Abstracts

The Effects of Microwave Radiation, Hyperthermia, and L-Ascorbic Acid on Ehrlich Ascites Carcinoma Cell Metabolism

G.E. Piontek, C.A. Cain and J.A. Milner. "The Effects of Microwave Radiation, Hyperthermia, and L-Ascorbic Acid on Ehrlich Ascites Carcinoma Cell Metabolism." 1978 Transactions on Microwave Theory and Techniques 26.8 (Aug. 1978 [T-MTT] (Special Issue on Microwaves in Medicine, with Accent on the Application of Electromagnetics to Cancer Treatment)): 535-540.

The effects of microwave radiation, hyperthermia, and L-ascorbic acid on metabolism of (U-/sup 14/C) glucose, (2-/sup 14/C) glucose, and (1,5-/sup 14/C) citrate in Ehrlich ascites tumor cells (EATC) were studied. Microwave irradiated and water bath incubated cells were maintained at the same temperature for comparison. Data were obtained at 37.5°C and 42.5°C in the presence or absence of L-ascorbic acid. Ascorbic acid increased the rate of metabolism of both glucose and citrate. No significant differences in glucose and citrate metabolism were found between irradiated and nonirradiated cells at the same temperature and ascorbic acid concentration. A comparison of glucose metabolism in a normal tissue preparation and EATC was made. Vitamin C did not increase metabolism in the normal cell preparation.

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