[Antitumor effect of MMC mixed in Beriplast P]. [Japanese]

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Publication Date: 1995

Abstract:

We attempted to mix an anticancer drug. MMC, with a fibrinogen preparation, Beriplast P (B. P.). First, we examined how MMC was gradually released from its mixture. As the result, its release depended on the MMC concentration in B. P., and the release rate of 1.0 mg MMC from 100 microliters B. P. was 1.6 mg/30 min. Second, we examined the safety of the conjugated drug for normal tissue, because MMC is one of anticancer drugs causing serious damage to normal tissue. When the conjugation of 100 microliters B. P. and below 1.6 mg MMC was coated within one square centimeter, the drug was safe for the endothelium of artery and vein, and the intestinal wall. Third, we attempted an experiment on both the antitumor effect and the role of survival prolongation of the conjugated drug in a mouse carrying a malignant tumor. MMC conjugated with Beriplast P had a highly antitumor effect, which caused necrosis in the cancer cells in unstable conditions. Also, its conjugation drug could inhibit the growth of cancer cells in stable conditions, and prolonged the survival period. From these results, the mixture of MMC and B. P. was found to possess an MMC releasing effect, was safe for normal tissues, and showed high antitumor effect with prolongation of the survival period.