial Kamofsky performance status (KPS) was one of poor prognostic factors for the treatment of patients with malignant glioma. It has not been ascertained that treatment of malignant glioma altered the prognosis in patients with poor performance status. In this study, we report the contribution of RF interstitial hyperthermia to survival in the patients with low Kamofsky performance status.

MATERIAL AND METHOD:

Sixty-four patients with malignant glioma were treated by thermoradiotherapy using RF interstitial hyperthermia at our hospital between 1990 and 2000. Thirty-two patients with a Kamofsky performance status score of between 70 to 100 were excluded from this study because our objective was to determine the outcome of patients who were poorly functional at the time of admission. The remaining 32 patients with low performance status (KPS score of 30 to 60) formed this study population. The interstitial hyperthermia system used in this study was constructed of 13.56 MHz RF generator and needle-shaped electrodes which was inserted into the tumor with stereotactic apparatus under local anesthesia (Hyperthermia group). The patients received hyperthermia which was delivered with the edge of the tumor to 43C for 60 min. As a historical control, 58 patients with low KPS score were prepared. Twenty-four patients were diagnosed by biopsy and conventional radiochemotherapy (Biopsy group). The remain 34 patients underwent operative management with radiochemotherapy (Operation group) Actuarial survival times and survival percentages were estimated by Kaplan-Meier method.

RESULT:

The mean age of hyperthermia group was 61.4 years. There were 15 glioblastomas and 17 anaplastic astrocytomas. The mean duration of survival in hyperthermia group was 50 weeks. In control cases, the mean survivals of biopsy group and operation group were 28 weeks and 36 weeks. Even though differences were not statistically significant, patients treated with hyperthermia had longer survival than those treated with conventional treatment.

CONCLUSION:

Our experience showed a trend in which hyperthermia may be more beneficial than conventional radiochemotherapy for the patients with poor performance status. We concluded that these particular patients should be actively treated with RF interstitial hyperthermia.