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论著

PPARα配体对肌细胞的毒性作用研究

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摘要 背景与目的： 探讨过氧化物酶体增殖物激活受体α(peroxisome proliferators-activated receptor α, PPARα)配体类降脂药物对人骨骼肌细胞的影响。 材料与方法： WST-1法测定苯扎贝特及与阿托伐他汀联合应用时对人横纹肌肉瘤(RD)细胞的毒性作用；全自动生化分析仪测定不同浓度的苯扎贝特及与阿托伐他汀联合作用RD细胞，细胞中乳酸脱氢酶(LDH)和肌酸激酶(CK)活性；Hoechest 33342染色法观察细胞凋亡的形态学改变。 结果：苯扎贝特明显抑制RD细胞生长，明显降低CK活性，并引起细胞凋亡的典型变化，呈剂量-效应和时间-效应关系，与阿托伐他汀联合应用时对RD细胞的作用增强。 结论： 苯扎贝特作为PPARα配体对RD细胞具有明显的细胞毒性作用，与他汀类合用时细胞毒性增强。

关键词 过氧化物酶体增殖物激活受体α； 贝特类； 肌病

Myotoxic Effects of Peroxisome Proliferators-activated Receptor β Ligand on Skeletal Muscle Cells

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Abstract BACKGROUND AND AIM: To investigate the effects of lipid-lowering drugs such as peroxisome proliferators-activated receptor α (PPARα) ligands on human skeletal muscle cells. MATERIALS AND METHODS: WST-1 assay was applied to determine the cytotoxicity of benzafibrate and atorvastatin to human embryo rhabdomyosarcoma (RD) cells. Enzymatic activities of lactate dehydrogenase (LDH) and creatine kinase (CK) were measured by automatic biochemistry analyzer and Hoechest 33342 staining was used to assess apoptosis. RESULTS: Bezafibrate markedly inhibited the proliferation of RD cells, reduced CK activity and caused apoptosis in a dose- and time-dependent manner. Toxicity was enhanced in the co-administration of benzafibrate with atorvastatin. CONCLUSION: Benzafibrate as a PPARα ligand induced obvious cytotoxicity on RD cells and demonstrated synergistic interaction with atorvastain.

Keywords peroxisome proliferators-activated receptor α fibrates myopathy

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