

米力农治疗慢性充血性心力衰竭急性加重期的临床观察

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摘要 目的:观察米力农治疗慢性充血性心力衰竭(CCHF)急性加重期的临床疗效和安全性。方法:将100例CCHF急性加重期患者随机均分为对照组和观察组。对照组患者给予血管紧张素转化酶抑制剂、 β 受体阻滞药、利尿药、醛固酮受体拮抗药、洋地黄等常规治疗。观察组患者在对照组治疗的基础上给予米力农0.3 mg/kg加入5%葡萄糖液注射液50 ml中,微量泵持续泵入, qd。两组患者疗程均为5 d。观察两组患者的临床疗效,治疗前后心脏指数(CI)、左心室舒张末期内径(LVEDD)、左心室射血分数(LVEF)、心胸比率(CTR)、氨基末端B型利钠肽前体(NT-proBNP)含量及不良反应发生情况。结果:两组患者总有效率比较差异无统计学意义($P>0.05$)。治疗后,两组患者LVEDD、CTR均显著低于同组治疗前,差异均有统计学意义($P<0.01$),但两组间比较差异无统计学意义($P>0.05$); CI、LVEF均显著高于同组治疗前($P<0.01$),且观察组高于对照组($P<0.05$); NT-proBNP显著低于同组治疗前($P<0.01$),且观察组低于对照组($P<0.05$)。两组患者治疗期间均未见明显不良反应发生。结论:米力农治疗CCHF急性加重期的疗效和安全性与常规治疗相当,但在改善心功能方面优于常规治疗。

关键词 米力农;慢性充血性心力衰竭;急性加重期;心功能;疗效;安全性

Clinical Observation of Milrinone in the Treatment of Chronic Congestive Heart Failure in Acute Exacerbation Stage

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ABSTRACT OBJECTIVE: To observe the clinical efficacy and safety of milrinone in the treatment of chronic congestive heart failure (CCHF) in acute exacerbation stage. METHODS: 100 patients with CCHF were randomly divided into control group and observation group. Patients in control group were given routine treatment, including angiotensin converting enzyme inhibitors, β blockers, diuretics, aldosterone receptor antagonists and digitalis, etc. Based on the treatment of control group, patients in the observation group were given milrinone 0.3 mg/kg adding into 5% glucose injection 50 ml and it was continuously pumped with micro pump, once a day. The course of both was 5 d. The clinic data was observed, including clinical efficacy, CI, LVEDD, LVEF, CTR, NT-proBNP before and after treatment and ADR. RESULTS: There were no significant difference in the clinical efficacy between 2 groups ($P>0.05$). After treatment, the LVEDD and CTR in 2 groups were significantly lower than before, with significant difference ($P<0.01$), but there was no significant difference between 2 groups ($P>0.05$). The CI and LVEF in 2 groups were significantly higher than before ($P<0.01$) and observation group was higher than control group ($P<0.05$); the NT-proBNP was significantly lower than before ($P<0.01$) and observation group was lower than control group ($P<0.05$). There were no obvious adverse reactions during the treatment. CONCLUSIONS: Milrinone has similar efficacy and safety with routine treatment in the treatment of CCHF; however, it is better than routine treatment in improving the heart function.

KEYWORDS Milrinone; Chronic congestive heart failure; Acute exacerbation stage; Heart function; Efficacy; Safety

充血性心力衰竭(CHF)是一种常见的、严重威胁人类生命安全的疾病,也是多种心血管疾病的终末表现。该病预后极差。对慢性充血性心力衰竭(CCHF)心功能急性恶化患者的治疗较困难,患者常因病情加重而导致死亡。米力农为非洋地黄、非儿茶酚胺类强心药,对血管平滑肌有直接的松弛作

用,可降低CCHF患者心脏前后负荷、体循环血管阻力、肺循环血管阻力、肺动脉平均压,可显著增加肺毛细血管楔嵌压、心输出量、心脏指数(CI)和脉搏指数,但不增加心肌耗氧量。在本研究中笔者观察了米力农治疗CCHF急性加重期患者的临床疗效和安全性,以为临床治疗提供参考。

1 资料与方法

1.1 资料来源

选取2012年1月—2014年9月我院收治的100例CCHF

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急性加重期患者,均诊断为慢性收缩性左心室功能衰竭。纳入标准:(1)左心室增大、左心室收缩末期容量增加、左心室射血分数(LVEF)≤40%;(2)有基础心脏病史;(3)有呼吸困难、乏力和液体潴留(水肿)等症状。排除舒张性心力衰竭^[1]。按随机

数字表法将所有患者均分为对照组和观察组。两组患者年龄、性别等基本资料比较,差异均无统计学意义($P>0.05$),具有可比性,详见表1。本研究方案经我院医学伦理委员会批准,所有患者家属均知情同意且签署了知情同意书。

表1 两组患者基本资料比较($\bar{x}\pm s$)

Tab 1 Comparison of general information between 2 groups($\bar{x}\pm s$)

组别	n	年龄,岁	男性/女性,例	心胸比率(CTR),%	LVEF,%	左室舒张末期内径(LVEDD),mm	纽约心脏协会心功能(NYHA)分级,例	
							III	IV
对照组	50	54.5±11.5	27/23	65.2±3.3	33.7±3.4	67.3±3.2	30	20
观察组	50	55.1±10.9	25/25	64.8±2.8	34.3±2.9	67.8±4.1	32	18

1.2 治疗方法^[2]

对照组患者给予血管紧张素转化酶抑制剂、β受体阻滞药、利尿药、醛固酮受体拮抗药、洋地黄等常规治疗。观察组患者在对照组治疗的基础上给予米力农注射液(山东鲁南制药股份有限公司,规格:5 mg:5 ml)0.3 mg/kg加入5%葡萄糖液注射液50 ml中,以0.2 μg/(kg·min)微量泵持续泵入,qd。两组患者疗程均为5 d。

1.3 观察指标

观察两组患者治疗前后CI、LVEDD、LVEF、CTR、氨基末端B型利钠肽前体(NT-proBNP)含量及不良反应发生情况。

1.4 疗效判定标准

显效:心功能改善≥Ⅱ级;有效:心功能改善≥Ⅰ级;无效:未达上述标准。总有效率=(显效例数+有效例数)/总例数×100%。

1.5 统计学方法

采用SPSS 13.0统计软件对所得数据进行分析。计量资料以 $\bar{x}\pm s$ 表示,采用t检验;计数资料以率表示,采用 χ^2 检验,两两比较采用单因素方差分析。 $P<0.05$ 为差异有统计学意义。

2 结果

表3 两组患者治疗前后CI、LVEDD、LVEF、CTR、NT-proBNP比较($\bar{x}\pm s$)

Tab 3 Comparison of CI, LVEDD, LVEF, CTR and NT-proBNP between 2 groups before and after treatment($\bar{x}\pm s$)

组别	n	时间	CI,L(min·m ²)	LVEDD,mm	LVEF,%	CTR,%	NT-proBNP,pg/ml
对照组	50	治疗前	1.87±0.25	67.3±3.2	33.7±3.4	65.2±3.3	4 365.2±562.5
		治疗后	2.26±0.30*	63.9±3.6*	46.3±5.8*	63.6±2.7*	3 426.4±834.7*
观察组	50	治疗前	1.79±0.22	67.8±4.1	34.3±2.9	64.8±2.8	4 487.6±783.8
		治疗后	2.85±0.41**	63.2±4.2*	52.1±6.4**	62.1±2.6*	2 821.3±912.6**

注:与治疗前比较,* $P<0.01$;与对照组比较,** $P<0.05$

Note: vs. before treatment,* $P<0.01$; vs. control group,** $P<0.05$

2.3 不良反应

两组患者治疗期间均未见明显不良反应发生。

3 讨论

磷酸二酯酶抑制剂(PDEs)为一种抑制磷酸二酯酶(PDE)活性的药物。米力农为选择性的PDE3^[3],可通过抑制PDE,抑制细胞内第二信使环磷酸腺苷(CAMP)的裂解,增加心肌细胞内CAMP浓度,产生正性肌力作用;同时还可增加血管平滑肌细胞内CAMP浓度,产生扩张血管的作用。PDE3对β肾上腺素受体功能缺陷的CHF患者意义重大。在治疗急慢性、顽固性CHF的过程中,当利尿药、血管扩张药、洋地黄等药物治疗效果不佳时,PDE3具有显著疗效。本研究中,两组患者CI、LVEF均显著高于同组治疗前,且观察组高于对照组。这表明米力农可在短期内快速改善CCHF患者的左心室功能。

有研究表明,心脏病变所致的长期的血流动力学负荷增大、神经激素的激活、容量及压力负荷等多种因素均可造成左心室重构^[4]。左心室重构包括左心室大小、形状和功能的改

2.1 两组患者临床疗效比较

两组患者总有效率比较差异无统计学意义($P>0.05$),详见表2。

表2 两组患者临床疗效比较(例)

Tab 2 Comparison of clinical efficacy between 2 groups (case)

组别	n	显效	有效	无效	总有效率,%
观察组	50	30	16	4	92.0
对照组	50	18	26	6	88.0

2.2 两组患者治疗前后CI、LVEDD、LVEF、CTR、NT-proBNP比较

治疗前,两组患者CI、LVEDD、LVEF、CTR、NT-proBNP比较,差异均无统计学意义($P>0.05$)。治疗后,两组患者LVEDD、CTR均显著低于同组治疗前,差异有统计学意义($P<0.05$),但两组间比较差异无统计学意义($P>0.05$);CI、LVEF显著高于同组治疗前($P<0.01$),且观察组高于对照组,差异均有统计学意义($P<0.05$);NT-proBNP显著低于同组治疗前($P<0.01$),且观察组低于对照组,差异均有统计学意义($P<0.05$),详见表3。

变,而CTR增加、心室增大是判定心室重构的重要标准^[4]。在本研究中,治疗后两组患者LVEDD、CTR均显著低于同组治疗前。这表明,短期应用米力农并不能影响左心室重构,而更多表现在对左心室收缩功能的影响上。

NT-proBNP是脑钠肽前体被蛋白酶分解后的产物,是由心肌细胞合成的心源性神经激素,在CCHF诊断中具有高度的敏感性和特异性。研究证实,NT-proBNP水平可随NYHA增加而明显升高,病情改善后可随NYHA减少而降低^[5]。本研究中,两组患者NT-proBNP均显著低于同组治疗前,且观察组低于对照组。这表明患者心功能得到显著改善。

米力农的心血管效应与其剂量大小有关,小剂量时主要表现为正性肌力作用;当剂量加大,特别是负荷剂量时,其扩张血管的作用随剂量的增加而增强,但患者可出现低血压现象。有研究发现,对米力农血药浓度的监测,有助于提高心力衰竭患者使用米力农的安全性^[6]。当米力农剂量为(0.20±0.06)μg/(kg·min)时可达治疗水平^[2]。而本研究中,观察组患

六味地黄丸联合二甲双胍治疗2型糖尿病伴肥胖的临床观察

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摘要 目的:观察六味地黄丸联合二甲双胍治疗2型糖尿病伴肥胖的临床疗效和安全性。方法:将80例2型糖尿病伴肥胖患者随机均分为对照组与观察组。对照组患者给予二甲双胍片1片,口服,bid,2周内逐渐增加至2片;如患者出现胃肠道反应则剂量改为1片,口服,tid。观察组患者在对照组治疗的基础上加用六味地黄丸8粒,口服,tid。两组患者疗程均为12周。观察两组患者的临床疗效,治疗前后空腹血糖(FPG)、餐后2h血糖(2h PG)、糖化血红蛋白(HbA_{1c})、甘油三酯(TG)、总胆固醇(TC)、高密度脂蛋白胆固醇(HDL-C)、体质量指数(BMI)及不良反应发生情况。结果:观察组患者总有效率显著高于对照组,差异有统计学意义($P<0.05$)。治疗后,两组患者FPG、2h PG、HbA_{1c}、TC、TG均显著低于同组治疗前,且观察组低于对照组;HDL-C、BMI均显著低于同组治疗前,差异均有统计学意义($P<0.05$)。两组患者治疗期间均未见明显不良反应发生。结论:六味地黄丸联合二甲双胍治疗2型糖尿病伴肥胖较单用二甲双胍疗效更显著,安全性相似。

关键词 2型糖尿病;肥胖;六味地黄丸;二甲双胍;疗效;安全性

Clinical Observation of Liuwei Dihuang Pills Combined with Metformin in the Treatment of Obese Patients with Type 2 Diabetes

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ABSTRACT OBJECTIVE: To observe the clinical efficacy and safety of Liuwei dihuang pills combined with metformin in the treatment of obese patients with type 2 diabetes. METHODS: Totally 80 obese patients with type 2 diabetes were randomly divided into control group and observation group. Patients in control group were orally given metformin 1 pill, bid; gradually increased to 2 pills; 1 pill for the patients with gastrointestinal reactions, tid. Patients in observation group were added Liuwei dihuang pills 8 pills based on the treatment of control group, tid. The course of both was 12 weeks. The clinic data was observed, including clinical efficacy, FPG, 2 h PG, HbA_{1c}, TG, TC, HDL-C and BMI before and after treatment and ADR. RESULTS: The total effective rate in observation group was higher than control group, with significant difference ($P<0.05$). After treatment, the FPG, 2 h PG, HbA_{1c}, TC and TG in 2 groups were significantly lower than before and observation group was lower than control group; HDL-C and BMI were significantly lower than before, with significant difference between 2 groups ($P<0.05$). There were no obvious adverse reactions during the treatment. CONCLUSIONS: Liuwei dihuang pills combined with metformin have more significant efficacy than only metformin in the treatment of obese patients with type 2 diabetes with similar safety.

KEYWORDS Type 2 diabetes; Obesity; Liuwei dihuang pills; Metformin; Efficacy; Safety

者给予米力农0.2 μg/(kg·min)时未发生心律失常及低血压事件。这表明短期小剂量应用米力农治疗CCHF安全性较好。

综上所述,米力农治疗CCHF急性加重期的疗效和安全性与常规治疗相当,但在改善心功能方面优于常规治疗。由于本研究纳入的样本量较小,此结论有待大样本、多中心研究进一步证实。

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