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长期应用氨氯地平对老年高血压患者晨峰现象的影响*

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摘要 目的:分析长期应用氨氯地平治疗老年高血压患者的效果及对晨峰现象的影响。**方法:**选取2017年8月至2018年8月本院收治的老年高血压患者164例,按照患者入院顺序交替均分为两组($n=82$)。观察组长期给予氨氯地平治疗,对照组给予非洛地平治疗,两组均连续治疗8周后,比较其降压效果及晨峰血压的变化。**结果:**治疗后,观察组的白昼平均收缩压(Day systolic blood pressure, dSBP)、白昼平均舒张压(Day diastolic blood pressure, dDBP)、夜间平均收缩压(Night systolic blood pressure, nSBP)、夜间平均舒张压(Night diastolic blood pressure, nDBP)、24 h 平均收缩压(24 h systolic blood pressure, 24hSBP)、24 h 平均舒张压(24 h diastolic blood pressure, 24hDBP)均低于对照组及治疗前($P<0.05$);观察组的晨峰值显著低于对照组及治疗前($P<0.05$);观察组患者的治疗前两组总胆固醇(Total cholesterol, TC)、甘油三酯(Triglyceride, TG)、低密度脂蛋白(Low density lipoprotein cholesterol, LDL-C)显著低于对照组及治疗前($P<0.05$),高密度脂蛋白(High density lipoprotein cholesterol, HDL-C)显著高于对照组及治疗前($P<0.05$)。**结论:**对老年高血压患者长期应用氨氯地平不但降压安全、有效,且对控制血压晨峰现象具有积极的影响。

关键词:老年患者;晨峰;高血压;氨氯地平;长期

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Effect of Long-term Application of Amlodipine on the Morning Peak Phenomenon in the Elderly Hypertensive Patients*

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ABSTRACT Objective: To analyze the effect of long-term amlodipine in the treatment on elderly hypertensive patients and its effect on Chenfeng phenomenon. **Methods:** A total of 164 elderly hypertensive patients admitted to our hospital from August 2017 to August 2018 were enrolled and divided into the two groups according to the order of admission ($n=82$). The observation group was treated with amlodipine for a long time, and the control group was treated with felodipine. After 8 weeks of continuous treatment, the antihypertensive effect and morning blood pressure of the two groups were compared. **Results:** After 8 weeks of treatment, the average systolic blood pressure of dSBP, dDBP, nSBP, nDBP, 24hSBP and 24hDBP in the observation group were lower than those in the control group and before treatment ($P<0.05$). The morning peak of the observation group was significantly lower than that of the control group and before treatment ($P<0.05$). The differences of TC, TG, LDL-C in the observation group were significantly lower than those in the control group and before treatment ($P<0.05$), HDL-C was significantly higher than the control group and before treatment ($P<0.05$). **Conclusion:** Long-term application of amlodipine is not only safe and effective, but also has a positive effect on the control of blood pressure morning peak phenomenon in the treatment of elderly hypertensive patients.

Key words: Elderly patients; Morning peak; Hypertension; Amlodipine; Long-term

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前言

高血压是老年人群的常见病和多发病,患者的具体表现是体循环动脉血压增高,少部分患者可能伴有心、脑、肾等器官功能损害。血压晨峰是指清晨患者血压急剧升高。人体由睡眠状

态转为清醒并开始活动,血压从相对较低水平迅速上升至较高水平,一般认为该现象与交感神经激活有密切的关系^[1,2]。有研究表明^[3]高血压患者晨峰现象的严重程度与心、脑、血管疾病的发生概率有直接的影响。因此,除了将老年患者血压水平控制在安全范围内,还要加强对晨峰现象的控制^[4],以避免引起各种

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心脑血管意外的发生,保证老年患者的生命安全。

非洛地平与氨氯地平平均具有较好的降压效果,非洛地平用于治疗高血压、缺血性心脏病、心力衰竭等病症^[9];氨氯地平可以扩张外周小动脉,使外周阻力(后负荷)降低,从而减少心肌耗能和氧需求^[9]。本研究选取 164 例老年高血压患者,将其均分 2 组并给予不同药物进行长期降压治疗,发现长期应用氨氯地平不但具有良好的降压效果,而且对控制血压晨峰现象具有积极的影响,现将结果报道如下。

1 资料与方法

1.1 一般资料

选取 2017 年 8 月至 2018 年 8 月本院治疗的 164 例老年高血压患者,按照患者入院顺序分为两组。观察组 82 例患者长期应用氨氯地平治疗,平均年龄(72.06 ± 0.37)岁,男性/女性(56/26)例,其中有吸烟史者占 49 例,有糖尿病史者占 53 例。对照组 82 例患者长期应用非洛地平治疗,患者最小年龄 62 岁,最大年龄 85 岁,平均年龄(72.14 ± 0.39)岁,男性/女性(55/27)例,其中有吸烟史者占 50 例,有糖尿病史者占 55 例。两组老年高血压患者的一般临床资料比较差异无统计学意义($P > 0.05$),具有可比性。

1.2 纳入与排除标准

SBP ≥ 140 mmHg 或 DBP ≥ 90 mmHg;24 h 检测血压水平,均存在晨峰现象^[7,8]。排除继发高血压者。

1.3 治疗方法

对照组:非洛地平治疗,每天 07:00~08:00 服用非洛地平缓释片(阿斯利康制药有限公司,国药准字:H20030415),5 mg/

次,连续治疗 3 个月。

观察组:氨氯地平治疗,服用氨氯地平(辉瑞制药有限公司,国药准字:H10950224),5 mg/次,连续治疗 3 个月。为了增进疗效,建议用药期间为患者做好用药监测,同时指导科学饮食。

1.4 观察指标

24 h 动态血压监测,并计算晨峰值。日渐每隔 20 min 测一次,夜间每隔 30 min 测一次,记录 dSBP、dDBP、nSBP、nDBP、24hSBP、24hDBP 值。

晨峰现象,患者起床后 2 h 内的平均收缩压高于夜间最低收缩压。经 3 次测量取平均值,若晨峰值 ≥ 23.8 mmHg,即现象发生^[9]。

检测血脂常规项目:TC、TG、LDL-C、HDL-C。患者均禁食 8-10 h,抽取空腹静脉血,采用酶联发对其血样中的 TC、TG、LDL-C、HDL-C 的水平进行检测。试剂盒购买于上海酶联免疫有限公司,严格按照说明书操作。

1.5 统计学分析

采用(SPSS20.0)录入实验数据,计数资料和计量资料分别采用或%表示,行 t 检验和 χ^2 检验,以 $P < 0.05$ 为差异有统计学意义。

2 结果

2.1 两组血压水平变化的对比

治疗前,两组血压水平比较差异无统计学意义($P > 0.05$)。经连续 8 周治疗后,观察组的 dSBP、dDBP、nSBP、nDBP、24hSBP、24hDBP 均低于对照组及治疗前($P < 0.05$)。见表 1。

表 1 两组治疗前后的血压水平变化对比(mmHg)

Table 1 Comparison of the changes of blood pressure levels between two groups of elderly patients (mmHg)

Groups	Subgroup	dDBP	dSBP	nDBP	nSBP	24hDBP	24hSBP
Observation group (n=82)	Before treatment	90.23 $\pm$ 0.74	169.03 $\pm$ 1.26	95.15 $\pm$ 1.05	163.74 $\pm$ 0.69	93.29 $\pm$ 1.04	165.16 $\pm$ 0.78
	After treatment	75.94 $\pm$ 0.69* [#]	123.54 $\pm$ 1.21* [#]	70.12 $\pm$ 1.03* [#]	112.57 $\pm$ 0.71* [#]	74.58 $\pm$ 1.12* [#]	120.15 $\pm$ 0.57* [#]
Control group (n=82)	Before treatment	90.36 $\pm$ 0.82	168.97 $\pm$ 1.31	94.26 $\pm$ 1.06	163.65 $\pm$ 0.65	93.17 $\pm$ 1.12	165.24 $\pm$ 0.75
	After treatment	81.49 $\pm$ 0.68*	132.46 $\pm$ 1.24*	74.52 $\pm$ 1.05*	128.41 $\pm$ 0.73*	79.51 $\pm$ 1.09*	131.62 $\pm$ 0.54*

Note: * $P < 0.05$ compared with before treatment, compared with the control group, [#] $P < 0.05$.

2.2 两组老年患者的晨峰值对比

治疗前,两组晨峰值比较差异无统计学意义($P > 0.05$)。不

同方案连续治疗 8 周后,观察组的晨峰值显著低于对照组及治疗前($P < 0.05$),见表 2。

表 2 两组治疗前后的晨峰值对比 (mmHg)

Table 2 Comparison of the morning peaks before and after treatment between two groups (mmHg)

Groups	Cases	Before treatment	After treatment	T	P
Observation group(n=82)	82	36.84 $\pm$ 0.26	16.48 $\pm$ 0.15	5.325	< 0.05
Control group(n=82)	82	36.49 $\pm$ 0.31	22.17 $\pm$ 0.19	6.124	< 0.05
t	-	0.568	6.210	-	-
P	-	> 0.05	< 0.05	-	-

2.3 两组治疗前后的血脂水平的对比

治疗前,两组 TC、TG、LDL-C、HDL-C 水平比较差异无统计学意义($P > 0.05$)。治疗后,观察组患者的 TC、LDL-C 显著低

于对照组及治疗前,HDL-C 显著高于对照组及治疗前 ($P < 0.05$)。见表 3。

表 3 两组治疗前后血脂水平变化情况的对比

Table 3 Comparison of the changes of blood lipid between the two groups

组别	Group	Cases	TC	TG	LDL-C	HDL-C
Observation group	82	Before treatment	5.12± 0.31	1.78± 0.05	2.96± 0.17	0.89± 0.21
		After treatment	4.18± 0.15* [#]	1.51± 0.12	2.31± 0.08* [#]	1.13± 0.07* [#]
Control group	82	Before treatment	4.98± 0.29	1.77± 0.06	2.95± 0.18	0.90± 0.19
		After treatment	4.63± 0.17*	1.53± 0.14	2.45± 0.12*	0.96± 0.09*

Note: * $P < 0.05$ compared with before treatment, compared with the control group, [#] $P < 0.05$.

3 讨论

以往高血压疾病多发于老年人群中,但近年来,受饮食结构变化、生活压力等影响,高血压的发病率逐渐增加^[10,11]。该病作为心脑血管病最主要的危险因素,一旦引发各种心脑血管疾病,都有可能造成严重的后果,威胁患者的生命安全,增加治疗难度^[12,13]。临床研究显示高血压与自主神经功能失调有非常密切的关系,当交感神经激活,会导致血压升高,同时会出现机体代谢紊乱或心脑血管等靶器官并发症发生^[14,15]。而高血压患者晨峰程度加剧与心脑血管意外的发生相关^[16]。清晨高血压变化最大,控制晨峰血压对稳定病情、调节血压水平、预防心脑血管意外发生都有积极的影响^[17,18]。现代医学总结并归纳血压晨峰可能与这4个原因相关:①血交感神经系统活性快速增强,正常情况下,人们觉醒后肾上腺素水平和血浆去甲肾上腺素浓度由夜间的休眠状态开始上升,导致心脏每搏输出量增加,血压急剧升高,从而诱发晨峰血压^[19]。②RAS系统激活。清晨时,血管紧张素分泌量增加、血浆中肾素分泌量增加,在一定程度上扩大了血容量,促使交感神经末梢释放的茶酚胺明显增多,此时血压升高^[20]。③颈动脉压力感受器的敏感性下降,清晨当压力感受器敏感性下降后,血压调节速率也随之下降,从而诱发晨峰血压现象^[21]。④血液流变学的改变,清晨由于患者全血黏度、血浆纤维蛋白浓度等升高,显著增加了外周血流阻力,从而诱发晨峰血压现象^[22]。

为了预防心脑血管意外发生,控制晨峰血压非常关键。临床上,对晨峰高血压者选用长效平稳的降压药,保证用药安全的基础上,长期将患者血压水平控制在安全范围内^[23,24]。苯磺酸氨氯地平属于钙通道阻滞剂,其降压效果基于血压基线水平,用药后能够促使患者的血压水平逐渐下降并达到安全范围内,同时不会影响夜间低血压水平^[25],药物机制表现在:选择性对平滑肌细胞和心肌细胞进行钙离子跨膜抑制^[26]。本品作用于血管平滑肌,降低外周血管阻力,并促使心肌耗氧量下降,最终达到降压的目的^[27,28]。该药物经口服后,其生物利用度约为4%~90%,一般30~50 min即可起效,药效持续24 h,其代谢物经肾脏排出。老年患者长期应用,不会对机体造成太大的影响,每日口服1次,即可达到24 h平稳控制血压的效果,并且可阻断钙离子通道,改善动脉粥样硬化进展程度^[29,30]。结合研究结果显示:不同方案连续治疗8周后,观察组的dSBP、dDBP、nSBP、nDBP、24hSBP、24hDBP及晨峰值均低于对照组的相应指标及治疗前。可见,长期应用氨氯地平对控制老年高血压患者的晨峰现象具有积极的影响,同时对调节血压水平,预防心脑血管

意外也有显著的效果。治疗后,观察组血脂改善优于对照组。说明高血压晨峰的发生与血脂水平有关,而氨氯地平的服用,能降低外周血管阻力,达到控制晨峰。此外,建议更多有关学者参与到老年高血压患者晨峰现象研究中来,从而为临床提供更安全、更高效的治疗选择。

综上,对老年高血压患者长期应用氨氯地平不但降压安全、有效,且对控制血压晨峰现象具有积极的影响。

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