

mean diameters of compound liposome were (123.1±1.8) nm and its Pdl was below 0.20 and its Zeta potential was (-24.3±0.51) mV.

The entrapment efficiency is the most important indicator to evaluate the quality of liposomal preparations, and whether it can play the most efficient and low toxicity characteristics of common preparations. In this study, the dextran gel method was used to determine the entrapment efficiency, which could effectively separate the compound liposomes and free drugs. This method is convenient, fast, easy to operate, reproducible, and more suitable for quality control in the production process.

Particle size and its distribution are important indicators that affect the targeting, physical stability and clinical safety of liposomes. Therefore, it is one of the key factors in the quality control of liposomes. In this study, the particle size and distribution of the composite liposomes were measured by the particle size analyzer. The results showed that the particle size was uniform and normal distribution.

In this study, two kinds of anti-tumor drugs DMY and CPT-11 were encapsulated in liposome delivery system to prepare compound liposomes. The preparation process was simple and feasible, reproducible and high encapsulation efficiency.

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### RESEARCH PROGRESS OF JAUNDICE AND RELATED ANIMAL MODELS

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**Abstract:** Jaundice can be seen in the development of a variety of diseases, due to the lack of ideal animal model, limiting the treatment of jaundice. In this paper, we reviewed the literature of jaundice and related diseases model in recent years, it includes hepatocellular jaundice, cholestatic jaundice and jaundice syndrome in traditional Chinese medicine(TCM). To analyze the mechanism and effect of the model, which can provide some basis for the study, prevention and cure of traditional Chinese medicine.

**Key words:** liver injury, cholestasis, jaundice syndrome, animal model

**1. Introduction** Jaundice (hyperbilirubinemia) is a common clinical disease, hemolysis and liver damage weakened liver cell uptake and bilirubin exclusion, leading to increased levels of bilirubin in the blood, manifested as skin, sclera and mucous membranes yellowish discoloration. Jaundice is a challenging disease that requires a reasonable and highly recognized jaundice animal model in-depth study to make further progress in diagnosis and treatment. So, establish a jaundice animal model similar with the human disease can improve the evaluation system of treatment of jaundice syndrome to achieve a better therapeutic effect.

**2. Hepatocellular jaundice model** Lipopolysaccharide (LPS) is a major component of the outer membrane of Gram-negative bacteria. Lipid A is a toxic and bioactive centre that produces a more durable and extensive immune injury to the liver[1]. The application of LPS has been recognized by the world as a highly repeatable model. Xinyan Peng intraperitoneal injection of LPS(4mg/kg) in mice, blood and liver tissue were collected after 8 hours. The level of serum ALT and AST was significantly increased. Pathology revealed the liver injury, liver cell necrosis, bleeding and inflammatory cell infiltration. The pathological basis of acute liver injury induced by CCl<sub>4</sub> is free radical production and lipid peroxidation. Sumaira Sahreen established liver fibrosis model by intraperitoneal injection of CCl<sub>4</sub> (0.5 ml/kg) olive oil solution twice a week for 8 weeks. D-galactosamine (D-GalN) can induce toxic liver injury model, and liver histopathological changes similar to human viral hepatitis. This is a classic animal model for the pathogenesis of viral hepatitis. Hui sun established the rat model of acute hepatitis by interaperitoneal injection of D-GalN (400mg/kg) , to find out the metabolic mechanism and special biomarkers of hepatitis rats[2]. In addition to the above drugs, aflatoxin, acetaminophen (APAP) and cyclosporine A were also used to establish animal models of chemical or drug-induced liver injury.

**3. Cholestatic jaundice model** α-Naphthalene isothiocyanate (ANIT) is a non-hereditary toxic drug that can induced the release of high concentrations of bile acids into the liver leading to liver injury[3], ANIT has the advantage of low carcinogenicity compared with other genotoxic drugs and can be widely used in rodent simulations of human intrahepatic cholestasis. Chlorpromazine is the main drug for the treatment of mental illness, its liver toxicity can not be ignored, it can inhibit the flow of bile in the body[4]. Qiaoling Yang was injected intraperitoneally with chlorpromazine (75mg/kg) to make rat cholestasis model. Serum biochemical markers and pathology showed that the model was successfully replicated. Obstructive jaundice is easy to form cholestasis, endotoxemia, lipid peroxidation, inflam-

matory cytokines. Therefore, secondary injury to the liver and other organs. Carmen G. Tag was used to establish the bile duct ligation to induced inflammatory liver injury and fibrosis in obstructive cholestasis.

4. Animal model of jaundice syndrome in TCM According to the theory of traditional Chinese medicine, it is divided into yinhuang model and yanghuang model. Heng Fang oral administration ginger extract and ethanol solution every day for 14 days, 15-16 days oral administration ANIT olive oil solution to establish yanghuang model with mice. Xin Tong combined with the method of jaundice model, the rats in the model group were treated with rhubarb decoction, ethanol and ANIT to create the yinhuang model. Changes in biochemical indicators and histological observation are consistent with the characteristics of jaundice, And with the treatment of Yin Chen Si Ni Decoction to prove that the model was established and reliable.

5. Discussion Finally, the comparison of various types of jaundice model method found that modern medicine establish animal models by pathological method, it's hard to explain the real mechanism. Making some models and human pathogenesis does not match. There are many interference factors in the modeling process, which leads to poor stability and reproducibility of the model. So, it is very important to establish and adopt a reasonable animal model in the study of jaundice.

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### **SIFENG POINTS ACUPUNCTURE IN THE TREATMENT OF INFANTILE MALNUTRITION 60 CASES OF CLINICAL OBSERVATION**

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**Abstract** Objective: To observe sifeng points acupuncture clinical curative effect for the treatment of infantile malnutrition product. Methods: 60 cases of children with malnutrition product were given sifeng points acupuncture treatment with 2 times per week and 4 weeks for a course of treatment. Results: The total effective rate was 91.7%. Conclusion: Sifeng points acupuncture treatment of infantile malnutrition product efficacy. The method is simple, and quick effect, no side effects.

**Key words:** sifeng points; malnutrition product; acupuncture; external treatment; children

Infantile malnutrition western medicine called "chronic nutritional disorder", good hair at 1~5 years children. Usually refers to pediatric sallow and emaciated, thinning hair, abdominal swelling, green root exposure, or abdomen sunken boat, diet, abnormal a disease. At present, infantile malnutrition is still one of the four serious illness card for pediatric clinical, threatening the healthy growth of infants and young children. Of modern medicine in the treatment of infantile malnutrition syndrome mainly adjust the diet structure, added a variety of digestive enzymes, vitamins, trace elements, such as symptomatic treatment, there is no specific drug therapy. [1] The author use knead ridge with sifeng points acupuncture treatment of infantile malnutrition, achieved a certain effect, the results reported as follows.

**Objective** To observe sifeng points acupuncture clinical curative effect for the treatment of infantile malnutrition product.

**Materials and methods** Watch cases, a total of 60 cases are all the first hospital affiliated to heilongjiang university of Chinese medicine treating pediatric clinic patients. They include 37 cases of male and 23 cases of female. Age 1~6 years of age, course of 3~12 months. Then we give sifeng points acupuncture treatment to them. Sifeng points in the palm of your hand index finger, middle finger, ring finger and little finger refers to the section in the cherry blossom grain center, after local disinfection, with 1 sterile needles prick or stab 0.1 inch, not retaining needle, and then pull out, yellowish-white transparent liquid, with a dry sterile cotton. 2 times per week, 4 weeks for 1 course of treatment.

**Results and discussion** After 1 course of treatment, sick children were cured 36 cases. 12 cases were markedly effective, 7 cases of effective .5 cases were not cured. The total effective rate was 91.7%. And they did not appear side effects.

Infantile malnutrition due to dishonor, omnivorous diet more disorderly throw or disturbance factors such as long illness, spleen and stomach function is impaired, fluid loss, cannot kill water, heat production in delay time stagnant. Sifeng points are the singular point, also are three Yin meridians of hand, too. Acupuncture sifeng points, with spleen appetizer, antipyretic except vexed, unobstructed lotaustralin, mediate effect of the zang-fu organs. Studies have found that sifeng points acupuncture can increase the body's absorption of nutrients, and promoted the formation of red blood cells and hemoglobin to benefit qi and blood, the purpose of improving symptoms [2].