

# 依那普利联合氯沙坦治疗老年肾性高血压的临床观察

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**摘要** 目的 探讨依那普利联合氯沙坦治疗老年肾性高血压的效果。方法 选取 2008 年 2 月~2011 年 10 月我院收治的肾性高血压患者 70 例,按随机数字表法分为观察组和对照组,每组 35 例。对照组给予依那普利 20mg,每天 2 次;观察组给予依那普利 10mg,每天 2 次;氯沙坦 50mg,每天 1 次。观察两组血压、肾功能指标变化及不良反应。结果 观察组总有效率为 95.0%(38/35),对照组为 75.0%(30/35),差异有统计学意义( $P<0.05$ );治疗后两组血压(DBP、SBP)和肾功能(SCr、BUN、mAlb)指标均明显改善( $P<0.05$ ),观察组较对照组改善更为明显( $P<0.05$ );观察组不良反应发生为 17.14%(6/35),对照组为 14.29%(5/35),差异无统计学意义( $P>0.05$ )。结论 依那普利联合氯沙坦治疗老年肾性高血压能更有效改善血压和肾功能,安全性高。

**关键词** 氯沙坦;依那普利;肾性高血压

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## Clinical Observation of Enalapril Combined with Losartan on Treatment of Elderly Renal Hypertension

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**ABSTRACT Objective:** To investigate the effect of enalapril combined with losartan on treatment of elderly renal hypertension.

**Methods:** 70 cases of patients with renal hypertension from February 2008 to October 2011 in our hospital were selected, according to the random number table were divided into the observation group and the control group with 35 cases in each groups. The control group were given enalapril 20mg, 2 times a day; the observation group was given enalapril 10mg, twice a day; losartan 50mg, once a day. The blood pressure and renal function changes, and adverse reactions of two groups were observed. **Results:** The total effective rate of observation group was 95.0% (38/35), in the control group was 75.0% (30/35), the difference was statistically significant ( $P<0.05$ ); blood pressure (DBP, and SBP) and renal function (SCr and BUN, mAlb) indicators were significantly improved of two groups ( $P<0.05$ ), compared with the control group, the observation group improved more significantly ( $P<0.05$ ); The occurrence of adverse reactions in the observation group was 17.14% (6/35), in the control group was 14.29% (5/35), the difference was not statistically significant ( $P>0.05$ ).

**Conclusion:** Enalapril combined with losartan on treatment of elderly renal hypertension can be more effective in improving blood pressure and renal function, and has a high security.

**Key words:** Losartan; Enalapril; Renal hypertension

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肾性高血压是由于肾脏实质性病变和肾动脉病变引起的血压升高,多见于老年人,是老年患者终末期肾功能衰竭和死亡的重要原因。目前已经公认治疗肾性高血压不仅要控制血压,更重要的是延缓或逆转肾功能损伤。近年有多篇研究证实依那普利与氯沙坦联合治疗肾性高血压的疗效显著<sup>[1-3]</sup>,但尚未见针对老年患者的报道。为此,现将我院应用依那普利联合氯沙坦治疗 35 例老年肾性高血压的情况报告如下。

### 1 资料与方法

#### 1.1 一般资料

选取 2008 年 2 月~2011 年 10 月我院收治的肾性高血压患者 70 例,男 42 例,女 28 例;年龄 60~78 岁,平均(68.6±2.5)岁;原发性肾小球肾炎 32 例,糖尿病肾病 18 例,慢性肾盂

肾炎 12 例,肾病综合征 8 例。纳入标准 2009 年修订的《中国高血压防治指南》<sup>[4]</sup>,收缩压(SBP)≥140mmHg,舒张压(DBP)≥90mmHg,符合第 7 版《内科学》肾功能不全诊断标准<sup>[5]</sup>,血肌酐 185~276μmol/L,年龄在 60 岁以上;停用对高血压和尿蛋白有影响的降压药物 2 周以上;排除肾动脉畸形;经医院伦理委员会批准,患者知情同意。按随机数字表法将纳入病例分为观察组和对照组,每组 35 例,两组患者性别、年龄、肾功能等一般资料经统计学分析,均无统计学意义( $P>0.05$ ),具有可比性。

#### 1.2 方法

对照组给予依那普利 20mg,每天 2 次。观察组给予依那普利 10mg,每天 2 次;氯沙坦 50mg,每天 1 次。两组均以 4 周为 1 个疗程,2 个疗程后评价疗效。

#### 1.3 观察指标

(1)血压:采取标准水银汞柱法取右上肢坐位测量 SBP 和 DBP,重复 3 次,取平均值。(2)肾功能:在清晨留取 24h 尿,采

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用放射免疫法测定肾功能指标血清肌酐(SCr)、尿微量白蛋白(mAlb)、尿素氮(BUN) ,取非同日测定 2 次的平均值。(3)不良反应 治疗期间每周行血常规、心电图、血脂等检查 ,记录咳嗽、头晕、血钾高等不良反应发生情况。

1.4 疗效评价<sup>[6]</sup>

(1) 显效 :DBP 下降≥ 20 mmHg 或 DBP 下降≥ 10 mmHg 并达到正常 ;(2)有效 :DBP 下降 10~19 mmHg 或 DBP 下降< 10 mmHg 并达到正常或 SBP 下降≥ 30 mmHg ;(3)无效 :未达到以上标准。以显效率 + 有效率计算总有效率。

1.5 统计学方法

所有数据采用 SPSS13.0 统计软件进行处理 ,计量资料以 (x± s)形式表示 ,组间比较采用 t 检验 ,治疗前后比较采用配对 t 检验 ,计数资料比较采用 X<sup>2</sup> 检验 P<0.05 为差异有统计学意义。

2 结果

2.1 两组临床疗效比较

观察组总有效率为 95.0%(38/35) ,对照组为 75.0%(30/35) ,差异有统计学意义(P<0.05)。见表 1。

表 1 两组临床降压效果比较 [n(%)]

Table 1 Comparison of clinical antihypertensive effects two groups [n(%)]

Group	n	Effectual	Effective	Ineffective	Total effective rate(%)
Observation	35	23(65.71)	10(28.57)	2(5.71)	94.29
Control	35	12(34.29)	13(37.14)	10(28.57)	71.43

Note: Comparison with control group,X<sup>2</sup>=5.56 P<0.05.

2.2 两组治疗前后血压变化比较

治疗后两组 DBP 和 SBP 均较治疗前明显降低(P<0.05) ,

观察组下降较对照组更为明显(P<0.05)。见表 2。

表 2 两组治疗前后血压变化比较 (x± s)

Table 2 Comparison of Changes of blood pressure of two groups comparison before and after treatment (x± s)

Group	Time	DBP(mmHg)	SBP(mmHg)
Observation(n=35)	Pre-treatment	115.8± 10.4	179.3± 15.1
	Post-treatment	90.4± 3.1 <sup>ac</sup>	133.2± 10.1 <sup>bf</sup>
Control(n=35)	pre-treatment	118.3± 11.6	178.2± 14.7
	post-treatment	106.5± 5.3 <sup>c</sup>	165.4± 7.3 <sup>d</sup>

Note: Comparison with pre-treatment, at=5.68, bt=6.66, ct=4.12, dt=4.32, P<0.05; comparison with control group, et=3.98, ft=4.11, P<0.05.

2.3 两组治疗前后肾功能指标比较

治疗后两组 SCr、BUN、mAlb 水平均较治疗前显著下降

(P<0.05) ,观察组较对照组下降更为显著(P<0.05)。见表 3。

表 3 两组治疗前后肾功能指标比较(x± s)

Table 3 Comparison of Renal function indexes of two groups comparison before and after treatment (x± s)

Group	Time	SCr (μmol/L)	BUN (mmol/L)	mAlb (μg/ml)
Observation(n=35)	Pre-treatment	159.23± 29.35	6.82± 1.61 <sup>△</sup>	48.6± 10.2
	Post-treatment	140.16± 26.11 <sup>ag</sup>	5.42± 1.48 <sup>bh</sup>	25.2± 7.3 <sup>ci</sup>
Control(n=35)	Pre-treatment	158.54± 28.45	6.96± 1.58	48.2± 10.6
	Post-treatment	149.47± 28.78 <sup>d</sup>	6.14± 1.66 <sup>e</sup>	36.4± 8.5 <sup>f</sup>

Note: Comparison with pre-treatment, at=6.76, bt=5.48, ct=7.11, dt=4.10, et=3.98, ft=4.26, P<0.05; comparison with control group, gt=4.09, ht=3.96, it=4.22, P<0.05.

2.4 两组不良反应发生率比较

对照组发生头痛 3 例 ,面色潮红 2 例 ;观察组发生头痛 4 例 ,面色潮红 2 例。两组不良反应发生率比较无显著性差异 (X<sup>2</sup>=0.82 P>0.05)。

肾性高血压是最常见的一种继发性高血压 ,机制复杂 ,主要为<sup>[7-9]</sup> (1)肾素依赖 :肾脏病变引起肾组织缺血缺氧 ,刺激分泌大量肾素入血 ,通过肾素 - 血管紧张素 - 醛固酮系统(RAS)使血管强烈收缩而血压增高 ;(2)容量依赖 :肾脏病变引起肾小球滤过率下降 ,水钠潴留 ,使血容量增多 ,阻力增大而致血压增高。研究表明<sup>[10-12]</sup> ,高血压和肾损害关系密切 ,若血压长期增高 ,

3 讨论

会引起内皮功能损伤,释放生长转化因子 $\beta$ 、纤溶酶原激活物抑制剂等细胞因子,直接造成肾损害,而肾损害加重血压增高,形成恶性循环。因此,单独控制血压或单独改善肾功能均不能有效遏制病情进展,必须二者兼治,目前多数学者认同联合用药策略。

控制血压是遏制肾性高血压患者肾脏病变发展的关键,但常需大量用药,而产生颜面潮红、头昏、头痛、下肢水肿等一系列副作用。目前市场上降血压药物种类繁多,合理选择至关重要。尤其对老年患者,由于器官功能衰退,血管老化,血压缓冲、调节能力降低,若联合用药选择不当,不仅难以达到预期效果,而且还容易因较多的不良反应诱发或加剧病情<sup>[13]</sup>。近年来,随着老龄化人口的增加,我国老年肾性高血压发病率急剧上升,已成为终末期肾病而死亡的高危人群<sup>[14]</sup>,日益受到人们关注。

依那普利为血管紧张素转换酶抑制剂,通过作用于RAS抑制血管紧张素的生成,减少醛固酮和肾上腺素的释放,从而扩张血管,使血管阻力降低,使血压下降,同时能够减轻肾小球内压,减少蛋白尿排泄,增加肾血流量和肾小球滤过率,延缓肾小球硬化和肾小管间质损害,保护肾功能<sup>[15-17]</sup>。目前依那普利对肾性高血压的确切疗效已被公认,被广泛用于临床。但笔者在临床实践中体会到,老年肾性高血压患者病程一般较长,单独应用依那普利效果不佳。氯沙坦是血管紧张素(Ang)受体拮抗剂,对Ang的1型受体(AT1)有高度选择性,能竞争性阻断Ang的生理作用而使血压下降,同时降低蛋白尿而发挥肾脏保护作用<sup>[18-19]</sup>。因此,依那普利和氯沙坦联合应用不仅可从肾素依赖和容量依赖两种机制上对因治疗肾性高血压,而且还能双重拮抗Ang,阻断RAAS<sup>[20]</sup>。

本研究结果显示,观察组总有效率显著高于对照组( $P < 0.05$ ),治疗后观察组血压和肾功能指标较对照组改善更为明显( $P < 0.05$ ),而两组不良反应无显著性差异( $P > 0.05$ )。由此可见,依那普利联合氯沙坦治疗老年肾性高血压能更有效改善血压和肾功能,安全性高,值得临床推广应用。

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