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麻黄附子细辛汤配合缪刺法治疗腰椎间盘突出伴坐骨神经痛疗效 及对VAS评分、JOA评分及炎症因子的影响*

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摘要 目的:探讨麻黄附子细辛汤配合缪刺法治疗腰椎间盘突出伴坐骨神经痛疗效及对视觉模拟评分(VAS)评分、日本骨科协会评估治疗分数(JOA)评分及炎症因子的影响。**方法:**2018年1月到2021年12月选择在本院诊治的腰椎间盘突出伴坐骨神经痛患者86例作为研究对象,据1:1随机分配数字表法把患者分为缪刺组与对照组各43例。对照组给予麻黄附子细辛汤治疗,缪刺组在对照组治疗的基础上给予缪刺治疗,所有患者都治疗观察1个月,在治疗前后进行VAS疼痛评分与JOA腰椎功能评分并分析炎症因子的表达情况。**结果:**治疗后缪刺组的总有效率为97.7%,高于对照组的86.0%($P<0.05$)。两组治疗后的VAS评分与JOA评分低于治疗前,缪刺组低于对照组($P<0.05$)。两组治疗后的腰屈曲范围高于治疗前,缪刺组高于对照组($P<0.05$)。缪刺组治疗期间的腰大肌挛、恶心呕吐、低血压、眩晕等不良反应发生率为4.6%,低于对照组的30.2%($P<0.05$)。两组治疗后的血清IL-1 α 、IL-6含量低于治疗前,缪刺组低于对照组($P<0.05$)。**结论:**麻黄附子细辛汤配合缪刺法治疗腰椎间盘突出伴坐骨神经痛能降低患者的VAS评分与JOA评分,可减少不良反应的发生,还可抑制炎症因子的表达,提高患者的腰屈曲范围。

关键词:麻黄附子细辛汤;缪刺法;腰椎间盘突出;坐骨神经痛

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Effect of Ephedra Fuzi Asanxin Decoction Combined with Myobasmus in the Treatment of Lumbar Disc Herniation with Sciatica and Its Effect on VAS Score, JOA Score and Inflammatory Factors*

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ABSTRACT Objective: To investigate the curative effect of Mahuang Fuzi Xixin Decoction combined with Miao needling in the treatment of lumbar intervertebral disc herniation with sciatica and its effect on visual analogue scale (VAS) score, the Japanese Orthopaedic Association Scores (JOA) score and the inflammatory factors. **Methods:** From January 2018 to December 2021, 86 cases of patients with lumbar intervertebral disc herniation and sciatica who were diagnosed and treated in our hospital were selected as the research subjects. All the cases were divided into the Miao acupuncture group and the control group of 43 cases in each groups accorded to the 1:1 random allocation number table method. The control group were given Mahuang Fuzi Xixin Decoction, and the Miao needling group were given Miao needling on the basis of the treatment of the control group. All patients were observed for 1 month. VAS pain score and JOA lumbar function score were performed before and after treatment, and the expression of inflammatory factors was analyzed. **Results:** After treatment, the total effective rates of Miao needling group were 97.7 %, which were higher than 86.0 % of control group ($P<0.05$). The VAS and JOA scores of the two groups after treatment were lower than those before treatment, and the Miao needling group were lower than that of the control group ($P<0.05$). The range of lumbar flexion in the two groups after treatment were higher than that before treatment, and that in the miao needling group were higher than that in the control group ($P<0.05$). The incidence of psoas major, nausea and vomiting, hypotension, dizziness and other adverse reactions in the miao needling group were 4.6 %, which were lower than 30.2 % in the control group ($P<0.05$). The levels of serum IL-1 α and IL-6 in the two groups after treatment were lower than those before treatment, and those in the Miao needling group were lower than those in the control group ($P<0.05$). **Conclusion:** Mahuang Fuzi Xixin Decoction combined with Miao needling in the treatment of lumbar intervertebral disc herniation with sciatica can reduce the VAS score and JOA score of patients, reduce the occurrence of adverse reactions, inhibit the expression of inflammatory factors, and improve the lumbar flexion range of patients.

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前言

腰椎间盘突出症在临床上比较常见,是一种以下肢感觉障碍、腰痛、局部压痛等症状为主要表现的脊柱疾病,多伴有坐骨神经痛^[1]。腰椎间盘突出症的病因是在常规椎间盘退行性变的基础上,因内外各种原因导致纤维环破裂,压迫坐骨神经所致。腰椎间盘突出症多发生于45岁左右人群,多为劳累、腰扭伤而发病,少数可无明显外伤史^[2]。西医治疗腰椎间盘突出症以物理牵引、止痛等为主,具有一定的近期疗效,但是持续应用效果不理想^[3,4]。中医认为腰椎间盘突出症伴坐骨神经痛的主要病机是气滞血瘀,在治疗上需要活血化瘀、通络止痛^[5]。针刺治疗具有安全、副作用小、简、便、廉、效等优势,且不良反应也比较少^[6]。缪刺法为针刺法的一种,已有数千年的历史,已运用于腰椎间盘突出症的治疗。麻黄附子细辛汤为临床常用经方,出自《伤寒论》,可用于治疗哮喘、咳嗽、感冒等疾病^[7]。现代研究表明腰椎是人体负重及活动的枢纽,腰椎间盘突出症的发病主要与椎间盘发生退行性改变有关^[8]。特别是炎症因子的大量释放可导致蛋白多糖逐渐损耗,伴有胶原纤维逐渐溶解,使得纤维环及髓核的含水量逐渐降低,使椎间盘细胞增殖和基质合成减少,同时椎间盘发生萎缩,在受到外力与内力因

素影响,髓核也可能从纤维环薄弱处外突,从而导致腰椎间盘突出伴坐骨神经痛的发生^[9,10]。本文具体探讨了麻黄附子细辛汤配合缪刺法治疗腰椎间盘突出伴坐骨神经痛疗效及对VAS评分、JOA评分及炎症因子的影响,以明确两者联合使用的应用效果。现报道如下。

1 资料与方法

1.1 研究对象

2018年1月到2021年12月选择在本院诊治的腰椎间盘突出伴坐骨神经痛患者86例作为研究对象。

纳入标准:符合腰椎间盘突出伴坐骨神经痛的诊断标准;病程 ≥ 3 个月;患者生命体征稳定,患者及对本次研究内容及治疗方案均知情,在自愿条件下签署了知情同意书;研究经医院伦理委员会审核通过;单侧椎间盘突出、适合保守治疗患者。

排除标准:妊娠期哺乳期女性;对治疗相关药物过敏者;合并感染性疾病患者;合并腰椎肿瘤、结核、骨折者;正在参加其他临床研究者;合并严重的心、肺、肝、肾疾病患者;合并有精神疾病的患者。

根据1:1随机分配数字表法将患者分为缪刺组与对照组各43例,两组患者一般资料对比无差异($P>0.05$)。见表1。

表1 两组一般资料对比

Table 1 Comparison of general data between the two groups

Groups	n	Course of disease (month)	Body mass index (kg/m ²)	CT grading (Grade I/ II)	Lesion site (L4-L5/L5-S1)	Age (years)	Gender (Male/female)
Miao needling group	43	9.28 $\pm$ 0.26	23.12 $\pm$ 1.74	23/20	29/14	45.39 $\pm$ 1.47	28/15
Control group	43	9.27 $\pm$ 0.33	23.19 $\pm$ 2.10	22/21	30/13	45.22 $\pm$ 1.28	29/14

1.2 治疗方法

对照组:给予麻黄附子细辛汤治疗,组方:葛根30克、生地黄20克、炮附片15克、酒黄芩15克、桂枝10克、炙甘草10克、全蝎10克、川芎10克、蜜麻黄6克、细辛3克、蜈蚣2克,水煎400 mL,分两次早晚餐后服。

缪刺组:在对照组治疗的基础上给予缪刺治疗,使用 $\phi 0.28 \times 40$ mm华佗牌不锈钢一次性针灸针,取委中、阳陵泉、秩边、环跳、承扶、肾俞、大肠俞等穴。局部皮肤常规消毒,进针后采用缪刺法,以患者出现较为强烈的针感或针感沿着一定的方向传导为佳,留针30 min,1次/d。

所有患者都治疗观察1个月。

1.3 观察指标

1.3.1 疗效标准 治愈:局部压痛、感觉障碍等症状体征消失,功能恢复正常,能参加正常劳动和工作。显效:局部压痛、感觉障碍等症状体征消失,明显减轻,或平时症状消失。好转:局部压痛、感觉障碍等症状体征消失减轻,腰部活动功能改善。无效:局部压痛、感觉障碍等症状体征消失无改善。总有效率=(痊愈+显效+好转)例数/总例数 $\times 100.0\%$ 。

1.3.2 VAS评分、JOA评分统计 所有患者在治疗前后进行视觉模拟评分(Visual analogue scale, VAS)疼痛评分与日本骨科协会评估治疗分数(Japanese Orthopaedic Association Scores, JOA)腰椎功能评分。JOA评分为0-29分评分,分数越高,腰椎功能越差,VAS评分分为0-10分评分,分数越高,疼痛越严重。

1.3.3 LFR测定 在治疗前后对患者进行腰屈曲范围(Lumbar flexion range, LFR)的测定。

1.3.4 不良反应 记录与观察两组患者在治疗期间出现的腰大肌痉挛、恶心呕吐、低血压、眩晕等不良反应情况。

1.3.5 IL-1 α 、IL-6含量测定 在治疗前后抽取患者的空腹静脉血2-3 mL,离心后分离上层血清,采用酶联免疫法检测血清白介素(Interleukin, IL)-1 α 、IL-6含量。

1.4 统计方法

本次研究的统计软件为SPSS19.00,检验水准为 $\alpha=0.05$ 。计量数据以均数 $\pm$ 标准差等表示,计数数据以百分比表示,两两对比方法为t检验与卡方分析等, $P<0.05$ 为差异有显著性意义。

2 结果

2.1 总有效率对比 ($P<0.05$)。见表 2。

治疗后缪刺组的总有效率为 97.7%，高于对照组 86.0%

表 2 两组治疗后总有效率对比(n)

Table 2 Comparison of total effective rate between the two groups after treatment (n)

Groups	n	Cure	Excellent	Upturn	Invalid	Total effective rate
Miao needling group	43	36	4	2	1	42(97.7%) [#]
Control group	43	10	13	14	6	37(86.0%)

Note: Compared with control group, [#] $P<0.05$.

2.2 VAS 疼痛评分与 JOA 腰椎功能评分变化对比 低于对照组($P<0.05$)。见表 3。

两组治疗后的 VAS 评分与 JOA 评分低于治疗前,缪刺组

表 3 两组治疗前后 VAS 疼痛评分与 JOA 腰椎功能评分变化对比(分,均数± 标准差)

Table 3 Comparison of VAS pain score and JOA lumbar function score before and after treatment between the two groups (score, mean ± standard deviation)

Groups	n	VAS score		JOA score	
		Pretherapy	Post-treatment	Pretherapy	Post-treatment
Miao needling group	43	6.52± 0.33	1.35± 0.16 ^{**}	24.10± 3.48	9.43± 0.56 ^{**}
Control group	43	6.54± 0.32	2.67± 0.26 [*]	24.28± 2.17	13.09± 1.17 [*]

Note: Compared with control group, [#] $P<0.05$; Compared with pretherapy, ^{*} $P<0.05$, the same below.

2.3 腰屈曲范围变化对比 ($P<0.05$)。见表 4。

两组治疗后的腰屈曲范围高于治疗前,缪刺组高于对照组

表 4 两组治疗前后腰屈曲范围变化对比(cm,均数± 标准差)

Table 4 Comparison of changes in lumbar flexion range between the two groups before and after treatment (CM, mean ± standard deviation)

Groups	n	Pretherapy	Post-treatment
Miao needling group	43	2.99± 0.78	8.56± 1.33 ^{**}
Control group	43	2.92± 0.82	7.44± 0.93 [*]

2.4 不良反应情况对比 不良反应发生率为 4.6%，低于对照组的 30.2% ($P<0.05$)。

缪刺组治疗期间的腰大肌痉挛、恶心呕吐、低血压、眩晕等 见表5。

表 5 两组治疗期间不良反应情况对比(n)

Table 5 Comparison of adverse reactions between the two groups during treatment (n)

Groups	n	Psoas major spasm	Nausea and vomiting	Low blood pressure	Vertigo	Summation
Miao needling group	43	0	1	1	0	2(4.6%) [#]
Control group	43	4	4	3	2	13(30.2%)

2.5 血清 IL-1α、IL-6 含量变化对比 于对照组($P<0.05$)。见表 6。

两组治疗后的血清 IL-1α、IL-6 含量低于治疗前,缪刺组低

表 6 两组治疗前后血清 IL-1α、IL-6 含量变化对比(pg/mL,均数± 标准差)

Table 6 Comparison of serum IL-1α and IL-6 levels between the two groups before and after treatment (pg/ mL, mean ± standard deviation)

Groups	n	IL-1α		IL-6	
		Pretherapy	Post-treatment	Pretherapy	Post-treatment
Miao needling group	43	75.89± 7.10	21.38± 1.56 ^{**}	34.22± 6.86	5.34± 0.87 ^{**}
Control group	43	75.99± 8.14	37.33± 2.58 [*]	34.29± 5.19	9.18± 1.11 [*]

3 讨论

腰椎间盘突出症是临床常见疾病,当椎间盘压迫到坐骨神经时,极可能出现坐骨神经痛^[1]。现代研究表明腰椎间盘突出症是由各种内外因素的作用,造成椎间盘受力不均,导致椎间盘发生退行性改变,从而出现髓核突出、纤维环破裂,刺激坐骨神经,最终出现腰腿疼痛^[2]。腰椎间盘突出症属中医学“腰痛”、“痹证”等范畴,经脉在经络系统中占据主导地位,具有气血运行缓慢、渗濡灌注等生理,因而容易感受邪气,使渗化失常、络脉痹阻,形成络病,络脉痹阻之后,不通则痛,为此腰椎间盘突出症的核心病机为络脉痹阻^[3]。当前中医治疗腰椎间盘突出症伴坐骨神经痛的方法比较多,包括药物口服与针刺治疗等^[4]。在麻黄附子细辛汤方中,葛根生地黄补肝肾、益精血、强腰膝,生地黄补益肝肾、强筋壮腰、祛风胜湿,炮附片、蜈蚣、酒黄芩补血活血、养血敛阴、通络止痛,桂枝、炙甘草活血止痛,全蝎、川芎、蜜麻风散寒除湿、温经通络除痹痛,全方共收壮腰强骨、除痹止痛、补肝益肾、调和气血功^[15,16]。

本研究显示治疗后缪刺组的总有效率为 97.7%,高于对照组的 86.0%;两组治疗后的 VAS 评分与 JOA 评分低于治疗前,缪刺组低于对照组;缪刺组治疗期间的腰大肌痉挛、恶心呕吐、低血压、眩晕等不良反应发生率为 4.6%,低于对照组的 30.2%,表明麻黄附子细辛汤配合缪刺法治疗腰椎间盘突出症伴坐骨神经痛能提高治疗效果,促进改善患者的腰椎功能与缓解疼痛,还可减少不良反应的发生^[17]。该结果与 Ruschel LG^[18]等人的报道具有相似性,分析可知:缪刺在针灸临床的运用已有数千年的历史,历史记载躁厥者,必为缪刺之^[19]。缪刺可改善血液循环,减轻或消除炎症对神经根和脊髓硬膜的化学刺激,减少炎症渗出物,并促使渗出物的吸收,减轻神经根的粘连,还可抑制致痛物质的释放,可兴奋内在的抗痛系统,提高痛阈,从而达到镇痛作用,并且缪刺通过轴突反射引起血管扩张,改善病痛部位的微循环,通过强刺激的传入信息可上传启动植物神经中枢,加快致痛、致炎物质的排除,从而有利于改善患者的腰椎功能^[20,21]。

腰椎间盘突出症属于中医腰痛痹证、腰腿痛、腰胯痛等范畴的相关疾病。特别是随着年龄的增长,腰椎会逐渐老化,可导致椎间盘后侧的纤维环破裂,使得椎间盘各部分从纤维环破裂处突出,导致腰屈曲范围降低^[2]。中医认为劳累过度、风寒湿邪侵袭、气血不足、肝肾亏虚可导致气血运行不畅,而致腰膝疼痛^[23]。IL-1 是一类主要的前炎性因子,IL-1 α 和 IL-1 β 是最早发现的两种。IL-1 α 在椎间盘基质的合成分解方面,主要导致纤维环细胞的蛋白多糖合成减少,释放增加,还可促进髓核基质中蛋白多糖的降解^[24]。IL-6 可以促进椎间盘髓核组织中前列腺素 E2 的产生,后者本身具有强烈的致痛性,同时具有提高神经纤维对致痛物的敏感度。IL-6 还能促进另一种致炎致痛物磷脂酶 A2 的表达、合成、释放等过程^[25]。并且腰椎间盘细胞中即可检测出大量的 IL-6,从细胞内转移到细胞外的这些因子可引起巨噬细胞聚集,巨噬细胞的吞噬作用及释放的 IL-6,造成椎间盘缓慢吸收^[26]。本研究显示两组治疗后的腰屈曲范围高于治疗前,缪刺组高于对照组;缪刺组治疗期间的腰大肌痉挛、恶心呕吐、低血压、眩晕等不良反应发生率为 4.6%,低于对照组的

30.2%,表明麻黄附子细辛汤配合缪刺法治疗腰椎间盘突出症伴坐骨神经痛能抑制炎症因子的表达,提高患者的腰屈曲范围。该结果与 Yuan S^[27]的报道具有相似性,分析可知,麻黄附子细辛汤具有调节免疫、抗变态反应等作用,通过兴奋大脑皮层及皮层下中枢起到中枢镇痛作用,还能持久温和地收缩血管,从而发挥抗炎的作用^[28,29]。缪刺可以通过延缓椎间盘的退变速度,减轻炎症反应,改善神经根的微循环。同时缪刺还可延缓椎间盘发生退行性改变,促进椎间盘内细胞数进一步减少,从而加强机体的抗炎作用^[30]。本研究由于经费问题,未进行长期调查分析,也未进行多时间点的动态检测分析,未单独进行缪刺的分组,将在后续研究中探讨。

总之,麻黄附子细辛汤配合缪刺法治疗腰椎间盘突出症伴坐骨神经痛能降低患者的 VAS 评分与 JOA 评分,可减少不良反应,还可抑制炎症因子的表达,提高患者的腰屈曲范围。

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