

论文

几种国产光敏剂的光动力学效应、皮肤光敏副反应及毒性的比较研究

王耐勤;于刚;梁亚云;叶爱莲;张燕;袁启忠

北京市肿瘤防治研究所; *北京市制药工业研究所

摘要:

本文选用六项指标对国产3种光敏剂HPS、LF-019和Y-HPD与美国产的Photofrin II进行了光动力学效应、皮肤光敏副反应及毒性的比较研究。结果表明国产三种光敏剂光敏效应的主要指标均比Photofrin II强。在三种光敏剂中,以Y-HPD的作用最好,除光敏副反应比HPS和LF 019明显外,‘从其它五项指标观察,如Y-HPD加照光对MGC-803细胞的杀伤作用,对L₆₁₅小鼠存活时间的影响;对L₁₂₁₀细胞核酸生物合成的影响;Y-HPD在L₁₂₁₀细胞内的含量,以及小鼠的LD₅₀,Y-HPD均比HPS和LF-019强。

关键词: 光敏剂 光动力学效应 耳或皮指数 血卟啉 光卟啉 II

A COMPARATIVE STUDY ON THE PHOTODYNAMIC EFFECT, PHOTSENSITIVE SIDE ACTION AND TOXICITY OF SEVERAL CHINA-MADE PHOTSENSITIZERS

WANG Nai-Qin; YU Gang and LIANG Ya-Yun YE Ai-Lian; ZHANG Yan and YUAN Qi-Zhong

Abstract:

In this paper, the photodynamic effect, photosensitive side action and acute toxicity of three China-made new hematoporphyrin derivatives, HPS, LF-019 and Y-HPD were compared with those of America-made photofrin II. The experimental method included: (1) the killing effect of photosensitizer plus exposure to light on MGC-803 cells, (2) the survival time of mice that received L₆₁₅ cells pretreated with photosensitizer and light, (3)the inhibitory effect on ³H-Td R or ³H-UR incorporated into DNA or RNA, (4) the uptake and storage of photosensitizers in L₁₂₁₀ cells, (5) the ear index and skin index that showed skin photosensitive side action and (6) the LD₅₀ in mice.The results showed that the photodynamic effect of the three China-made photosensitizers was more potent than that of photofrin II. In the three China-made photosensitizers, except for the skin photosensitive side action, Y-HPD was more potent than HPS or LF-019 on the killing effect of MGC-803 cells, the survival time of L₆₁₅ mice, the inhibitory effect of nucleic acid biosynthesis and the content of photosensitizers in L₁₂₁₀ cells. The acute toxicity of Y-HPD was lower than that of other photosensitizers.

Keywords: Photodynamic effect Ear and skin index Hematoporphyrins Photofrin II Photosensitizers

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