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论文

大蒜油对环磷酰胺化疗小鼠白细胞减少症的预防作用

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摘要：

目的 探讨大蒜油 (GO) 对环磷酰胺（CP）化疗荷瘤小鼠白细胞减少症的预防作用。方法 60只昆明小鼠随机分为荷瘤模型组（Model组）、CP组、25μg/g GO+CP组（GO1+CP组）和50μg/g GO+CP组（GO2+CP组），共4组。右侧腋窝下接种H22瘤细胞，连续给药13d 。观测体质量、瘤重、脾重、脾结节计数、外周血象、骨髓DNA含量、骨髓有核细胞计数及骨髓嗜多染红细胞微核率变化。结果 与Model组相比，CP组瘤重减少60.5%（P<0.05），白细胞计数降低65.9%（P<0.05），脾脏指数、脾结节计数、骨髓DNA含量、骨髓有核细胞计数分别降低了34.8%，63.1%，50.1%，64.3%（P<0.05），骨髓微核率升高到40.2‰（P<0.05）。GO1+CP组和GO2+CP组抑瘤率分别为58.1%、62.0%，与CP组差异无统计学意义（P>0.05）。与CP组比较，GO2+CP组白细胞计数显著增加（P<0.05），脾脏指数、脾结节计数、骨髓DNA含量、骨髓有核细胞计数分别升高了60.0%，161.3%，39.7%，140%（P<0.05），其骨髓微核率降低至28.6‰（P<0.05）。结论 大蒜油在保证环磷酰胺抑瘤作用下，可明显减轻白细胞减少症等化疗副作用。

关键词： 大蒜油；环磷酰胺；H22；化疗；小鼠

Preventive effect of garlic oil on cyclophosphamide-induced leukopenia in tumor-bearing mice

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Abstract:

Objective To observe the preventive effect of Garlic oil（GO） on H22 tumor bearing mice in conjuction with cyclophosphamide（CP） chemotherapy. Methods 60 mice were randomized into four groups: tumor model, CP group, 25μg/g GO +CP and 50μg/g GO+CP group. Each mouse was inoculated with Hepatoma 22 cells subcutaneously at the right armpit, followed by 13 days of GO administration. Mice were sacrificed by cervical dislocation, and then tumor mass and spleens were dissected and weighted. In addition, WBC, spleen index, spleen nodes count, the contents of DNA and Nucleated marrow cells (NMC) in bone marrow, bone marrow micronucleus were detected. Results Compared with the tumor model, the tumor mass of CP group decreased by 60.5%, while WBC, spleen index, spleen nodes count, the contents of DNA in bone marrow and NMC were lowered by 65.9%, 34.8%, 63.1%, 50.1%, 64.3%（P<0.05）, respectively. Compared with the CP group, 50μg/g GO caused a tumor inhibiting rate of 62.0%(P>0.05), and increased WBC, spleen index, spleen nodes count, the content of DNA and NMC（P<0.05）. Conclusions Garlic oil can attenuate the leukopenia induced by CP on tumor-bearing mice without influencing its anti-tumor activity.

Keywords: Garlic oil; Cyclophosphamide; H22; Chemotherapy; Mouse

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