Combination therapy of liposome-entrapped muramyl tripeptide phosphatidylethanolamine (L-MTP-PE) against syngeneic tumors in mice

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Antitumor activities of L-MTP-PE (Liposome-entrapped myuramyl tripeptide phosphatidylethanolamine) in the combination treatment with chemo- or immune-therapeutic antitumor agents against various syngeneic tumors were tested. Against liver metastasis model of M5076 carcinoma, L-MTP-PE showed a tendency of elongation of survival days by its single treatment, however, elongation with statistical significance was observed in the combination treatment with 5-FU. Against Meth A fibrosarcoma system, L-MTP-PE showed a significant elongation of survival days in spite of its non-effect on tumor growth, when combined with 5-FU. L-MTP-PE also enhanced antitumor effect of OK-432 (picibanil), a bacterial immunotherapeutic agent against MM46 mammary carcinoma. In parallel with enhanced antitumor activity, TNF production induced by OK-432 was potentiated when primed with L-MTP-PE. These data suggest that L-MTP-PE seems to elongate the survival days of solid tumor bearing mice due to its saving effect on chemotherapeutic drug-induced immunosuppression and that L-MTP-PE also may potentiate the antitumor effect of immunotherapeutic agent OK-432 by the enhanced production of TNF.