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The Tissue Distribution and Pharmacokinetics of Long-Circulating β-Elemene Liposomes in Mice

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***SUMMARY*. The aim of this research was to prepare β-elemene long-circulating liposomes and understand the distribution, elimination, and localization profile of β-elemene in mice tissues. Beta-elemene long-circulating liposome was prepared by ethanol injection method. Gas chromatography (GC) was established to determine the concentration of β-elemene in rat plasma and tissues (heart, liver, spleen, lungs, kidneys, intestine and brain) after intravenous injection of β-elemene long-circulating liposome and conventional liposomes, respectively. The α, $T_{1/2\beta}$, K12, and AUC of β-elemene long-circulating liposome groups were higher compared with conventional liposomes, and the $T_{1/2\alpha}$, Vc, CL, and K10 of the latter were lower; β-elemene long-circulating liposomes were distributed mainly in liver, spleen and lungs, which could reduce the accumulation in the heart. The results indicate that β-elemene long-circulating liposome is a controlled long-efficient formulation and the cardiotoxicity was reduced.**

KEY WORDS: β-elemene, GC, Long-circulating liposomes, PEG2000, Pharmacokinetic, Tissue distribution.

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