

论著

成都地区中老年人高脂血症患者血清HDL亚类组成的研究

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摘要 目的: 探讨中老年人高脂血症患者血清HDL亚类组成和相对百分含量的变化及其与血脂水平的关系。方法: 采用双向电泳-免疫印迹检测法按年龄分层分析了172例中老年人高脂血症患者及115例正常中老年对照血清HDL亚类组成及相对百分含量。结果: 中老年人高脂血症患者血清中小颗粒的pre β 1-HDL、HDL3b、HDL3a含量显著高于对照组 ($P < 0.01$ 或 $P < 0.05$), 而大颗粒的HDL2b含量显著低于对照组 ($P < 0.01$); 正常健康中老年人发现随着年龄的增长, pre β 1-HDL有逐渐升高的趋势, HDL2b有降低的趋势, 中老年高脂血症患者及正常对照, 各年龄组中均可见男性pre β 1-HDL含量显著高于女性 ($P < 0.05$), HDL2b含量显著低于女性 ($P < 0.05$)。此外, 相关分析发现中老年人高脂血症组小颗粒的pre β 1-HDL含量与患者血清TG、TC、apoB100、apoC II、apoCIII、apoE水平及TG/HDL-C比值呈显著正相关 ($r = 0.432$; $r = 0.243$; $r = 0.341$; $r = 0.259$; $r = 0.335$; $r = 0.308$ 及 $r = 0.453$, $P < 0.05$ 或 $P < 0.01$), 与HDL-C水平呈显著负相关 ($r = -0.167$, $P < 0.05$); 与此相反, 大颗粒的HDL2b水平与TG、TC、apoC II、apoCIII、apoE水平及TG/HDC比值呈显著负相关 ($r = -0.296$; $r = -0.156$; $r = -0.182$; $r = -0.216$; $r = -0.203$ 及 $r = -0.313$, $P < 0.05$ 或 $P < 0.01$), 而与HDL-C水平呈显著正相关 ($r = 0.124$, $P < 0.05$)。结论: 中老年人高脂血症患者血清HDL亚类颗粒呈变小趋势, 且男性HDL颗粒较女性小, 中老年高脂血症患者胆固醇逆向转运过程可能减弱。

关键词 [脂蛋白类,HDL](#); [中年人](#); [老年人](#); [高脂血症](#); [动脉硬化](#); [冠状动脉疾病](#)

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Subclasses of serum HDL in middle and old aged patients with hyperlipidemia in Chengdu City

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Abstract

AIM: To detect the change of composition and ratio of serum HDL subclasses and explore the relationship between these changes and the plasma lipid level in patients with hyperlipidemia. METHODS: The components of subclasses of serum HDL in 172 middle and old aged patients with hyperlipidemia and 115 healthy middle and old aged were determined by dimensional gel electrophoresis associated with immuno-blotting method. RESULTS: Compared to the healthy controls, the contents of pre β 1-HDL, HDL3b and HDL3a were significantly higher ($P < 0.05$ or $P < 0.01$), while that of HDL2b was significantly lower ($P < 0.01$) in middle and old aged patients with hyperlipidemia. The content of pre β 1-HDL increased with age in healthy controls, whereas the HDL2b decreased. The content of pre β 1-HDL was significantly higher ($P < 0.05$), while the HDL2b ($P < 0.05$) was significantly lower in men than in women in patients with hyperlipidemia and the healthy controls. In middle and old aged patients with hyperlipidemia, the content of pre β 1-HDL was positively correlated with the serum TG, TC, apoB100, apoC II, apoCIII, apoE and TG/HDL-C ($r = 0.432$; $r = 0.243$; $r = 0.341$; $r = 0.259$; $r = 0.335$; $r = 0.308$ and $r = 0.453$, $P < 0.05$ or $P < 0.01$), while it was negatively correlated with HDL-C ($r = -0.167$, $P < 0.05$). The content of HDL2b was negatively correlated with TG, TC, apoC II, apoCIII and TG/HDL-C ($r = -0.296$; $r = -0.156$; $r = -0.182$; $r = -0.216$; $r = -0.203$ and $r = -0.313$, $P < 0.05$ or $P < 0.01$), while it was positively correlated with HDL-C ($r = 0.124$, $P < 0.05$). CONCLUSIONS: The particle of HDL in the middle and old aged patients with hyperlipidemia showed a general shift towards smaller size, which indicated that the reverse cholesterol transport might

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be weakened. Men had smaller HDL particle size than women.

Key words [Lipoproteins HDL](#) [Middle age](#) [Old age](#) [Hyperlipidemia](#) [Arteriosclerosis](#) [Coronary disease](#)

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