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Evaluation of anti-cancer activity of survivin siRNA delivered by polyethylene-glycol liposomes in k562-bearing xenograft

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Abstract

This study is to investigate anti-cancer activity of the novel survivin siRNA polyethylene-glycol (PEG) liposomes in K562-bearing nude mice. The leukemia cell line K562 xenograft model was established in balb/c nu/nu mice, and survivin siRNA PEG liposomes was administrated by intraperitoneal (i.p.). The same volume of liposomes was administrated as placebo control. The real-time PCR and western blotting were used to examine the knocking down effect. The tumor weight and size in nude mice was measured to evaluate the inhibitory effect *in vivo*. As results, the expression ratio of survivin mRNA in siRNA group was 0.35±0.1 (survivin/GAPDH) versus 1.85±0.65 in control group with significant difference ($P<0.05$), as well as protein level by western blotting analysis ($p<0.05$). The results also showed the novel survivin siRNA liposomes could inhibit the growth of K562 in xenograft model. Our study suggests the novel survivin siRNA PEG liposome delivery system may be a potential gene therapy for the treatment of leukemia.

Biography

Suoqin Tang has completed his M.D. at the age of 28 from The Fourth Medical University in Xian, China, which is famous for The Terra Cotta Warriors, and postdoctoral studies from Children's Hospital Los Angeles, USC School of Medicine. He is the deputy head, Department of Pediatrics, Chinese Army General Hospital, has published 7 papers outside China and 56 papers in China, he is the standing member of Chinese Pediatric Society, and member of Chinese Pharmacopoeia Commission, as well as an editorial board member of Chinese Journal of Pediatrics.