

FIRST RESULTS OF A PHASE II CLINICAL STUDY ON RELAPSED MALIGNANT GLIOMAS TREATED WITH ELECTRO-HYPERTHERMIA

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The purpose of this study was to evaluate the activity and toxicity of electro-hyperthermia (ET) on relapsed malignant glioma patients. Twelve patients with histologically diagnosed malignant glioma entered the study. Eight patients had glioblastoma multiforme, two had anaplastic astrocytoma grade III and two had anaplastic oligodendroglioma. All patients were pre-treated with temozolamide-based chemotherapy and radiotherapy. Hyperthermia with short radiofrequency waves of 13.56 MHz was applied using a capacitive coupling technique keeping the skin surface at 20 degrees C. The applied power ranged between 40-150 Watts and the calculated average equivalent temperature in the tumours was above 40 degrees C for more than 90% of the treatment duration. One complete remission and 2 partial remission were achieved, with a response rate of 25%. The median duration of response was 10 months (range 4-32). The median survival of the entire patient population was 9 months, with 25% survival rate at 1 year. ET appears to have some effectiveness in adults with relapsed malignant glioma.