

Effect of hemostatics used during operations for digestive organ on cancer cells present in the peritoneal cavity.

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Abstract:

We investigated effects of hemostatics used during operations for digestive organ on cancer cells present in the peritoneal cavity using BALB/c mice inoculated with Meth A tumor cells (fibrosarcoma) intraperitoneally (i.p.) and C3H/He mice inoculated with MH134 tumor cell (hepatic cell carcinoma) i.p. Microfibrillar collagen hemostat (Avitene) or fibrinogen preparation (Beriplast P) did not affect survivals of those tumor-bearing mice. Gelatin sponge (Spongel) prolonged survivals of MH134 tumor-bearing mice. Liquid form gelatin used instead of Spongel displayed in vitro antitumor effect on MH134 tumor cells at the concentration of 15 mg/ml. Radioactive sodium chromate-labeled MH134 and Meth A tumor cells were not lysed when they were incubated with 15 mg/ml of liquid form gelatin for 24 hours. On the other hand, the tritium thymidine (³H-TdR) uptake by MH134 or RL 1 tumor cells was suppressed when they were incubated with 15 mg/ml of liquid form gelatin for 24 hours. Proliferation of Meth A tumor cells were not affected by the treatment. Effect of liquid form gelatin on phytohemagglutinin (PHA)-stimulated spleen cells as a benign counter-part of RL 1 tumor cells (T cell lymphoma) was examined. Liquid form gelatin (15 mg/ml) did not suppress ³H-TdR uptake by PHA-stimulated spleen cells.