



The use of pentoxifylline might enhance the effect of chemotherapy or radiotherapy in reducing tumor growth

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To the editor

For their article [1] exploring the effects of pentoxifylline (PTXF) on the phenotype and function of tumor-infiltrating lymphocytes (TILs) and splenocytes in a triple-negative breast cancer mouse model, I would like to congratulate Kazemi and their colleagues. According to their findings, tumor growth in PTXF-treated mice was significantly reduced compared to control mice (P 0.01). In mice treated with PTXF, the frequency of regulatory and cytotoxic TILs was roughly half (P 0.01) and twice (P 0.05) that of the control group, respectively. They came to the conclusion that PTXF treatment could inhibit tumor growth and alter the balance of cytokines in TILs, as well as the regulatory-to-cytotoxic TILs ratio, in favor of antitumor responses. We examined the effects of PTXF and alpha-tocopherol on the clinical outcome of 66 patients with stage IIIB non-small cell lung cancer in a randomized clinical trial that was published in *Medical Oncology*, supporting these preclinical findings. 33 of the 66 patients additionally received PTXF (400 mg, three times daily) and alpha-tocopherol (300 mg, twice daily) during radiotherapy, as well as 400 mg of PTXF and 300 mg of alpha-tocopherol every day for three months following radiotherapy. 33 other patients (control group) only received radiotherapy. Alpha-tocopherol and PTXF-treated patients had median survival times of 18 months and 1- and 2-year overall survival rates of 55% and 30%, respectively. In control patients, the 1- and 2-year overall survival rates were 40% and 14%, respectively, with a median survival of 10 months. These variations were statistically significant ($p=0.0175$). We draw the conclusion that the use of PTXF and alpha-tocopherol in conjunction with radiotherapy may

provide a potential survival benefit in this patient population [2]. In conclusion, the use of PTXF may increase the effectiveness of chemotherapy or radiotherapy in reducing tumor growth. Clinical trials should be conducted to further investigate this issue.

Declarations

Informed consent Not applicable.

Conflicts of interest The author declares no conflict of interest. This paper did not involve human participants and/or animals.

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