药学学报 1994, 29(11) 801-808 DOI: ISSN: CN:

论文

氧自由基致体外培养血管内皮细胞的损伤及人参皂甙的保护作用

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摘要：

比较了酶学(黄嘌呤-黄嘌呤氧化酶)法、化学(cu^{2+} -抗坏血酸)法和电解法产生外源性氧自由基致体外培养血管内皮细胞的损伤，观察人参皂甙的保护作用。结果表明以酶学法最稳定，适用于氧自由基损伤内皮细胞模型的建立。人参皂甙(40 $ug\cdot ml^{-1}$)可降低MDA含量，减轻细胞损伤。提示人参皂甙可能具有保护血管内皮细胞受损的作用。

关键词： 血管内皮细胞；氧自由基；人参皂甙；前列环素；化学发光；脂质过氧化

PROTECTIVE EFFECTS OF GINSENOSIDES ON OXYGEN FREE RADICAL INDUCED DAMAGES OF CULTURED VASCULAR ENDOTHELIAL CELLS *IN VITRO*

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Abstract:

In this study. calf aortic endothelial cells(ECs) were cultured *in vitro* to study the ECs damages induced by exogenous oxygen free radical(OFR)，and the protective effects of ginseno- sides. Exogenous OFR was generated by three methods：enzyme reaction(xanthine—xanthine oxidase)，chemical reaction (Cu^{2+}-ascorbate)and electrolysis. The experimental results indicated that the xanthine--xanthine oxidase method is most suitable for the study of free radical mediated ECs damages. Addition of ginsenosides(40 $ul\cdot ml^{-1}$)reduced the concentration of MDA in the cultured ECs. while the 6-keto-PGF_{1a} content in the medium was reduced($P>0.05$)and the morphologic damages of the ECs was alleviated. It is concluded that ginsenosides exerted a protective effects on ECs damages against lipid peroxidation，and ginsenosides might play an important role in antiatherosclerosis through its protective effect on endothelial cells.

Keywords: Vascular endothelial cell；Oxygen free radical；Ginsenoside；Prostacyclin；Chemiluminescences；Lipid peroxidation

收稿日期 1993-09-30 修回日期 网络版发布日期

DOI:

基金项目:

通讯作者:

作者简介:

参考文献：

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