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## 麝香保心丸与曲美他嗪联合治疗老年冠心病心绞痛的疗效及对血浆 BNP 水平的影响

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**摘要 目的:**分析麝香保心丸联合曲美他嗪治疗老年冠心病心绞痛的疗效及对血浆 B 型脑钠肽 (BNP) 水平的影响。**方法:**选取 2010 年 1 月 -2015 年 1 月我院收治的老年冠心病心绞痛患者 128 例作为研究对象,采用随机数字表法将其分为实验组(64 例)和对照组(64 例),单纯使用曲美他嗪对对照组患者进行治疗,联合使用麝香保心丸和曲美他嗪对实验组患者进行治疗,观察两组患者的临床疗效,比较治疗前后两组血浆 BNP 水平、左心室舒张末期内径(LVEDD)、左心室收缩末期内径(LVESD)以及左室射血分数(LVEF),统计两组的不良反应。**结果:**实验组的治疗总有效率为 92.19%,明显高于对照组的 62.50%,差异具有统计学意义( $P < 0.05$ );治疗后,实验组与对照组血浆 BNP、LVEDD、LVESD、LVEF 均得到改善,但是实验组改善更明显,差异具有统计学意义( $P < 0.05$ );两组不良反应率比较,无统计学差异( $P > 0.05$ )。**结论:**应用麝香保心丸联合曲美他嗪治疗老年冠心病心绞痛的临床疗效显著,且明显降低血浆 BNP 水平,值得在临幊上推广应用。

**关键词:**麝香保心丸;曲美他嗪;老年;冠心病心绞痛;疗效;血浆 BNP

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## Effect of Shexiang Baoxin Pill and Trimetazidine Combined Treatment on Senile Coronary Heart Disease Angina Pectoris and Influence on Plasma BNP Levels

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**ABSTRACT Objective:** To analyze the effect of Shexiang Baoxin Pill combined with trimetazidine in the treatment of senile patients with coronary heart disease angina pectoris and its influence on plasma brain natriuretic peptide(BNP) levels. **Methods:** 128 cases of senile patients with coronary heart disease angina pectoris treated in our hospital were selected as the objects from January 2010 to January 2015, they were divided into experimental group (64 cases) and control group (64 cases) according to the random number table method. The control group was treated by Trimetazidine, the experimental group was treated by Shexiang Baoxin Pill combined with trimetazidine. Observed and compared the clinical efficacy of the two groups and compared the plasma BNP level, left ventricular end diastolic diameter (LVEDD), left ventricular end systolic diameter(LVESD) and left ventricular ejection fraction(LVEF) of two groups before and after treatment, analyzed the adverse reactions in the two groups. **Results:** The total effective rate of treatment group was 92.19%, which was significantly higher than 62.50% in control group ( $P < 0.05$ ). After treatment, the plasma BNP level, LVEDD, LVESD, LVEF in experimental group and control group were improved, but the experimental group improved more significantly, and the differences were statistically significant ( $P < 0.05$ ). The incidence of adverse reactions between the two groups had no significant difference ( $P > 0.05$ ). **Conclusion:** The Shexiang Baoxin Pill combined with trimetazidine has better clinical effect in the treatment senile patients with coronary heart disease angina pectoris, which could significantly decreases the plasma BNP level, it is worthy of clinical application.

**Key words:** Shexiang Baoxin Pill; Trimetazidine; Senile; Coronary heart disease angina pectoris; Effect; Plasma BNP

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### 前言

冠状动脉粥样硬化性心脏病(冠心病)以老年人群较为高发,是主要心血管疾病之一。冠心病患者的临床症状以胸痛、胸

闷、气短为主。心绞痛是冠心病常见类型,患者由于心肌缺氧缺血导致一系列以心前区疼痛为主的症候群<sup>[1]</sup>。麝香保心丸具有芳香温通,益气强心之功效。用于气滞血瘀所致的前区疼痛和心肌缺血所致的心绞痛、心肌梗死<sup>[2]</sup>。曲美他嗪可有效的抑制游离脂肪酸代谢,在心肌供氧受限时,提高氧利用度,以缓解心肌缺血症状、维持心肌存活和改善心脏功能<sup>[3]</sup>。本研究旨在分析应用麝香保心丸联合曲美他嗪治疗冠心病心绞痛的临床疗效,及其对左心室收缩末期内径(left ventricular end systolic diameter, LVESD)、左心室舒张末期内径(Left ventricular end diastolic diameter, LVEDD)、血浆B型脑钠肽(brain natriuretic peptide, BNP)水平以及左室射血分数(left ventricular ejection fraction, LVEF)的影响,为临床治疗提供参考。现将分析结果报告如下:

## 1 对象与方法

### 1.1 研究对象

本文的研究选取我院于2010年1月-2015年1月间收治的128例老年冠心病心绞痛患者,纳入标准:<sup>①</sup>符合符合国际心脏病学会和协会及世界卫生组织(WHO)临床命名标准化联合专题组报告《缺血性心脏病的命名及诊断标准》<sup>[4]</sup>;<sup>②</sup>轻、中度患者;<sup>③</sup>年龄在60岁以上;<sup>④</sup>能配合医师治疗。排除标准:<sup>⑤</sup>重大脏器有严重病变;<sup>⑥</sup>对本实验药物过敏;<sup>⑦</sup>不能遵医嘱。采用随机数字表法将其分为对照组(64例)和实验组(64例),两组患者在性别、年龄、血压、血脂、既往史、病程方面的差异均无统计学意义( $P>0.05$ ),具有可比性,见表1。

表1 两组患者一般资料比较

Table 1 Comparison of the general data in two groups

Items	Control group(n=64)	Experimental group(n=64)	$\chi^2/T$	P
Male/Famle	42/22	43/21	19.315	0.143
Age(year)	67.81±4.38	68.18±5.67	27.092	0.372
Systolic pressure(mmHg)	128.33±12.46	130.86±18.29	51.843	0.811
Diastolic pressure(mmHg)	79.52±10.27	82.64±12.31	39.507	0.104
Triglyceride(mmol/L)	1.76±1.04	1.81±3.12	0.971	0.527
Cholesterol total(mmol/L)	4.37±1.38	4.30±0.82	1.638	0.185
Low density lipoprotein(mmol/L)	2.14±0.76	2.18±0.77	0.750	0.074
High density lipoprotein(mmol/L)	1.11±0.20	1.15±0.23	0.482	0.263
History of hypertension(%)	31(48.44)	33(51.56)	8.529	0.484
History of diabetes(%)	28(43.75)	27(42.19)	10.295	0.629
Course of coronary heart disease(month)	2.31±0.28	2.54±0.19	1.023	0.097

### 1.2 研究方法

实验组患者联合使用麝香保心丸和曲美他嗪进行治疗,对照组患者给予曲美他嗪治疗。曲美他嗪(北京万生药业有限责任公司,国药准字H20065167,片剂,20 mg/片):口服,20 mg/次,一日3次,2周为1个疗程。麝香保心丸(上海和黄药业有限公司,国药准字Z31020068,丸剂,22.5 mg/丸):口服,45 mg/次,3次/日,2周为1个疗程。两组均治疗3个月。

### 1.3 观察指标

根据患者临床症状改善情况及心电图结果,参考文献疗效标准<sup>[5]</sup>,将疗效分为三个等级:显效、有效及无效,总有效率=(显效+有效)/总例数×100%。

所有研究对象分别于入院后24 h内及药物治疗3月后抽取空腹肘静脉血3 mL于依地酸二钠(EDTA-2Na)抗凝管中,在4℃的条件下以3000 r/min的转速离心10 min,将血浆分

离并于-70℃条件下保存待检。经酶联免疫(Enzyme-Linked Immunosorbent Assay,ELISA)法测定血浆中BNP水平,测定仪为西门子ADVIA Centaur CP化学发光分析仪及其配套试剂盒,操作均严格按照说明书进行。心动超声检测LVEDD、LVESD以LVEF。

### 1.4 统计学方法

经SPSS19.0软件对实验数据进行处理,计量资料经由均数±标准差( $\bar{x} \pm s$ )表示,经由t检验,计数资料经由 $\chi^2$ 检验, $P<0.05$ 表示差异有统计学意义。

## 2 结果

### 2.1 两组患者疗效比较

实验组患者治疗的总有效率为92.19%,明显优于对照组的62.50%,差异具有统计学意义( $P<0.05$ ),见表2。

表2 两组治疗后临床疗效比较[n(%)]

Table 2 Comparison of clinical efficacy in two groups after treatment[n(%)]

Groups	n	Excellent	Effective	Invalid	Total effective rate
Control group	64	17(26.56)	23(35.94)	24(37.50)	40(62.50)
Experimental group	64	39(60.94)	20(31.25)	5(7.81)	59(92.19)
$\chi^2$	-	-	-	-	12.463
P	-	-	-	-	0.015

## 2.2 两组患者治疗前后血浆 BNP 与心功能情况比较

两组治疗前血浆 BNP、LVEDD、LVESD、LVEF 比较,差异无统计学意义( $P>0.05$ );经过 3 月治疗后,实验组与对照组血浆

BNP、LVEDD、LVESD、LVEF 均得到改善,但是实验组改善更明显,差异均有统计学意义(均  $P<0.05$ ),见表 3。

表 3 两组患者治疗前后血浆 BNP 水平与心功能情况比较

Table 3 Comparison of plasma BNP and cardiac function in two groups before and treatment

Groups	BNP(pg/mL)		LVEDD(mm)		LVESD(mm)		LVEF(%)	
	Before treatment	After treatment						
Control group	318.37± 61.24	197.35± 24.01*	62.47± 3.91	60.18± 3.71*	45.91± 2.15	43.73± 2.45*	49.26± 4.02	50.84± 4.58*
Experimental group	320.09± 55.13	116.52± 19.31*	63.05± 2.83	52.94± 3.06*	44.48± 2.78	34.18± 2.73*	48.73± 5.31	57.96± 5.64*
t	132.171	145.171	26.038	35.927	18.936	19.483	20.047	28.915
P	0.387	0.036	0.724	0.025	1.242	0.017	0.951	0.013

Note: Compared with before treatment, \* $P<0.05$ .

## 2.3 两组患者不良反应比较

对照组出现头晕不良反应患者 1 例,占 1.56%;实验组食欲不振不良反应患者 1 例,占 1.56%,两者之间差异无统计学意义( $P>0.05$ )。

## 3 讨论

冠心病是由于冠状动脉粥样硬化而导致血管腔出现狭窄或阻塞,导致患者心肌缺氧、缺血的一种心脏病。心绞痛是较为常见的冠心病类型之一并且患病年龄趋于年轻化<sup>[6]</sup>。既往研究发现曲美他嗪和麝香保心丸可单独用于冠心病心绞痛患者的治疗,且对冠心病心绞痛症状有较好的改善作用<sup>[7]</sup>。曲美他嗪的作用有:<sup>[8]</sup>①抑制游离脂肪酸代谢,降低脂肪酸代谢量,提升心肌葡萄糖的利用率<sup>[8,9]</sup>;②增加病变心肌和供氧受限冠脉的氧利用率,缓解心肌缺血情况<sup>[10,11]</sup>。③提升乳酸利用率,降低酮体水平,进而抑制缺氧,保护心肌<sup>[12]</sup>。麝香保心丸的主要成分包括蟾酥、牛黄、人参、麝香等,其中麝香具有活血通络的功效,能调节血脂、保护血管内的组织、缓解血管壁炎症<sup>[13]</sup>。本研究发现实验组的治疗总有效率为 92.19%,明显高于对照组的 62.50%,说明曲美他嗪和麝香保心丸共同发挥了其缓解冠心病心绞痛的作用,且效果较曲美他嗪单独应用更加明显。可能由于在曲美他嗪增加冠脉供氧保护心肌的基础上<sup>[14]</sup>,麝香保心丸进一步发挥保护血管内皮,缓解血管炎症的作用<sup>[15]</sup>,使冠脉痉挛或冠脉缺血得到缓解,进而改善心绞痛的症状,提示临床可联合应用曲美他嗪和麝香保心丸治疗冠心病心绞痛患者,使患者更大程度上获益。

BNP 主要由心室释放,具有利尿、利钠的生理作用,可以抑制心室重构<sup>[16,17]</sup>。研究表明,血浆 BNP 对老年冠心病心绞痛患者的诊断和预后具有重要意义<sup>[18]</sup>。BNP 是反应心功能的指标之一,冠心病心绞痛患者心肌供血不足,心功能降低,血浆 BNP 水平明显升高<sup>[19]</sup>,曲美他嗪联合麝香保心丸和改善心肌缺血、缺氧状态,改善心功能,从而降低血浆 BNP 水平。本研究发现,治疗后,实验组血浆 BNP 水平(116.52± 19.31)pg/mL 明显低于对照组血浆 BNP 水平(197.35± 24.01)pg/mL,实验组与对照组 LVEDD、LVESD、LVEF 均得到改善,但是实验组改善更明

显,说明曲美他嗪联合麝香保心丸可明显改善冠心病心绞痛患者的心功能,进而缓解心绞痛症状<sup>[20]</sup>。提示临幊上可联合曲美他嗪和麝香保心丸降低冠心病心绞痛患者血浆 BNP 水平,改善心功能,进而缓解心绞痛症状。曲美他嗪的不良反应包括胃肠道不适(恶心,呕吐)和帕金森症状,少数可出现过敏反应。麝香保心丸舌下含服者偶有麻舌感。本研究发现,实验组不良反应率为 1.56%与对照组的 1.56%无明显差异,说明曲美他嗪联合麝香保心丸治疗冠心病心绞痛患者并不会增加不良反应,安全性较高。

综上所述,对老年冠心病心绞痛患者实施麝香保心丸联合曲美他嗪的方案治疗具有较好的临床疗效,并可明显改善血浆 BNP 水平,缓解心绞痛症状,值得进一步推广。

## 参 考 文 献(References)

- Dawkes S, Smith GD, Elliott L, et al. Self-management of coronary heart disease in older patients after elective percutaneous transluminal coronary angioplasty[J]. J Geriatr Cardiol, 2016, 13(5): 393-400
- Jiang P, Dai W, Yan S, et al. Biomarkers in the early period of acute myocardial infarction in rat serum and protective effects of Shexiang Baoxin Pill using a metabolomic method[J]. J Ethnopharmacol, 2011, 138(2): 530-536
- Chrusciel P, Rysz J, Banach M. D efining the Role of Trimetazidine in the Treatment of Cardiovascular Disorders: Some Insights on Its Role in Heart Failure and Peripheral Artery Disease[J]. Drugs, 2014, 74(9): 971-980
- Lee PH, Ahn JM, Chang M, et al. Left Main Coronary Artery Disease: Secular Trends in Patient Characteristics, Treatments, and Outcomes [J]. J Am Coll Cardiol, 2016, 68(11): 1233-1246
- McCarthy CP, Mullins KV, Kerins DM. The role of trimetazidine in cardiovascular disease: beyond an anti-anginal agent [J]. Eur Heart J Cardiovasc Pharmacother, 2016, 2(4): 266-272
- 王爽,武卫党,耿蓬勃,等.硝酸异山梨酯片联合美托洛尔治疗老年冠心病心绞痛的疗效及对 IL-18 及 hs-CRP 水平的影响[J].现代生物医学进展, 2013, 13(27): 5292-5295  
Wang Shuang, Wu Wei-dang, Geng Peng-bo, et al. Clinical Effect of Isosorbide Dinitrate Tablets Combined with Metoprolol on Senile

- Patients with Angina Pectoris and its Influence on IL-18 and hs-CRP Levels[J]. *Progress in Modern Biomedicine*, 2013, 13(27): 5292-5295
- [7] Jiang B, Cai F, Gao S, et al. Induction of cytochrome P450 3A by Shexiang Baoxin Pill and its main components[J]. *Chem Biol Interact*, 2012, 195(2): 105-113
- [8] Suner A, Cetin M. The effect of trimetazidine on ventricular repolarization indexes and left ventricular diastolic function in patients with coronary slow flow[J]. *Coron Artery Dis*, 2016, 27(5): 398-404
- [9] Zhang J, He S, Wang X, et al. Effect of trimetazidine on heart rate variability in elderly patients with acute coronary syndrome [J]. *Pak J Med Sci*, 2016, 32(1): 75-78
- [10] Xu X, Zhang W, Zhou Y, et al. Effect of trimetazidine on recurrent angina pectoris and left ventricular structure in elderly multivessel coronary heart disease patients with diabetes mellitus after drug-eluting stent implantation: a single-centre, prospective, randomized, double-blind study at 2-year follow-up [J]. *Clin Drug Investig*, 2014, 34 (4): 251-258
- [11] Li Y, Wang D, Hu C, et al. Efficacy and Safety of Adjunctive Trimetazidine Therapy for Acute Myocardial Infarction: A Systematic Review and Meta-Analysis[J]. *Cardiology*, 2016, 135(3): 188-195
- [12] Kim JS, Kim CH, Chun KJ, et al. Effects of trimetazidine in patients with acute myocardial infarction: data from the Korean Acute Myocardial Infarction Registry[J]. *Clin Res Cardiol*, 2013, 102(12): 915-922
- [13] Xiong XJ, Wang Z, Wang J. Innovative Strategy in Treating Angina Pectoris with Chinese Patent Medicines by Promoting Blood Circulation and Removing Blood Stasis: Experience from Combination Therapy in Chinese Medicine [J]. *Curr Vasc Pharmacol*, 2015, 13(4): 540-553
- [14] Tsiofis K, Andrikopoulos G, Manolis A. Trimetazidine and cardioprotection: facts and perspectives[J]. *Angiology*, 2015, 66(3): 204-210
- [15] Xiang L, Jiang P, Zhan C, et al. The serum metabolomic study of intervention effects of the traditional Chinese medicine Shexiang Baoxin Pill and a multi-component medicine polypill in the treatment of myocardial infarction in rats[J]. *Mol Biosyst*, 2012, 8(9): 2434-2442
- [16] Wei G, Ningfu W, Xianhua Y, et al. N-terminal pro-B-type natriuretic peptide is associated with severity of the coronary lesions in unstable angina patients with preserved left ventricular function [J]. *J Interv Cardiol*, 2012, 25(2): 126-131
- [17] Yücel M, Avsarogullari L, Durukan P, et al. BNP shows myocardial injury earlier than Troponin-I in experimental carbon monoxide poisoning[J]. *Eur Rev Med Pharmacol Sci*, 2016, 20(6): 1149-1154
- [18] Wei P, Wang HB, Fu Q, et al. Levels of BNP and stress blood glucose in acute coronary syndrome patients and their relationships with the severity of coronary artery lesion[J]. *Cell Biochem Biophys*, 2014, 68 (3): 535-539
- [19] Romel SM, Faruque M, Bari MA, et al. Association between elevated B-type Natriuretic Peptide levels with extent of coronary artery disease in patients with unstable angina and NSTEMI [J]. *Mymensingh Med J*, 2014, 23(3): 544-551
- [20] Fan FF, Xu Q, Sun Q, et al. Assessment of the Reporting Quality of Randomized Controlled Trials on Treatment of Coronary Heart Disease with Traditional Chinese Medicine from the Chinese Journal of Integrated Traditional and Western Medicine: A Systematic Review [J]. *PLoS One*, 2014, 9(1): e86360

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- [15] Chang H J, Quan Y P, Chen S Z, et al. Change of brain natriuretic peptide levels and improved toast classification of acute cerebral infarction and the relationship between the prognosis[J]. *Journal of cardio-cerebrovascular disease prevention and control*, 2016, 16 (3): 194-196
- [16] Nong X G, Cheng W P. Patients with acute cerebral infarction before and after treatment serum Hey, hs CRP, BNP and plasma D-dimer level variation analysis [J]. *Journal of community medical journal*, 2015, 13(15): 28-30
- [17] Li X Y, Zhang P A. Dynamic detection of serum called S100B protein and homocysteine value to the diagnosis of acute cerebral infarction [J]. *Chinese journal of practical neurological diseases*, 2016, 19 (4): 49-51
- [18] Zhu R X, Yuan J, Li P, et al. Degree of nerve function defect in patients with acute cerebral infarction and ox-LDL, hs-CRP, Hey.IMP of correlation study [J]. *Journal of Beijing medicine*, 2015, 37 (5): 441-444
- [19] Chen J, Liu W P, Peng Z H, et al. FIB and hs-CRP levels and recurrent cerebral infarction severity and correlation analysis [J]. *Modern biomedical progress*, 2015, 15(17): 3307-3309
- [20] Wang L L, He Y M, Hao C J. Red shu cut statin combination of coenzyme Q10 treatment of chronic heart failure after serum inflammatory index, serum brain natriuretic peptide and the changes of cardiac function[J]. *China medical review*, 2016, 13(6): 166-169