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药火针联合补阳还五汤加减治疗糖尿病痹症疗效及神经因子影响 *

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摘要 目的:探讨药火针联合补阳还五汤加减治疗糖尿病痹症疗效及神经因子影响。**方法:**选取我院 2017 年 1 月~2020 年 4 月所收治的 80 例糖尿病痹症患者,随机分为两组,每组 40 例,两组均给予常规西医治疗,研究组在此基础上应用药火针联合补阳还五汤加减治疗,对照组不予以其他特殊治疗,对比不同治疗方法治疗糖尿病痹症疗效及神经因子影响。**结果:**研究组患者治疗后正中神经和腓总神经的运动神经传导速度(Motor Nerve Conduction Velocity,MNCV)和感觉神经传导速(Sensory Nerve Conduction Velocity,SNCV)均明显高于对照组($P<0.05$);研究组患者治疗后人脑源性神经营养因子(brain-derived neuro-trophic factor,BDNF)、人胰岛素样生长因子 1(insulin-like growth factor 1,IGF-1)、人神经生长因子(nerve growth factor,NGF)明显高于对照组,人髓磷脂碱性蛋白(myelinBasic Protein,MBP)明显低于对照组($P<0.05$);研究组患者的治疗有效率 92.5 %明显高于对照组 75 % ($P<0.05$)。**结论:**药火针联合补阳还五汤加减治疗糖尿病痹症,可有效改善糖尿病痹症的临床症状,改善病变神经传导速度及神经因子,对改善神经功能具有显著的临床效果,可提升治疗有效率,值得临床上推广应用。

关键词:药火针;补阳还五汤加减;糖尿病痹症;疗效;神经因子

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Therapeutic Effect and Influence of Nerve Factors on Diabetic Arthralgia Treated by Herbal Fire Acupuncture Combined with Buyang Huanwu Decoction*

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ABSTRACT Objective: To explore the curative effect and the influence of nerve factor of the treatment of diabetic arthralgia by the combination of medicine fire acupuncture and Buyang Huanwu Decoction. **Methods:** 80 patients with diabetic arthralgia admitted to our hospital from January 2017 to April 2020 were randomly divided into study group and control group, 40 patients in each group. Two groups were treated with conventional western medicine. On this basis, the patients in the study group were treated with traditional Chinese medicine and fire acupuncture combined with Buyang Huanwu Decoction. The control group was not given other special treatment, and different treatment methods were compared to treat diabetic arthralgia Effect and the influence of nerve factors. **Results:** The MNCV and SNCV of median nerve and common peroneal nerve in the study group were significantly higher than those in the control group ($P<0.05$). The BDNF, IGF-1 and NGF in the study group were significantly higher than those in the control group($P<0.05$), MBP was significantly lower than the control group ($P<0.05$). **Conclusion:** The treatment of diabetic arthralgia with herbal fire acupuncture combined with Buyang Huanwu Decoction can effectively improve the clinical symptoms of diabetic arthralgia, improve the pathological nerve conduction velocity and nerve factors, have significant clinical effect on improving the nerve function, can improve the treatment efficiency, and is worthy of clinical application.

Key words: Herbal fire acupuncture; Buyang Huanwu Decoction addition and subtraction; Diabetic arthralgia; Curative effect; Nerve factor

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前言

糖尿病痹症是糖尿病一种常见并发症,据资料数据统计^[1],

糖尿病患者 10 年内并发症率为 60 %,甚至导致致残^[1,2]。硫酸是临床治疗糖尿病痹症的常用药,可有效改善临床症状,但是难以抑制病情发展。中医学理论表明,糖尿病痹症主要病

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机是消渴迁久而造成脉络瘀阻、血行淤滞、气阴耗损等^[3]。药火针、补阳还五汤均是中医治疗糖尿病痹症的重要方法,长期应用在糖尿病痹症治疗中,并获得了患者好评^[4,5]。但是关于两者联合用于糖尿病痹症治疗的报道较少,对此,本研究选取我院2017年-2020年所收治的80例糖尿病痹症患者开展研究,探讨药火针联合补阳还五汤加减治疗糖尿病痹症疗效。

表1 两组一般资料对比

Table 1 Comparison of general data between the two groups

Groups	n	Gender (male / female)	Age (years)	Course of disease (years)	Disease grade (n)		
					Light	Moderate	Severe
Research Group	40	23/17	61.35± 6.54	5.24± 1.60	14	20	6
Control group	40	22/18	61.40± 6.51	5.28± 1.61	15	21	4

1.2 入选标准

纳入标准^[6,7]:经临床表现、既往病史,结合心电图、尼龙丝、温度觉等检查而确诊为糖尿病痹症;年龄20~70岁;配合治疗,临床资料完整;自愿参与本研究,并签署知情同意书。

排除标准:非糖尿病因素导致痹症;合并贫血、甲亢等影响血糖的相关疾病;合并其他自身免疫性疾病,近期有皮质类固醇激素使用史;合并心、肝、肾等严重脏器病变者;妊娠期、哺乳期妇女;精神意识障碍、依从性差者;在治疗期间使用其他药物者。

1.3 治疗方法

两组患者均给予常规西医治疗,根据患者的血糖水平予以相应降糖治疗,对于合并高血压、高胆固醇血症患者,分别予以ARB/ACEI、他汀类药物降压、降脂,指导患者合理饮食,规律休息,养成良好生活习惯。注射硫酸辛,生产企业:成都倍特药业股份有限公司,批准文号:国药准字H20183534,药品规格:6 mL:0.15 g/支,用法用量:静脉滴注12 mL,每天1次。

研究组患者在此基础上应用药火针联合补阳还五汤加减治疗,(1)药火针:糖尿病痹症分为气虚血瘀、肝肾亏虚、痰瘀阻络、寒凝血瘀四种证型,根据不同证型分别取穴:气海、穴内关、足三里、合谷、三阴交;三阴交、穴肝俞、承山、足三里、肾俞、伏兔;合谷、曲池、脾俞、足三里、三焦俞、三阴交、丰隆、解溪、太冲;外关、曲池、肾俞、命门、腰阳关、环跳、阳陵泉、绝骨、照海、足临泣、关元。根据体表穴位深浅分布进行针刺,初起连续针刺3 d,然后每2~3 d进行1次。(2)补阳还五汤加减:黄芪60 g,鸡血藤、伸筋草各30 g,川穹、赤芍、茯苓、当归、地龙、牛膝、白芍、红花、山药各15 g,甘草10 g。对于肢体发凉患者加桂枝10 g;对于湿热偏盛者加薏苡仁20 g、防己12 g;对于合并水

1 资料与方法

1.1 一般资料

选取我院2017年1月~2020年4月所收治的80例糖尿病痹症患者,将其随机分为研究组和对照组,每组40例,两一般资料如表1所示,对比无显著性差异($P>0.05$),可对比。

肿者,加车前子30 g。加水煎熬至400 mL,早晚温服。

对照组不予以其他特殊治疗,两组患者均治疗20 d。

1.4 评价指标及方法

(1)神经传导速度^[8,9]:采取肌电图仪(型号:BJABR-XL-TEK)检测正中神经和腓总神经的MNCV和SNCV,数值越高,表示传导速度越快,则表示神经神经越佳。

(2)神经因子^[10]:取患者空腹静脉血3 mL,静置15 min后,采取离心处理(3000 r/min)10 min,分离血清,-70℃待测。采取双抗体夹心ELISA测定BDNF、MBP、IGF-1、NGF,试剂盒均购于上海酶联生物科技有限公司,严格按照说明书进行操作。

1.5 疗效评定标准

评估两组疗效。麻木感、疼痛等临床症状基本消失,深浅反射达到正常标准,神经传导速度恢复正常,或比治疗前提高5 m/s,即显效。临床症状改善,深浅反射改善,神经传导速度增快,但未达到显效标准,即有效。未达到上述标准,甚至加重,即无效^[11,12]。

1.6 统计学方法

采用SPSS23.0计量资料($\bar{x} \pm s$)示,行t检验;计数资料采取%示,采取 χ^2 检验, $P<0.05$ 有统计学意义。

2 结果

2.1 神经传导速度对比

两组治疗前正中神经和腓总神经的MNCV和SNCV对比无统计学差异($P>0.05$),治疗20 d后,研究组上述指标均明显高于对照组($P<0.05$),如表2。

表2 神经传导速度对比($\bar{x} \pm s$, m/s)Table 2 Comparison of nerve conduction velocity ($\bar{x} \pm s$, m/s)

Groups	n	Median nerve MNCV		MNCV of common peroneal nerve		Median nerve SNCV		SNCV of common peroneal nerve	
		Pre-treatment	After treatment	Pre-treatment	After treatment	Pre-treatment	After treatment	Pre-treatment	After treatment
Research Group	40	43.82± 3.71	50.98± 4.30 [*]	39.72± 3.75	45.31± 4.09 [*]	43.72± 4.82	50.51± 5.30 [*]	37.80± 4.67	43.13± 5.71 [*]
Control group	40	44.01± 3.82	47.51± 4.20 [#]	39.80± 3.80	41.98± 4.03 [#]	43.70± 4.90	46.02± 4.13 [#]	37.91± 4.70	39.89± 5.15 [#]

Note: Compared with the control group, ^{*} $P<0.05$; compared with pre-treatment, [#] $P<0.05$.

2.2 神经因子对比

两组治疗前各神经因子(BDNF、MBP、IGF-1、NGF)对比无统计学差异($P>0.05$),治疗 20 d 后,两组 BDNF、IGF-1、NGF

明显升高,MBP 明显降低,其中研究组改善较对照组明显($P<0.05$),如表 3。

表 3 两组神经因子对比($\bar{x}\pm s$)

Table 3 Comparison of nerve factors between the two groups ($\bar{x}\pm s$)

Groups	n	BDNF(ng/L)		MBP(μ g/L)		IGF-1(ng/L)		NGF(ng/L)	
		Pre-treat-ment	After treatment	Pre-treat-ment	After treatment	Pre-treat-ment	After treatment	Pre-treat-ment	After treatment
Research Group	40	1.50 $\pm$ 0.39	4.46 $\pm$ 0.62* [#]	5.65 $\pm$ 0.63	1.59 $\pm$ 0.36* [#]	86.70 $\pm$ 7.09	174.32 $\pm$ 12.36* [#]	612.29 $\pm$ 50.87	951.66 $\pm$ 61.28* [#]
Control group	40	1.51 $\pm$ 0.40	3.30 $\pm$ 0.53 [#]	5.69 $\pm$ 0.65	3.21 $\pm$ 0.43 [#]	86.72 $\pm$ 7.11	150.23 $\pm$ 10.98 [#]	613.01 $\pm$ 50.76	876.53 $\pm$ 57.71 [#]

2.3 两组疗效对比

研究组的治疗有效率 92.5 %,明显高于对照组的 75 %,具

有统计学差异($P<0.05$),如表 4 所示。

表 4 两组疗效对比(例,%)

Table 4 Comparison of clinical efficacy between the two groups (n,%)

Groups	n	Marked effect	Effective	Invalid	Total effective rate
Research Group	40	21	16	3	37(92.5)*
Control group	40	15	15	10	30(75)

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

3 讨论

糖尿病若未能得到有效控制,则可能并发多种疾病,严重影响患者机体功能^[13]。痹症是糖尿病一种常见并发症,多表现为麻木、疼痛、蚁走感等神经功能障碍症状^[14,15]。目前,糖尿病痹症发病机制尚不明确,多认为和微血管病变、自身免疫、神经因子减少等因素共同作用有关^[16,17]。中医认为,该病多由于消渴迁延不愈,造成血行不畅、滞滞淤血、脉络闭塞,应予以活血化瘀、益气养阴、通络止痛治疗^[18]。

火针具有针和灸的双重功效,其具体操作是针具经火烧后快速向穴位刺入,激发局部经气,增加人体阳气,化瘀通痹、健脾益肾、益气活血、柔筋缓急、除麻止痒,达到治疗疾病目的,促进机体恢复^[19,20]。补阳还五汤中黄芪可提高网状内皮系统吞噬功能,促进新陈代谢,增强细胞耐缺氧能力;鸡血藤可活血养血;伸筋草可疏通经络;当归可增加缺血组织血流灌注,阻抗循环障碍^[21];地龙可抑制血小板异常聚集;红花可抑制血小板聚集、抑制血栓形成;川芎可扩张外周血管,保护血管内皮细胞。诸药相辅相成,达到除淤阻、行气血的作用^[22]。上述治疗方法联合应用,可促进血流流通,调理身体,改善体质,提升神经传导功能,增强提升临床效果^[23]。

神经传导速度是反应神经功能的重要指标,糖尿病痹症患者其神经传导速度明显降低,对此,早期改善神经传导速度是该病治疗目标^[24,25]。本研究对糖尿病痹症患者实施药火针联合补阳还五汤加减治疗,结果显示,研究组患者治疗后正中神经和腓总神经的 MNCV 和 SNCV 均明显高于对照组,与刘桂伶^[26]等学者的研究类似,观察补阳还五汤合增液汤加减治疗糖尿病周围神经病变的临床疗效及其对氧化应激的影响,结果显示治

疗后观察组神经症状评分,神经反射评分及感觉功能检查评分均低于对照组,治疗后观察组中医证候评分低于对照组,治疗后观察组正中神经和腓总神经的 MNCV 和 SNCV 均高于对照组。表明补阳还五汤联合阿托伐他汀可明显改善患者的有关症状,改善糖尿病神经病变有关问题,而本研究采取药火针联合补阳还五汤加减治疗同样达到相似效果,补阳还五汤可扩张动脉血管,保护血管,提高机体对阳的耐力,抑制血小板聚集,促进损伤神经再生,改善神经传导效率,并且药火针治疗费用更低,用药安全,具有更大优势。

糖尿病痹症患者的神经营养状态较差,BDNF、MBP、IGF-1、NGF 作为反应神经受损、生长状态及营养的重要指标,可有效反应患者神经生长状态^[27,28]。有研究表明,糖尿病痹症患者血清 BDNF、IGF-1、NGF 显著下降,MBP 显著上升,由此提示,BDNF、MBP、IGF-1、NGF 在糖尿病痹症病情的发展过程中起到重要作用^[29]。通过本研究结果显示,研究组患者治疗后 BDNF、IGF-1、NGF 明显高于对照组,MBP 明显低于对照组,与丁亚琴^[30]等学者的研究类似,观察针灸联合补阳还五汤对糖尿病周围神经病变患者神经功能,血清神经元特异性烯醇化酶(NSE)水平及肢体麻木的影响,结果显示观察组治疗后 MBP 低于对照组,BDNF、IGF-1 高于对照组,同时观察组治疗后麻木、疼痛、灼热感、感觉异常及总评分低于对照组。说明药火针联合补阳还五汤加减治疗法改善血清神经生长因子,由此充分证实了中医疗法对于糖尿病痹症患者神经因子改善的重要作用。

本研究结果还表明,研究组患者的治疗有效率亦明显高于对照组,刘桂伶^[26]的研究也显示观察组临床有效率为 96.67 %,优于对照组的 85.00 %,由此提示,药火针联合补阳还五汤加减

治疗糖尿病痹症的效果较单独西医治疗更明显,从多方面肯定了药火针联合补阳还五汤加减治疗方案在本病中的治疗效果,分析其机制主要为,火针通过刺激局部,改善微循环,激活自身免疫力,温经散寒、激发经气、通经活络。补养还五汤通过抗血小板聚集、黏附,改善局部微循环,改善周围神经营养状况,修复受损神经^[3]。两者联合应用促进血液循环,改善局部皮肤及神经血液供应,有效改善神经功能,快速缓解临床症状,提高临床效果。

综上所述,药火针联合补阳还五汤加减治疗糖尿病痹症,可有效改善糖尿病痹症的临床症状,改善病变神经传导速度,对改善神经功能具有显著的临床效果。

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