

doi: 10.13241/j.cnki.pmb.2014.15.034

不同剂量氟伐他汀对冠心病伴血脂增高患者的临床作用研究

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摘要 目的:观察不同剂量氟伐他汀对冠心病伴血脂增高患者的临床效果及安全性,为临床治疗提供依据。**方法:**选择我院2010年5月~2013年2月收治的96例冠心病伴高脂血症患者并将其进行随机分组,即20 mg及40 mg氟伐他汀治疗组各48例,观察和比较两组的临床疗效及不良反应的发生情况。**结果:**经4周、8周治疗后,两组患者的总胆固醇(TC)、低密度脂蛋白胆固醇(LDL-C)、甘油三酯(TG)的水平均较同组治疗前显著降低,差异均具有统计学意义($P<0.05$);高密度脂蛋白胆固醇(HDL-C)均较同组治疗前明显升高,差异有统计学意义($P<0.05$);40 mg组hs-CRP含量下降,较20 mg组显著,差异明显具有统计学意义($P<0.05$)。

结论:对于冠心病伴血脂增高患者,采用高剂量氟伐他汀进行降脂治疗临床疗效较好,且安全性高,建议推广应用。

关键词:氟伐他汀;冠心病;高脂血症;临床疗效

中图分类号:R541.4 文献标识码:A 文章编号:1673-6273(2014)15-2936-03

Clinical Efficacy of Different Doses of Fluvastatin on Patients with Coronary Heart Disease Combined with Hyperlipidemia

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ABSTRACT Objective: To observe the different doses of fluvastatin on coronary heart disease in patients with elevated blood lipids, clinical efficacy and safety, provide the basis for clinical treatment. **Methods:** The hospital in May 2010–February 2013 period were treated 96 cases of patients with coronary artery disease and hyperlipidemia were randomized, of which 40mg 20 mg group and 48 cases in each group. Respectively, according to each group to give the corresponding lipid-lowering therapy with fluvastatin, compared the clinical efficacy and adverse reactions. **Results:** The two groups of patients after four weeks, eight weeks after treatment, TC, LDL-C, TG levels compared with before treatment significantly reduced, significant differences were statistically significant ($P < 0.05$). The two groups of patients taking fluvastatin treatment for 4 weeks, 8 weeks after HDL-C was significantly higher than that before treatment, the difference was statistically significant ($P < 0.05$). Two groups, 40mg group hs-CRP levels were significantly decreased compared to 20mg, significant differences were statistically significant ($P < 0.05$). **Conclusion:** For patients with coronary artery disease and elevated blood lipids, high doses of fluvastatin for lipid-lowering therapy better clinical efficacy and safety, the proposed application.

Key words: Fluvastatin; Coronary heart disease; Hyperlipidemia; Clinical efficacy

Chinese Library Classification: R541.4 **Document code:** A

Article ID: 1673-6273(2014)15-2936-03

前言

血脂异常是导致动脉粥样硬化与冠心病的重要危险因素之一,将血脂水平控制在理想范围在冠心病一级、二级预防中起重要作用^[1],对降低冠心病发病率,改善患者预后具有重要的临床意义。目前他汀类降脂药是调节血脂的常用药物类别,氟伐他汀是羟甲基戊二酰辅酶A(HMG-COA)还原酶抑制剂类降脂药^[2]。在其临床应用过程中,笔者观察了不同剂量氟伐他汀治疗冠心病合并血脂增高的临床效果及其安全性,具体结果报道如下。

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(收稿日期:2013-11-24 接受日期:2013-12-20)

1 资料与方法

1.1 临床资料

本组共纳入96例,均为我院2010年5月~2013年2月收治的冠心病伴高脂血症患者。其中男56例,女40例;年龄61~78岁,平均年龄(74.5±5.7岁)。所有患者冠心病的诊断符合WHO诊断标准^[3]。病例入选标准:未服用降脂药物或曾服用降脂药物已停服4周以上者,血脂增高符合以下条件:TC≥5.2 mmol/L(200 mg/dL),LDL-C≥3.12 mmol/L(120 mg/dL),TG≥1.70 mmol/L(150 mg/dL);除外有肝、肾等疾患以及内分泌疾患所致的继发性高血脂症。排除急性心梗或合并严重脏器功能不全、恶性肿瘤等严重疾病者;有心脏支架手术者;伴有严重感染等疾病者;对研究药物有严重影响者。将所有患者进行随机分组,其中20 mg组及40 mg组各48例,两组患者的年龄、性别、

病情及一般情况比较差异无显著($P>0.05$),具有可比性。

1.2 方法

治疗前记录所有患者的病史,体格检查、血、尿、便、常规及肝、肾功能、血脂(TC、TG、LDL-C 和 HDL-C)、血糖、12 导联静息心电图,并于服药前 2 周停用其他降脂药物和对血脂代谢有影响药物。所有患者均服用氟伐他汀(北京诺华制药有限公司生产,每片 20 mg),其中 20 mg 组给予氟伐他汀 20 mg 口服,日 1 次;40 mg 组给予氟伐他汀 40 mg,口服,日 1 次,连续服药 12 周。治疗结束后采取患者清晨空腹静脉血,对比观察两组的临床效果。

1.3 疗效评价

冠心病疗效评价依据 WHO 制定的“缺血性心脏病命名及诊断标准”中对冠心病近期疗效评定:胸闷、心悸、气短症状改善疗效评定;胸闷、心悸、气短 7 天内消失为显效;8~14 天

消失或好转为有效;15 天以上未见好转为无效。以显效与有效例数计算临床有效率。高脂血症疗效判定参照心血管药物临床试验评价方法治疗目标值为 TC 小于 4.68 mmol/L, LDL-C 小于 2.60 mmol/L。

1.4 统计学分析

本组数据均应用 SPSS13.0 进行软件分析,采用 χ^2 检验和 t 检验,以 $P<0.05$ 为差异具有统计学意义。

2 结果

2.1 两组的近期疗效比较

治疗后,20 mg 组显效 25 例,有效 14 例,无效 9 例,总有效率 81.25%;40 mg 组显效 28 例,有效 16 例,无效 6 例,总有效率 91.67%。两组近期疗效比较 40 mg 组临床有效率明显高于对照组,差异明显具有统计学意义($P<0.05$)。见表 1。

表 1 两组近期疗效比较 [n,(%)]

Table 1 Comparison of efficacy of two recent [n, (%)]

组别 Group	例数 n	显效 Markedly Effective	有效 Effective	无效 Invalid	总有效率 Total efficiency
20 mg	48	25(52.08)	14(29.17)	9(18.75)	39(81.25)
40 mg	48	28(58.33)	16(33.33)	4(8.33)	44(91.67)

2.2 治疗后两组的血脂水平比较

治疗 4 周、8 周后,两组患者的 TC、LDL-C、TG 水平均较同组治疗前显著降低,差异具有显著统计学意义($P<0.05$);

HDL-C 水平较治疗前明显升高,差异有统计学意义($P<0.05$)。

两组治疗后疗效对比,40mg 组显著优于 20mg 组,差异明显具有统计学意义($P<0.05$)。见表 2。

表 2 两组治疗前后血脂水平的比较

Table 2 Comparison of the blood lipid levels before and after treatment between two groups

组别 Group	例数 n	TC				LDL-C	
		治疗前 Before treatment	治疗 4 周后 4 weeks after treatment	治疗 8 周后 8 weeks after treatment	治疗前 Before treatment	治疗 4 周后 4 weeks after treatment	治疗 8 周后 8 weeks after treatment
			治疗前 Before treatment	治疗 4 周后 4 weeks after treatment		治疗 4 周后 4 weeks after treatment	治疗 8 周后 8 weeks after treatment
20mg	48	6.67± 0.74	5.67± 0.45*	4.73± 0.33*	4.67± 0.52	3.50± 0.29*	2.74± 0.18*
40mg	48	6.58± 0.67	5.11± 0.28*#	4.19± 0.13*#	4.53± 0.45	3.11± 0.22*#	2.27± 0.13*#

组别 Group	例数 n	TC				LDL-C	
		治疗前 Before treatment	治疗 4 周后 4 weeks after treatment	治疗 8 周后 8 weeks after treatment	治疗前 Before treatment	治疗 4 周后 4 weeks after treatment	治疗 8 周后 8 weeks after treatment
			治疗前 Before treatment	治疗 4 周后 4 weeks after treatment		治疗 4 周后 4 weeks after treatment	治疗 8 周后 8 weeks after treatment
20mg 组	48	2.88± 0.19	2.54± 0.37*	2.49± 0.28*	0.92± 0.28	1.03± 0.41*	1.18± 0.44*
40mg 组	48	2.90± 0.31	2.47± 0.32*	2.45± 0.22*	0.87± 0.32	1.24± 0.45*#	1.72± 0.56*#

注:与同组治疗前比较,* $P<0.05$;与 20mg 组治疗后比较,# $P<0.05$

Note: compared with the same group before treatment * $P<0.05$; compared with 20mg group after treatment, # $P<0.05$

2.3 治疗前后两组血清 hs-CRP 含量的比较

治疗前,两组 hs-CRP 含量比较无统计学差异($P>0.05$)。治疗 12 周后,两组 hs-CRP 含量均较治疗前显著下降,差异均具有显著统计学意义($P<0.05$),且 40 mg 组 hs-CRP 含量显著低于 20 mg 组,差异明显具有统计学意义($P<0.05$),见表 3。

2.4 治疗期间两组患者不良反应发生情况的比较

治疗期间,两组患者的肝、肾功能、血常规未见明显改变,

其中 20 mg 组出现 2 例恶心、呕吐,未经治疗服药 1 周自行缓解,40 mg 组患者出现 1 例腹胀、厌食,均未作特殊处理,服药 1 周后缓解,两组不良反应发生率比较无统计学差异($P>0.05$)。

3 讨论

近年来,随着我国人口老龄化,老年疾病显著增多,其中冠心病的发病率呈逐渐升高趋势,是心血管疾病致死的重要因

表3 治疗前后两组血清 hs-CRP 含量的比较
Table 3 Comparison of the serum hs-CRP levels before and after treatment between two groups

组别	例数	治疗前	治疗后
Group	n	Before treatment	After treatment
20mg	48	4.75± 1.03	2.41± 0.95
40mg	48	4.83± 0.98	1.44± 0.55
t		0.82	7.16
P		>0.05	<0.01

素。据相关资料报道^[4], 血脂异常是导致冠心病的重要危险因素, 积极有效控制血脂对降低冠心病发病率, 改善患者预后具有重要意义。目前, 他汀类降脂药是调节血脂的常用药物类别, 氟伐他汀是他汀类调脂药物, 是羟甲基戊二酰辅酶 A (HMG-CoA)还原酶抑制剂^[5], 通过竞争性抑制胆固醇生物合成初期阶段的限速酶 HMG-CoA 还原酶减少胆固醇的生物合成, 加强血液中 LDL-C 及其前体的清除, 从而有效降低 LDL-C 水平, 调整高胆固醇血症, 是调脂药物的一大进展^[6]。本组研究结果显示, 两组近期疗效比较 40mg 组临床有效率明显高于对照组, 差异明显具有统计学意义。两组患者经 4 周、8 周治疗后 TC、LDL-C、TG 水平较同组治疗前显著降低, 差异明显具有统计学意义($P<0.05$)。两组患者经服用氟伐他汀治疗 4 周、8 周后 HDL-C 较治疗前明显升高, 差异有统计学意义($P<0.05$)。两组治疗后疗效对比, 40 mg 组显著优于 20 mg 组, 差异明显具有统计学意义($P<0.05$)。40 mg 组 hs-CRP 含量下降较 20 mg 组显著, 差异明显具有统计学意义($P<0.05$)。据相关资料报道^[7], 氟伐他汀除了调脂作用外, 对血管内皮功能及炎症反应具有抑制作用, 可保持斑块稳定, 防止血栓形成, 对冠心病的二级预防及冠心病的发生具有重要的防治作用。

氟伐他汀为水溶性调脂药, 90%有肝排泄、6%由肾排泄, 不透过血脑屏障、因此对中枢神经及肝肾脏器不良反应少。在对氟伐他汀的不良反应观察中, 两组患者治疗期间均对肝、肾功能、血常规情况进行检查, 未见明显改变。两组患者仅有轻微恶心、呕吐、腹胀、厌食等症状, 未作特殊处理即行缓解, 这说明氟伐他汀的临床不良反应轻微。但相关资料报道^[8]发现, 长期服用该药物可致转氨酶升高, 且呈剂量依赖性, 在本文研究中未作深度研究, 但在一定剂量范围内疗效稳定。

总之, 高剂量氟伐他汀治疗冠心病伴血脂增高的临床疗效较低剂量更好, 且安全性高, 建议推广应用。

参考文献(References)

- [1] 叶强, 陈良海, 刘应才, 等. 辛伐他汀通过 Akt/GSK3β 通路抑制心肌梗死后心肌细胞凋亡 [J]. 中国药理学通报, 2011, 27(12): 1656-1660
Ye Qiang, Chen Liang-hai, Liu Ying-cai, et al. Effect of simvastatin on myocardial infarction by Akt /GSK3 β pathway after myocardial cell apoptosis[J]. Chinese Pharmacological Bulletin, 2011, 27(12): 1656-1660
- [2] 段明勤, 王丽霞, 黄改荣, 等. 急性冠状动脉综合征患者血浆氧化还原态的变化和意义 [J]. 中华老年医学杂志, 2013, 32(3): 246-248
Duan Ming-qin, Wang Li-xia, Huang Gai-rong, et al. Acute coronary syndrome patients plasma oxidation reduction state changes and significance of[J]. Chinese Journal of Geriatrics, 2013, 32(3): 246-248
- [3] 中华心血管病杂志编辑委员会血脂异常防治对策专题组, 血脂异常防治建议 [J]. 中华心血管杂志, 1997, 25(3): 169-175
Editorial Committee of dyslipidemia prevention project group Chinese Journal of cardiovascular diseases, prevention and treatment of dyslipidemia suggests[J]. Chinese Journal of Cardiology, 1997, 25 (3): 169-175
- [4] 王继萍, 童岚, 李修英, 等. 高血压伴肥胖患者血清脂联素水平与左心室肥厚及动脉粥样硬化的关系 [J]. 中华老年医学杂志, 2012, 31 (11): 963-966
Wang Ji-ping, Tong Lan, Li Xiu-ying, et al. The relationship between hypertension and serum adiponectin level in patients with obesity and left ventricular hypertrophy and atherosclerosis[J]. Chinese Journal of Geriatrics, 2012, 31(11): 963-966
- [5] 王涛. 普伐他汀干预兔股骨头坏死的组织学观察 [J]. 现代医学, 2011, 39(5): 564-565
Wang Tao. Pravastatin intervention in rabbits with steroid-induced avascular necrosis of the femoral head organization [J]. Modern medicine, 2011, 39(5): 564-565
- [6] Balakumar P, Kathuria S, Taneja G, et al. Is targeting eNOS a key mechanistic insight of cardiovascular defensive potentials of statins? [J]. J Mol Cell Cardiol, 2012, 52(1): 83-92
- [7] 汪雷, 陈红霞, 陈莉, 等. 不同他汀类药物治疗兔心肌缺血再灌注损伤的疗效及机制探讨 [J]. 现代医学, 2013, 41(2): 81-84
Wang Lei, Chen Hong-xia, Chen Li, et al. Different statin therapy in rabbits with myocardial ischemia and reperfusion injury effect and mechanism[J]. Modern medicine, 2013, 41(2): 81-84
- [8] Wright RS, Anderson JL, Adams CD, et al. 2011 ACCF/AHA focused update of the guidelines for the management of patients with unstable angina/non-ST-elevation myocardial infarction (Updating the 2007 guideline)[J]. Circulation, 2011, 123(22): 2022-2060
- [9] Altay H, Pehlivanoğlu S. Management of acute coronary syndromes in patients presenting without persistent ST-segment elevation: What has changed in the new European Society of Cardiology guideline? [J]. Turk Kardiyol Dern Ars, 2012, 40(1): 114-118
- [10] Wang Lei, Zhang Min-zhou. Progress of traditional Chinese medicine treatment of coronary artery disease after percutaneous coronary intervention [J]. Chinese Journal of Integrated Traditional and Western Medicine, 2010, 20(4): 444-446
- [11] Thiele H, Wohrle J, Hambrecht R, et al. Intracoronary versus intravenous bolus abciximab during primary percutaneous coronary intervention in patients with acute ST-elevation myocardial infarction: a randomised trial[J]. Lancet, 2012, 379(9819): 923 (下转第 2857 页)

- [9] Rocap G, Distel DL, Waterbury JB, et al. Resolution of Prochlorococcus and Synechococcus ecotypes by using 16S-23S ribosomal DNA internal transcribed spacer sequences[J]. Appl Environ Microb, 2002, 68(3): 1180-1191
- [10] Lu W, Evans EH, Mccoll SM, et al. Identification of cyanobacteria by polymorphisms of PCR-amplified ribosomal DNA spacer region [J]. Fems Microbiol Lett, 1997, 153: 141-149
- [11] 韩丹祥. 蓝藻念珠藻属系统发育和分子进化研究 [D]. 中国科学院研究生院, 2006
Han Dan-xiang. Study on phylogeny and Molecular evolution of Nostoc (Cyanophyta)[D]. Chinese Academy of Sciences, 2006
- [12] 史全良, 卜复鸣, 韩梅. 地衣中共生念珠藻多拷贝序列的初步分析 [J]. 苏州大学学报(自然科学版), 2005, 21(4): 75-79
Shi Quan-liang, Bu Fu-ming, Han Mei. The primary study on multi-copy of ITS sequences of Nostoc in lichens [J]. Journal of Suzhou University(Natural Science Edition), 2005, 21(4): 75-79
- [13] Iteman I, Rippka R, Marsac N, et al. Comparison of conserved structural and regulatory domains within divergent 16SrRNA-23SrRNA spacer sequences of cyanobacteria[J]. Microbiology, 2000, 146(6): 1275-1286
- [14] Thompson JD, Gibson TJ, Plewniak F, et al. The ClustalX windows interface: flexible strategies for multiple sequence alignment aided by quality analysis tools[J]. Nucleic Acids Res, 1997, 25(24): 4876-4882
- [15] Dai Y, Ni ZF, Dai J, et al. Isolation and expression analysis of genes encoding DNA methyltransferase in wheat (Triticum aestivum L.)[J]. BBA-Gene Struct Expr, 2005, 1729(2): 118-125
- [16] 胡鸿钧, 魏印心. 中国淡水藻类 - 系统、分类及生态 [M]. 北京: 科学出版社, 2006: 173-183
Hu Hong-jun, Wei Yin-xin. The freshwater algae of China-Systematics, Taxonomy and Ecology[M]. Beijing: Science press.,2006: 173-183
- [17] Boyer SL, Flechtner VR, Johansen JR. Is the 16S-23S rRNA Internal Transcribed Spacer Region a Good Tool for Use in Molecular Systematics and Population Genetics? A Case Study in Cyanobacteria [J]. Mol Biol Evol, 2001, 18(6): 1057-1069
- [18] Palinska JM. Genotypic and phenotypic diversity of cyanobacteria assigned to the genus Phormidium (Oscillatoriales) from different habitats and geographical sites[J]. Arch Microbiol, 2007, 187: 397-413
- [19] Finsinger K, Scholz I, Serrano A. Characterization of true-branching cyanobacteria from geothermal sites and hot springs of Costa Rica[J]. Arch Microbiol, 2008, 10(2): 460-473
- [20] Gupta V, Natarajan C, Chaudhary V, et al. Analyses of diversity among fungicidal Anabaena strains[J]. J Appl Phycol, 2012, 24(6): 1395-1405

(上接第 2938 页)

- [12] Hamm CW, Bassand JP, Agewall S, et al. ESC guidelines for the management of acute coronary syndromes in patients presenting without persistent ST-segment elevation: The task force for the management of acute coronary syndromes (ACS) in patients presenting without persistent ST-segment elevation of the European Society of Cardiology (ESC)[J]. Eur Heart J, 2011, 32(23): 2999-3054
- [13] Levine GN, Bates ER, Blankenship JC, et al. 2011 ACCF/AHA/SCAI guideline for percutaneous coronary intervention. A report of the american college of cardiology foundation/american heart association task force on practice guidelines and the society for cardiovascular angiography and interventions [J]. J Am Coll Cardiol, 2011, 58 (24): e44-e122
- [14] Merchant FM, Weiner RB, Rao SR, et al. In-hospital outcomes of emergent and elective percutaneous coronary intervention in octogenarians[J]. Coron Artery Dis, 2009, 20(2): 118-123
- [15] Muller C. New ESC guidelines for the management of acute coronary syndromes in patients presenting without persistent ST-segment elevation: What has changed in the new European Society of Cardiology guideline? [J]. Turk Kardiyol Dern Ars, 2012, 40(1): 1-8
- [16] Wright RS, Anderson JL, Adams CD, et al. 2011 ACCF/AHA focused update of the guidelines for the management of patients with unstable angina/non-ST-elevation myocardial infarction (Updating the 2007 guideline)[J]. Circulation, 2011, 123(22): 2022-2060
- [17] Altay H, Pehlivanoğlu S. Management of acute coronary syndromes in patients presenting without persistent ST-segment elevation: The Task Force for the management of acute coronary syndromes (ACS) in patients presenting without persistent ST-segment elevation of the European Society of Cardiology (ESC)[J]. G Ital Cardiol(Rome), 2012, 13 (3): 171
- [18] syndromes in patients presenting without persistent ST-segment elevation[J]. Swiss Med Wkly, 2012, 142: w13514