

題名:Evaluation of Multi-Target Liposomal Drugs for the Treatment of Gastric Cancer

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摘要:We studied the effects of multi- and single-target liposomal drugs on human gastric cancer cell AGS both in vitro and in vivo. The cytotoxic effect of dihydrotanshinone I was significantly enhanced by treatment with octreotide-polyethylene glycol(PEG)-liposome, Arg-Gly-Asp(RGD)-PEG-liposome, and RGD/octreotide-PEG-liposome encapsulated with 0.5 mug/ml of dihydrotanshinone I to AGS cell for 24 h, compared to control. Furthermore, the AGS cell survival rate for multi-target versus single target liposomal drugs was significantly suppressed. Microscopic examination revealed that significant cell death occurred in the multi- and single-target liposomal encapsulated drug groups. Significant suppression of tumor growth in AGS cell xenograft nude mice given octreotide-PEG-liposome, RGD/octreotide-PEG-liposome encapsulated drug, versus those given a free drug was noted after 13 d of experimentation with the multi-targeted liposome: up to 60.75% and 41.2% reduction of tumor volume as compared to dimethylsulfoxide (DMSO) control and the free drug groups respectively. The treated animals showed no gross signs of toxicity. The results have potential clinical application.