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麝香及西黄方中麝香酮在正常、乳腺癌癌前病变大鼠体内药动学的比较

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摘要:目的 比较麝香及西黄方中麝香酮在正常、乳腺癌癌前病变大鼠体内药动学。方法 7, 12-二甲基苯并蒽 (DMBA) 联合雌激素、孕激素建立大鼠乳腺癌癌前病变模型。大鼠随机分为麝香组、西黄方正常组、西黄方模型组, 灌胃给药 (含 2.73 mg/kg 麝香酮) 30 d, 于 0.083、0.25、0.5、1、1.5、2、4、6、8、24 h 采血, GC-MS 法测定麝香酮血药浓度, 计算主要药动学参数。结果 与麝香组比较, 西黄方正常组 AUC_{0-t} 、 $AUC_{0-\infty}$ 、 MRT_{0-t} 、 $MRT_{0-\infty}$ 、 $t_{1/2\alpha}$ 升高 ($P<0.01$), CL_z/F 降低 ($P<0.05$); 与西黄方正常组比较, 西黄方模型组 AUC_{0-t} 、 $AUC_{0-\infty}$ 、 MRT_{0-t} 升高 ($P<0.05$), CL_z/F 降低 ($P<0.05$)。结论 西黄方中麝香酮生物利用度高于麝香中, 体现了复方配伍的协同作用。在乳腺癌癌前病变大鼠中, 麝香酮消除减慢, 体内作用时间延长。
关键词: 麝香; 西黄方; 麝香酮; 乳腺癌癌前病变; 体内药动学; GC-MS
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Comparison of *in vivo* pharmacokinetics of muscone from *Moschus* and Xihuang

Decoction in normal rats and rats with precancerous lesions of breast cancer

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ABSTRACT: **AIM** To compare the *in vivo* pharmacokinetics of muscone from *Moschus* and Xihuang Decoction in normal rats and rats with precancerous lesions of breast cancer. **METHODS** The rat models of precancerous lesions of breast cancer were established by 7, 12-dimethyl-benzoanthracene (DMBA) combined with estrogen and progesterone. Rats were randomly assigned into *Moschus* group, Xihuang Decoction normal group, Xihuang Decoction model group and given intragastric administration (containing 2.73 mg/kg muscone) for 30 d, after which blood collection was performed at 0.083, 0.25, 0.5, 1, 1.5, 2, 4, 6, 8, 24 h, GC-MS was adopted in the plasma concentration determination of muscone, and main pharmacokinetic parameters were calculated. **RESULTS** Compared with the *Moschus* group, the Xihuang Decoction normal group demonstrated increased AUC_{0-t} , $AUC_{0-\infty}$, MRT_{0-t} , $MRT_{0-\infty}$, $t_{1/2\alpha}$ ($P<0.01$) and decreased CL_z/F ($P<0.05$). Compared with the Xihuang Decoction normal group, the Xihuang Decoction model group displayed increased AUC_{0-t} , $AUC_{0-\infty}$, MRT_{0-t} ($P<0.05$) and decreased CL_z/F ($P<0.05$). **CONCLUSION** The bioavailability of muscone in Xihuang Decoction is higher than that in *Moschus*, exhibiting the synergistic effect of compound compatibility. In the rats with precancerous lesions of breast cancer, muscone shows slowed down elimination and prolonged *in vivo* action time.
KEY WORDS: *Moschus*; Xihuang Decoction; muscone; precancerous lesions of breast cancer; *in vivo* pharmacokinetics; GC-MS

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