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芪苈强心胶囊联合左卡尼汀注射液对慢性心力衰竭的疗效探讨*

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摘要 目的:研究芪苈强心胶囊联合左卡尼汀注射液对慢性心力衰竭的疗效。**方法:**选择 2016 年 1 月~2019 年 1 月我院收治的 85 例慢性心力衰竭患者,随机分为两组。对照组静脉滴注左卡尼汀注射液,观察组联合口服芪苈强心胶囊。检测两组治疗前后的心功能、心室重构、血浆脑钠素 N 端前体肽(N-terminal pro peptide of brain natriuretic peptide, NT-pro BNP)、高敏 C 反应蛋白(High sensitive C-reactive protein, hs-CRP)水平。**结果:**观察组治疗的总有效率为 88.09 % (37/42), 明显高于对照组的 67.44 % (29/43) ($P<0.05$)。治疗前,两组的左心室舒张末期径(End diastolic diameter of left ventricle, LVEDd)、心率(heart rate, HR)、左心室收缩末期径(Left ventricular end systolic diameter, LVESd)、左室射血分数(Left ventricular ejection fraction, LVEF)、心排量(Cardiac output, CO)和 E 峰 /A 峰的比值(E peak /A peak, E/A)均无显著差异($P>0.05$);治疗后,两组的 LVEDd、HR 和 LVESd 均明显降低($P<0.05$), LVEF、CO 和 E/A 均明显升高($P<0.05$), 且观察组上述指标明显优于对照组($P<0.05$)。治疗前,两组的血浆 NT-pro BNP、hs-CRP 水平比较无差异($P>0.05$);治疗后,两组的血浆 NT-pro BNP、hs-CRP 水平均明显降低($P<0.05$), 且观察组明显低于对照组($P<0.05$)。对照组发生胃肠道反应 3 例,头痛 3 例,不良反应的发生率为 13.95 %;观察组发生胃肠道反应 4 例,头痛 3 例,不良反应的发生率为 16.67 %。两组不良发生的情况无统计学意义($P>0.05$)。**结论:**芪苈强心胶囊联合左卡尼汀注射液能改善慢性心力衰竭患者的心室重构及心功能,降低炎症标志物和神经内分泌激素水平,值得进行推广。

关键词:芪苈强心胶囊;左卡尼汀注射液;慢性心力衰竭

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Effect of Qiliqiangxin Capsule Combined with Levocarnitine Injection on Chronic Heart Failure*

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ABSTRACT Objective: To study the effect of Qiliqiangxin capsule combined with Levocarnitine injection on chronic heart failure. **Methods:** Selected 85 cases of patients with chronic heart failure who were treated in our hospital from January 2016 to January 2019, divided into two groups randomly. The control group was given levocarnitine injection, and the observation group was given Qiliqiangxin capsule. The cardiac function, ventricular remodeling, N-terminal pro peptide of brain natural peptide (NT Pro BNP) and high sensitive C-reactive protein (hs CRP) were measured before and after treatment. **Results:** The total effective rate of the observation group was 88.09 % (37/42), significantly higher than that of the control group (67.44 %)(29/43)($P<0.05$). Before treatment, the LVEDd, HR, LVESd, and LVEF, CO and (E/A) were not significantly different($P>0.05$). After treatment, LVEDd, HR and LVESd were significantly decreased in two groups($P<0.05$), and LVEF, CO and E/A were significantly increased($P<0.05$). The above indicators in the observation group were significantly better than the control group ($P<0.05$). Before treatment, there was no difference in plasma NT-pro BNP and hs-CRP levels between the two groups ($P>0.05$). After treatment, the levels of NT-Pro BNP and hs-CRP in the two groups were significantly reduced ($P<0.05$), and the observation group were significantly lower than those in the control group ($P<0.05$). In the control group, gastrointestinal reactions occurred in 3 cases, and headache occurred in 3 cases, and the incidence of adverse reactions was 13.95 %. In the observation group, 4 cases of gastrointestinal reactions, 3 cases of headache, and the incidence of adverse reactions was 16.67 %. The incidence of adverse reactions in the two groups was not statistically significant ($P>0.05$). **Conclusion:** Qiliqiangxin capsule combined with Levocarnitine injection can improve the ventricular remodeling and cardiac function in patients with chronic heart failure, reduce the level of inflammatory markers and neuroendocrine hormones, which is worthy of promotion.

Key words: Qiliqiangxin Capsule; Levocarnitine Injection; Chronic Heart Failure

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前言

慢性心力衰竭是心血管内科的多发病及常见病,该病是各种心脏疾病逐渐发展至终末阶段时产生的一种极为复杂病症,其症状包含呼吸困难、心悸、肺部啰音和下肢水肿等^[1-4]。其发生是因受到各种因素的影响而造成机体的心肌舒缩功能出现障碍,心脏的排血量降低,继而引发血流动力学障碍,心肌肥厚,心脏结构改变,心室重构,最后造成心室泵血功能降低^[5-8]。随着医学的迅速发展,西医治疗慢性心力衰竭的方法不断完善,但是仍存在多种问题,如用药的禁忌症较多,无法完全改善症状,患者无法耐受副作用等^[9-11]。中医认为,心气虚是心力衰竭患者最常见的一种症候,该病最基本的病理机制是气虚血瘀。芪苈强心胶囊以活血通络、益气温阳、祛瘀利水为治疗原则,对增加劳力耐受程度和改善心功能有较好的效果,能有效缓解患者的乏力、气短胸闷、尿少水肿以及心悸不安等症状^[12]。但是对心功能的研究较少,本研究在静脉滴注左卡尼汀等西医疗法的基础上联合口服芪苈强心胶囊,分析其对心力衰竭患者心室重构、心功能、炎症标志物和神经内分泌激素水平的影响。

1 资料与方法

1.1 一般资料

选择 2016 年 1 月~2019 年 1 月我院收治的 85 例慢性心力衰竭患者,均符合 1985 年 Carlson Boston 的诊断标准,对芪苈强心胶囊和左卡尼汀注射液不过敏,均知情同意。排除标准:(1)并发未控制的感染、严重的肝肾功能不全、严重的电解质紊乱的患者;(2)不稳定型心绞痛、急性心功能不全、急性心肌梗死、恶性心律失常、心源性休克患者;(3)有自身免疫性疾病或者近期使用过免疫抑制药的患者;(4)严重过敏体质患者;(5)并发肿瘤的患者。用抽签法随机分为两组。观察组 42 例,男 24 例,女 18 例;年龄 43~80 岁,平均 (59.76 ± 8.34) 岁;病程 4~23 年,平均 (13.76 ± 1.45) 年;基础疾病:肥厚型非梗阻性心肌病 1 例,冠心病 33 例,风湿性心脏病 3 例,先天性心脏病 3 例,扩张性心肌病 2 例。对照组 43 例,男 25 例,女 18 例;年龄 43~80 岁,平均 (58.93 ± 7.25) 岁;病程 4~23 年,平均 (14.13 ± 1.73)

年;基础疾病:肥厚型非梗阻性心肌病 1 例,冠心病 34 例,风湿性心脏病 3 例,先天性心脏病 3 例,扩张性心肌病 2 例。两组的一般资料无差异。

1.2 治疗方法

按照每例患者的具体情况采取相应的基础疾病治疗,如无禁忌者采取醛固酮受体拮抗剂、ACEI 和 β -受体阻滞剂等标准治疗。对照组:静脉滴注左卡尼汀(广州白云山天心制药,国药准字 H20123295),每次 1 g,每天 1 次。观察组:在左卡尼汀的基础上,口服芪苈强心胶囊(石家庄以岭药业,国药准字 Z20040141),每次 1.2 g,每天 3 次。均治疗 1 个月。

1.3 观察指标

疗效标准:① 显效:患者症状明显改善,心律失常减少幅度大于 90%,心功能分级提高超过 2 级;② 有效:症状有所改善,心律失常减少幅度大于 50%,心功能分级提高超过 1 级;③ 无效:症状无任何改变,心律失常和心功能无改变。

心功能指标:治疗前后,采用超声心动图检测左心室舒张末期径(End diastolic diameter of left ventricle, LVEDd)、心排量(Cardiac output, CO)、左心室收缩末内径(Left ventricular end systolic diameter, LVESD)、心率(heart rate, HR)、左室射血分数(Left ventricular ejection fraction, LVEF),并且计算 E 峰/A 峰的比值(E peak / A peak, E/A)。

治疗前后,用免疫散射比浊法检测 hs-CRP 水平,试剂盒购自上海信帆生物科技有限公司;用 E170 全自动电化学发光分析仪检测血浆 NT-pro BNP 水平。

观察患者胃肠道反应、头痛的发生情况。

1.4 统计学分析

采用 SPSS 20.0,计量资料行 t 检验,计数资料用 χ^2 检验, $P < 0.05$ 为差异有统计学意义。

2 结果

2.1 疗效比较

观察组治疗的总有效率为 88.09% (37/42),显著高于对照组的 67.44% (29/43), ($P < 0.05$),见表 1。

表 1 疗效比较[例(%)]

Table 1 Comparison of the clinical effect [n(%)]

Groups	n	Effective	Valid	Invalid	The total effect rate
Control group	43	11(25.58)	18(41.86)	14(32.56)	29(67.44)
Observation group	42	17(40.48)	20(47.62)	5(11.90)	37(88.09)*

Note: Compared with the control group, * $P < 0.05$.

2.2 心功能和心室重构比较

治疗前,两组的 LVEDd、HR、LVESd、LVEF、CO 和 E/A 均无显著差异($P > 0.05$);治疗后,两组的 LVEDd、HR 和 LVESd 均降低,LVEF、CO 和 E/A 均升高,且观察组上述指标均优于对照组($P < 0.05$),见表 2。

2.3 血浆 NT-pro BNP、hs-CRP 水平比较

治疗前,两组的血浆 NT-pro BNP、hs-CRP 水平比较无差

异($P > 0.05$);治疗后,两组的血浆 NT-pro BNP、hs-CRP 水平均明显降低($P < 0.05$),且观察组明显低于对照组($P < 0.05$),见表 3。

2.4 不良反应

对照组发生胃肠道反应 3 例,头痛 3 例,不良反应的发生率为 13.95%;观察组发生胃肠道反应 4 例,头痛 3 例,不良反应的发生率为 16.67%。两组不良发生的情况无统计学意义($P > 0.05$)。

表 2 心功能和心室重构比较($\bar{x} \pm s$)Table 2 Comparison of cardiac function and ventricular remodeling($\bar{x} \pm s$)

Groups	n		HR(Time/min)	LVEF(%)	LVEDd(mm)	CO(L/min)	LVESd(mm)	E/A
Control group	43	Before treatment	91.34± 12.56	32.67± 4.13	56.92± 5.34	3.54± 0.27	48.36± 5.27	0.72± 0.13
		After treatment	79.38± 11.45 [#]	40.31± 3.27 [#]	52.17± 4.36 [#]	4.39± 0.31 [#]	46.21± 4.73 [#]	0.94± 0.22 [#]
Observation group	42	Before treatment	92.78± 13.14	31.53± 3.92	55.73± 5.42	3.55± 0.24	49.13± 5.34	0.71± 0.14
		After treatment	72.13± 10.04 ^{*#}	48.19± 5.73 ^{*#}	43.87± 3.25 ^{*#}	5.23± 0.34 ^{*#}	44.53± 3.27 ^{*#}	1.19± 0.25 ^{*#}

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

表 3 血浆 NT- pro BNP、hs- CRP 水平比较($\bar{x} \pm s$)Table 3 Comparison of plasma NT Pro BNP and hs CRP levels ($\bar{x} \pm s$)

Groups	n		NT- pro BNP (pg/mL)	hs-CRP (mg/L)
Control group	43	Before treatment	4673.12± 124.53	12.39± 2.75
		After treatment	2471.76± 109.24 [#]	10.13± 1.23 [#]
Observation group	42	Before treatment	4671.53± 125.84	12.24± 2.41
		After treatment	1875.24± 103.43 ^{*#}	8.27± 1.05 ^{*#}

3 讨论

慢性心力衰竭是因为心脏功能性或器质性疾病对机体的心室充盈以及心室射血能力造成损害而导致的一组临床综合征,具有病情逐渐加剧以及反复发作的特点,病死率极高^[13-15]。当前,临床上治疗该种疾病的原则主要是抑制神经内分泌系统的过度激活以及改善心室重塑^[16,17]。目前的治疗药物已经由以往的强心、扩血管以及利尿转变成以 ACEI 阻断剂、利尿剂以及 β 受体阻滞剂为主要的疗法^[18-20]。虽然冠脉血运重建和慢性心力衰竭的规范治疗等治疗方法可以显著改善患者的预后,但是中老年患者常常并发多器官功能受损,或血压和心率异常等导致 ACEI 类药物、洋地黄类药物、 β 受体阻断药剂量受限或不能使用^[21,22]。另外,尽管利尿药能迅速减轻患者的症状,但是容易引发严重的电解质紊乱,明显升高室性心律失常的发生率^[23]。

中医认为,心力衰竭属于“痰饮”、“胸痹”以及“水肿”等的范畴。该病的病位在心,但是与脾、肺、肾的功能紊乱紧密相关。心力衰竭的病理基础为本虚标实,标以痰、瘀、水湿为主,虚以阳虚和气虚为主,且能累及其它的脏腑。该病的病机主要为血运无力、心阳不足、津液失运、脉络瘀滞、水湿停聚。芪蒯强心胶囊由附子、黄芪、丹参、人参、葶苈子、红花、泽泻、香加皮、玉竹、陈皮、桂枝等中药组成,具有活血通络、补气升阳等功效^[24]。其功效与西医治疗慢性心力衰竭患者的扩管、强心、利尿具有相似之处。芪蒯强心胶囊中,黄芪具有益卫固表、益气升阳、利水消肿的作用,专治虚性水肿;现代药理研究表明,黄芪可以增强心肌的收缩功能,抑制血管收缩,降低血浆 NT-pro BNP 水平,抑制心脏重塑,增加心排量,改善心功能。泽泻利水消肿、健脾渗湿;人参补气通路,香加皮强心利尿,附子温阳化气,陈皮畅气机,桂枝辛温通路,温阳化气,玉竹补养精神、生津止咳、滋阴补气;红花具有抗氧化、抗血栓、抗心肌损伤的作用。葶苈子具有泻肺行水的作用,现代药理学研究表明,葶苈子主要含

有强心苷类、异硫氰酸类以及脂肪酸类,能增加心输出量,增强心肌收缩力,降低心排量,减轻心脏负荷,降低静脉压^[25]。

心力衰竭的主要病理生理基础是神经内分泌系统的激活以及心室重构^[26]。研究发现,慢性心力衰竭的病理生理与炎症反应的激活紧密相关,心力衰竭发生时,白介素(IL)-6、肿瘤坏死因子(TNF)- α 、IL-1 等炎症因子可以进一步刺激肝脏合成以及分泌 hs-CRP^[27,28]。NT-pro BNP 主要在心肌细胞受到压力负荷增高时,左心室分泌,比 BNP 稳定,且半衰期长,因此更加适用于临床检测^[29,30]。本研究发现,治疗后,观察组的 LVEDd、HR、LVESd、LVEF、CO 和 E/A 明显优于对照组,观察组的血浆 NT-pro BNP、hs- CRP 水平明显低于对照组。表明芪蒯强心胶囊能抑制心室重构,改善心功能,降低炎症反应,调控神经内分泌系统,且无不良反应,显示出了芪蒯强心胶囊在治疗心力衰竭方面的综合优势。

综上所述,芪蒯强心胶囊联合左卡尼汀注射液能改善慢性心力衰竭患者的心室重构及心功能,降低炎症标志物和神经内分泌激素水平,值得进行推广。

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