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熊果酸醇质体的制备和体外透皮研究

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中文摘要:目的: 制备熊果酸醇质体并考察醇质体作为熊果酸经皮给药载体的渗透特性。 方法: 采用乙醇注入法制备熊果酸醇质体,并对其形态及粒径进行分析;采用TP-3型透皮扩散实验仪进行体外透皮吸收试验,比较熊果酸10%异丙醇溶液、熊果酸醇质体、熊果酸脂质体的经皮累积渗透量和渗透速率。 结果: 此方法制得的醇质体平均包封率为(95.83±0.86)%,平均粒径为(87.5±7.5) nm,Zata电位为-(38.4±3.6) mV。醇质体12 h的累积透过量为146.49 μg·cm^{-2},12 h的渗透速率为12.17 μg·cm^{-2}·h^{-1}。 结论: 醇质体包封率高,稳定性好,可显著促进熊果酸的透皮吸收。

中文关键词:熊果酸 醇质体 体外透皮

Preparation and transdermal diffusion of ursolic acid ethosomes

Abstract: Objective : To prepare ursolic acid ethosomes and investigate the penetration characteristics of ursolic ethosomes as a transdermal vehicle. Method: Ursolic acid ethosomes were prepared by injection method, and the shape and particle size of the ethosomes were analyzed. Ursolic acid permeation tests *in vitro* through the skin of rats were performed in TP-3 diffusion cell. The accumulated permeation amounts of ursolic acid 10% isopropanol solution, ursolic acid liposomes, ursolic acid ethosomes were compared. Result: The average encapsulation percentage, particle size, and Zeta potential of the ethosomes were (95.83±0.86)%, (87.5±7.5) nm and -(38.4±3.6) mV, respectively. The accumulated permeation amount of the ethosomes in 12 h was 146.49 μg·cm^{-2}, and its transdermal permeability in 12 h was 12.17 μg·cm^{-2}·h^{-1}. Conclusion: The encapsulation percentage of the ethosomes is good, and the stability of the ursolic acid ethosomes is fine. Ethosomes can significantly enhance the diffusion rate of ursolic acid through the skin of rats.

keywords:ursolic acid ethosomes transdermal diffusion *in vitro*

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