

论著

碳酸锂对抗AFB1诱导大鼠肝癌过程中MDA、4-HNE的表达及意义

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摘要 背景与目的: 采用免疫组化法检测碳酸锂(Li₂CO₃)对抗黄曲霉素B₁(Aflatoxin B₁,AFB₁)诱导大鼠肝癌过程中丙二醛(Malondialdehyde,MDA)、4-羟壬烯醛(4-hydroxynonenal,4-HNE)的表达情况,探讨Li₂CO₃的抗癌作用及其机制。材料与方法: 144只Wistar大鼠随机分为A、B、C、D 4组,分别为阴性、阳性对照及Li₂CO₃同时给药和Li₂CO₃先期给药组。于实验第6、9、10周分批断头处死动物,取动物的肝脏进行肝组织形态学检查及免疫组织化学染色。结果: C、D两组动物健康状况明显改善,肝癌前病变程度明显减轻; MDA、4-HNE在诱癌早期(实验第6周)即有表达,第10周显著增高,并呈B组>C组>D组>A组的趋势。结论: Li₂CO₃具有明显地对抗和抑制化学诱导肝癌过程中的脂质过氧化(Lipid peroxidation,LPO)作用;免疫组化法检测MDA、4-HNE可敏感而特异的反映机体氧化损伤程度,有助于肝癌的早期发现及病变进展的动态观察。

关键词 [丙二醛](#); [4-羟壬烯醛](#); [碳酸锂](#); [大鼠肝脏](#); [癌前病变](#)

Expression of MDA and 4-HNE in AFB₁-Induced Rat Hepatic Putative reneoplastic Lesions Alleviated by Li₂CO₃ and Their Significance

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Abstract **BACKGROUND & AIM:** In order to observe the anti-carcinoma use of lithium carbonate(Li₂CO₃) and it's mechanism, the histopathological change and the expression of malondialdehyde (MDA) and 4-hydroxynonenal(4-HNE)protein in Aflatoxin B₁ (AFB₁)-induced rat hepatic putative preneoplastic lesions alleviated by lithium carbonate(Li₂CO₃). **MATERIAL AND METHODS:** One hundred and forty-four healthy Wistar rats (155~175 g) were divided randomly into four groups: normal control group (group A), positive control group (group B), group treated with Li₂CO₃ simultaneously (group C), group pre-treated with Li₂CO₃ (group D). The rats were killed in batches in the 6th, 9th or 10th week of the experiment. Histopathological and immunohistochemical assay of MDA and 4-HNE protein was made on hepatic. **RESULTS:** The condition of rats was significantly improved in Group C and Group D, so do the severity of preneoplasm. Coinciding with the histopathological discoveries, a tendency of "Group B>Group C>Group D>Group A" could be found in observation of MDA and 4-HNE protein expressive, which occurred in the early stage (the 6th week) and significantly increased in the 10 th week. **CONCLUSION:** It suggested that Li₂CO₃ has obvious against or restrain lipid peroxidation effect on hepatoma induced by chemicals. The immunohistochemistry assay of MDA and 4-HNE can be used as a sensitive and specialize method to reflect oxidative damage, and it may help early finding and monitoring of hepatoma.

Keywords [malondialdehyde](#) [4-hydroxynonenal](#) [Li₂CO₃](#) [rat hepatic](#) [preneoplastic lesion](#)

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