doi: 10.13241/j.cnki.pmb.2017.07.031

丹红注射液对急性脑梗死患者血尿酸与胆红素水平的影响 *

刘 芳[1] 李 毅[1] 刘 刚[1] 王 巍[1] 张 琪[2]

（1 天津市环湖医院 内科 天津 300350；2 天津医科大学总医院 急诊科 天津 300052）

摘要 目的：探究丹红注射液对急性脑梗死患者血尿酸与胆红素水平的影响。**方法：**选取 2015 年 2 月到 2016 年 2 月我院神经内科收治的急性脑梗死患者 96 例，根据随机数字对照表分为对照组与试验组，每组各 48 例。对照组给予患者钙离子拮抗剂尼莫地平缓释片和抗血小板凝集剂阿斯匹林肠溶片治疗，试验组采用常规药物治疗联合给予丹红注射液治疗。观察并比较两组患者的临床疗效以及治疗前后血尿酸与胆红素水平的变化情况。**结果：**治疗后，两组患者的 NIHSS 评分及血尿酸与胆红素水平均较治疗前显著降低(P<0.05)，且与对照组相比，试验组的 NIHSS 评分及血尿酸与胆红素水平更低(P<0.05)。**结论：**丹红注射液对急性脑梗死患者具有显著的治疗效果，推测可能与降低血尿酸与胆红素的水平有关。

关键词：丹红注射液；急性脑梗死；血尿酸；胆红素

中图分类号：R743；**文献标识码：**A **文章编号：**1673-6273(2017)07-1321-03

Effects of Danhong Injection on the Serum Blood Uric Acid and Bilirubin Levels of Patients with Acute Cerebral Infarction*

LIU Fang[1], LI Yi[1], LIU Gang[1], WANG Wei[1], ZHANG Qi[2]

(1 Department of Internal Medicine, Tianjin Huanhu Hospital, Tianjin, 300350, China;

2 Department of Emergency, General Hospital of Tianjin Medical University, Tianjin, 300052, China)

ABSTRACT Objective: To investigate the effects of Danhong injection on the serum blood uric acid and bilirubin levels of patients with acute cerebral infarction. **Methods:** 96 patients with acute cerebral infarction who were treated in the neurology department of our hospital from February 2015 to February 2016 were selected and randomly divided into the control group and experiment group, with 48 cases in each group. Patients in the control group were treated with conventional drugs treatment, including calcium antagonists nimodipine sustained release tablets. Patients in the experiment group adopted routine drugs treatment combined with Danhong injection. After treatment, the clinical efficacy, serum blood uric acid and bilirubin levels were compared between two groups. **Results:** After treatment, the NIHSS scored of the two groups decreased (P<0.05), blood uric acid and bilirubinwere lower than before treatment (P<0.05); compared with the control group, the NIHSS scored of the experiment group significantly reduced, blood uric acid and bilirubin decreased obviously (P<0.05). **Conclusion:** Danhong injection in the treatment of patients with acute cerebral infarction has a obvious effect, speculate thatis relate to reduce the blood uric acid and bilirubin levels.

Key words: Danhong injection; Acute cerebral infarction; Blood uric acid; Bilirubin

Chinese Library Classification(CLC): R743 Document code: A

Article ID: 1673-6273(2017)07-1321-03

前言

急性脑梗死在中医上属于＂中风＂范畴，占脑血管疾病的50%以上，由于其发病急、病情变化快，致残率及致死率较高[1]。目前，临床上脑梗死主要以西药治疗为主，近年来大量研究表明丹红注射液对于急性脑梗死患者有较好的治疗效果，能够改善脑部血流供应，抑制血小板聚集，抑制炎性介质，保护脑组织免受损伤[2,3]。血尿酸及胆红素与急性脑梗死关系密切，当发生脑梗死时，血尿酸及胆红素水平升高，同时血尿酸及胆红素水平的升高还会加重脑梗死的病情，因此这两项指标能够作为评价脑梗死病情的发展情况[4,5]。但目前关于丹红注射液是否对急性脑梗死患者血尿素及胆红素有影响尚无报道，本研究以神经内科收治的 96 例急性脑梗死患者为研究对象，探讨丹红注射液对急性脑梗死患者临床疗效、血尿酸与胆红素水平的影响。

1 资料与方法

1.1 临床资料

本研究选取 2015 年 2 月到 2016 年 2 月我院神经内科收治的急性脑梗死患者 96 例，纳入标准：①按照 2014 年制定的《中国急性期缺血性脑卒中诊疗指南》中的诊断标准，病人常在安静状态下突然出现一侧肢体麻木、一侧口角歪斜、语言困难等症状，同时影像学检查颅脑 MRI 或 CT 确诊为脑梗死；②发病在 48 h 以内；③患者依从性良好，患者本人或其家属知情并同意参与本试验。排除标准：①脑梗死非急性期，病情稳定的患

* 基金项目：天津市卫生厅科研基金项目(110544)

作者简介：刘芳(1972-)，本科，主治医师，研究方向：内科、脑血管病，电话：13102118048

(收稿日期：2016-08-24 接受日期：2016-09-21)

者;②因外伤、脑肿瘤等脑占位性病变引起的脑梗死的患者;③存在严重并发症,如脑梗死合并脑出血等;④有严重的心脑血管、肝、肾等功能障碍;⑤有自身免疫性疾病;⑥恶性肿瘤患者;⑦有精神障碍,不能够配合治疗。按随机数字表法,将 96 例患者随机分配成两组,试验组 48 例,男女比为 28/20,平均年龄(52.33± 9.67)岁,平均病程(18.47± 7.33) h;对照组 48 例,男女比为 25/23,平均年龄(52.05± 10.18)岁,平均病程(18.05± 8.12) h。两组患者一般资料比较无统计学差异(P>0.05),具有可比性。

1.2 治疗方法

对照组采用常规药物治疗,给予患者钙离子拮抗剂尼莫地平缓释片 (江苏康缘药业股份有限公司,H20066423), 每次 60 mg,一日两次,给予患者抗血小板凝集剂,阿斯匹林肠溶片(拜阿斯匹灵,拜尔医药保健有限公司,国药准字 J20130078),每次 200 mg,每日一次,还可以适当应用神经营养药物,若出现颅内压升高给予脱水治疗,注意血压血糖的控制。试验组在常规药物治疗的基础上给予丹红注射液 (山东丹红制药有限公司,国药准字 Z20026866), 每次 20 mL, 加入 5%葡萄糖注射液 500 mL 稀释后缓慢滴注,每日 2 次。2 周为一个疗程,共治疗一个疗程。

1.3 观察指标

1.3.1 临床疗效评定指标 采用美国国立卫生研究院制定的脑卒中评估量表(NIHSS)对脑梗死患者治疗前及治疗 2 周后神经功能缺损情况进行评估,主要对患者意识水平、视野、上下肢运动、感觉及语言等方面进行评估。得分越高、神经功能损伤越严重。

1.3.2 血尿酸及胆红素水平 所有患者在确诊 24 h 内及治疗 2 周后清晨抽取 10 mL 空腹静脉血,静置 30 min 后,离心 3000 rpm× 10 min,收集血清,使用 PUS-2018G 型半自动生化分析仪测定血尿酸及胆红素水平。上述操作均由我院实验技术人员统一完成。

1.4 统计学分析

数据处理使用 SPSS13.0 软件,NIHSS 评分、血尿酸及胆红素水平采用均数± 标准差表示,使用 t 检验分析,以 P<0.05 为差异具有统计学意义。

2 结果

2.1 两组临床疗效的比较

两组患者在治疗前 NIHSS 评分比较差异无统计学意义(P>0.05)。治疗后,两组患者的 NIHSS 评分均较治疗前显著降低(P<0.05),且与对照组相比,试验组的 NIHSS 评分更低(P<0.05),见表 1。

表 1 两组患者治疗前后 NIHSS 评分比较($\bar{x}$± s,分)

Table 1 Comparison of the NIHSS score between two groups before and after treatment($\bar{x}$± s, Scores)

Groups	Time point	NIHSS score
Control group (n=48)	Before treatment	16.23± 3.14
	After treatment	11.07± 1.42*
Experimental group (n=48)	Before treatment	17.11± 3.01
	After treatment	7.13± 1.22*#

Note: Compared with before treatment,*P< 0.05. Compared with the control group, #P< 0.05.

2.2 两组治疗前后血尿酸与胆红素水平的比较

两组患者在接受治疗前血尿酸与胆红素水平比较差异无统计学意义(P>0.05)。治疗结束后,两组患者血尿酸与胆红素水平均较治疗前显著降低(P<0.05),且与对照组相比,试验组血尿酸与胆红素较低(P<0.05),见表 2。

表 2 两组患者治疗前后血尿酸与胆红素水平比较(μmol/L,$\bar{x}$± s)

Table 2 Comparison of the serum uric acid and bilirubin levels between two groups before and after treatment (μmol/L, $\bar{x}$± s)

Groups	Time point	Serum uric acid	Bilirubin
Control group (n=48)	Before treatment	323.04± 86.28	16.15± 5.70
	After treatment	287.32± 71.11*	13.81± 4.81*
Experiment group (n=48)	Before treatment	319.89± 82.85	16.28± 5.29
	After treatment	233.17± 65.90*#	11.06± 3.05*#

Note: Compared with before treatment, *P< 0.05. Compared with the control group, #P< 0.05.

3 讨论

急性脑梗死作为神经内科急性疾病之一,发病急、病情变化快,致残率及致死率较高,选择一种合适的治疗方案对于急性脑梗死患者尤为重要[6]。丹红注射液是由丹参、红花提取而来,主要有效成分为丹参酮、丹参酸及儿茶酚等,研究表明丹参能够使纤维蛋白原溶解、改善局部血流,红花能够降低白介素 8 的水平,从而抑制缺血再灌注损伤,还能改善血黏度,防止血小板聚集,同时红花能保护血管内皮,升高机体内 NO 水平及降低机体内 ET 水平,从而对缺血再灌注起到保护作用[10]。大量研究表明[7-9]丹红注射液治疗急性脑梗死有较好的效果。患者一旦出现脑梗死后,可引起脑组织血液循环受阻,造成脑组织缺血、缺氧等,从而导致脑组织损伤,而丹红注射液能够改善脑组织血液供应,改善微循环,从而保护脑组织免受损伤[11]。丹红注

射液中的丹参酸及丹参酮能够抑制血小板聚集,起到抗血栓形成作用。同时由于急性脑梗死发生的早期有炎症因子大量表达,而丹红注射液能够调节细胞因子分泌,从而抑制炎性介质的产生,起到抗炎的作用[12]。本研究小组以神经内科收治的96例急性脑梗死患者为研究对象,在常规药物治疗的基础上,联合使用丹红注射液,以评价其对急性脑梗死患者的临床疗效。治疗结束后发现,试验组NIHSS评分显著降低,说明丹红注射液对于急性脑梗死患者有较好的治疗效果。

尿酸是人体内嘌呤代谢的产物,当机体内尿酸升高时,尿酸结晶沉积在血管壁上,能够损伤血管内膜,从而促进动脉粥样硬化产生[13];尿酸增加还能够血黏度增加,血小板黏附增加,释放5-羟色胺及二磷酸腺苷,促进血栓形成;同时尿酸增加使得体内抗氧化物质减少,易于血栓形成[14]。当机体内血尿酸增加时,容易发生急性脑梗死,反之急性脑梗死患者体内尿酸水平明显高于正常人,但是当脑梗死病情稳定时,体内尿酸水平降低,因此血尿酸能够反映患者的病情变化[15]。本研究结果显示丹红注射液治疗后患者血尿酸水平明显降低,推测丹红注射液可能是通过降低患者血尿酸水平,从而起到治疗急性脑梗死的作用。

胆红素是血红蛋白分解的产物,是人体内的抗氧化剂和细胞保护剂,参与急性脑梗死的发生。胆红素一方面作为抗氧化剂能够清除氧自由基,保护脑组织[16,17],另一方面又被认为是急性脑梗死发生时缺血再灌注氧化应激反应的产物,而氧化应激反应越重,对机体的损伤越大[18]。由于急性脑梗死发生时,体内缺氧、炎性细胞增加、抗氧化剂减少导致胆红素大量增加,起到损伤组织的作用,因此胆红素的水平能够反映急性脑梗死的病情及预后[19,20]。本试验结果显示丹红注射液治疗后试验组胆红素水平明显降低,推测丹红注射液除能够降低血尿酸水平外,还能够降低患者胆红素水平,从而治疗急性脑梗死。

综上所述,丹红注射液对急性脑梗死患者有明显治疗效果,推测其与降低血尿酸与胆红素水平有关。

参考文献(References)

[1] Wen X, Wang Y, Zhang F, et al. In vivo monitoring of neural stem cells after transplantation in acute cerebral infarction with dual-modal MR imaging and optical imaging [J]. Biomaterials, 2014, 35(16): 4627-4635

[2] Takematsu M, Hoffman R S, Nelson L S, et al. A case of acute cerebral ischemia following inhalation of a synthetic cannabinoid [J]. Clinical Toxicology, 2014, 52(9): 973-975

[3] Zhou J, Zhang J. Identification of miRNA-21 and miRNA-24 in plasma as potential early stage markers of acute cerebral infarction[J]. Molecular medicine reports, 2014, 10(2): 971-976

[4] Shi D, Xia T, Feng H, et al. Evaluating the diagnostic value of vWF: Ag, DD and FDP in patients with acute cerebral infarction using ROC curves [J]. Experimental and therapeutic medicine, 2014, 7(6): 1573-1577

[5] Lin A Q, Shou J X, Li X Y, et al. Metabolic changes in acute cerebral infarction: Findings from proton magnetic resonance spectroscopic imaging [J]. Experimental and therapeutic medicine, 2014, 7(2): 451-455

[6] Jüttler E, Unterberg A, Woitzik J, et al. Hemicraniectomy in older patients with extensive middle-cerebral-artery stroke [J]. New England Journal of Medicine, 2014, 370(12): 1091-1100

[7] Gjerde G, Naess H. Risk factor burden predicts long-term mortality after cerebral infarction [J]. Acta Neurologica Scandinavica, 2014, 129(3): 173-177

[8] Liu J, Xing Y, Gao Y, et al. Changes in serum interleukin-33 levels in patients with acute cerebral infarction [J]. Journal of Clinical Neuroscience, 2014, 21(2): 298-300

[9] Hua F, Tang H, Wang J, et al. TAK-242, an antagonist for Toll-like receptor 4, protects against acute cerebral ischemia/reperfusion injury in mice[J]. Journal of Cerebral Blood Flow & Metabolism, 2015, 35(4): 536-542

[10] Berkhemer O A, Fransen P S S, Beumer D, et al. A randomized trial of intraarterial treatment for acute ischemic stroke [J]. New England Journal of Medicine, 2015, 372(1): 11-20

[11] Zhang J B, Jü X H, Wang J, et al. Serum cystatin C and cerebral microbleeds in patients with acute cerebral stroke[J]. Journal of Clinical Neuroscience, 2014, 21(2): 268-273

[12] Khatri P, Yeatts S D, Mazighi M, et al. Time to angiographic reperfusion and clinical outcome after acute ischaemic stroke: an analysis of data from the Interventional Management of Stroke (IMS III) phase 3 trial[J]. The Lancet Neurology,2014,13(6): 567-574

[13] Wijdicks E F M, Sheth K N, Carter B S, et al. Recommendations for the Management of Cerebral and Cerebellar Infarction With Swelling A Statement for Healthcare Professionals From the American Heart Association/American Stroke Associati on [J]. Stroke, 2014, 45(4): 1222-1238

[14] Chu H X, Kim H A, Lee S, et al. Immune cell infiltration in malignant middle cerebral artery infarction: comparison with transient cerebral ischemia[J]. Journal of Cerebral Blood Flow & Metabolism, 2014, 34(3): 450-459

[15] Saver J L, Goyal M, Bonafe A, et al. Solitaire™ with the Intention for Thrombectomy as Primary Endovascular Treatment for Acute Ischemic Stroke (SWIFT PRIME) trial: protocol for a randomized, controlled, multicenter study comparing the Solitaire revascularization device with IV tPA with IV tPA alone in acute ischemic stroke[J]. International Journal of Stroke, 2015, 10(3): 439-448

[16] Tokgoz S, Keskin S, Kayrak M, et al. Is neutrophil/lymphocyte ratio predict to short-term mortality in acute cerebral infarct independently from infarct volume?[J]. Journal of Stroke and Cerebrovascular Diseases, 2014, 23(8): 2163-2168

[17] Menon B K, d'Esterre C D, Qazi E M, et al. Multiphase CT angiography: a new tool for the imaging triage of patients with acute ischemic stroke[J]. Radiology, 2015, 275(2): 510-520

[18] Huang Y, Xia Z, Wei W, et al. The impact of leucoaraiosis on neurological function recovery in elderly patients with acute cerebral infarction: Clinical study involving 279 Chinese patients [J]. Journal of International Medical Research, 2014, 42(3): 857-862

[19] Kim E G, Eom T K, Kang S J. Severe visual loss and cerebral infarction after injection of hyaluronic acid gel [J]. Journal of Craniofacial Surgery, 2014, 25(2): 684-686

[20] Emberson J, Lees K R, Lyden P, et al. Effect of treatment delay, age, and stroke severity on the effects of intravenous thrombolysis with alteplase for acute ischaemic stroke: a meta-analysis of individual patient data from randomised trials [J]. The Lancet, 2014, 384(9958): 1929-1935