

Chemotherapy and Spleen Peptides Preparation, SP-1, (Polyerga™) in the Treatment of Experimental Lung Metastases of Mammary Carcinoma in Mice

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Aim. To study the influence of chemotherapy with cyclophosphamide and/or spleen peptides' preparation SP-1, Polyerga™, on the incidence of experimental lung metastases of mammary carcinoma in mice.

Method. Mammary carcinoma cells were injected i.v. into CBA/HZgr mice to obtain experimental lung metastases. One day later, a single injection of cyclophosphamide (50 mg/kg) was given i.p., and/or different concentrations of Polyerga™ were given perorally in drinking water until the end of the experiment. The mice were killed and the number of lung metastatic nodules determined.

Results. Peroral application of Polyerga™ was effective in reducing the number of experimental lung metastases. Even the smallest dose (0.05 mg/kg, 100-fold lower than the dose used in human practice) had a statistically significant effect ($p=0.042$). By increasing the dose of Polyerga™, its effectiveness was more pronounced. The dose of 5.0 mg/kg was as effective as a 100-fold higher dose, and was chosen for further experiments in combination with cyclophosphamide. Mice treated with the combined therapy were without tumor or the number of metastases was significantly reduced ($p<0.001$).

Conclusion. Polyerga™ preparation is active against tumor metastases, particularly if combined with the standard chemotherapy.

Key words: *mammary neoplasms, experimental; metastasis; peptides; therapy*

Received: March 14, 1997
Accepted: July 16, 1997

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