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痛敏穴刺血加艾灸疗法治疗类风湿关节炎临床疗效研究*

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摘要 目的:观察痛敏穴刺血加艾灸疗法治疗类风湿关节炎(RA)患者的临床疗效。**方法:**选取2019年1月~2022年1月44例类风湿关节炎患者随机分为2组,每组22例。对照组予以来氟米特片和塞来昔布胶囊治疗,观察组在对照组基础上采用痛敏穴刺血加艾灸疗法。两组患者治疗前后采用视觉模拟评分法(VAS)和疾病活动评分(DAS-28)进行评估,并检测类风湿因子(RF)、超敏C反应蛋白(hs-CRP)、血沉(ESR)、类风湿因子(RF)、纤维蛋白原(FIB)、D二聚体水平。**结果:**两组治疗后VAS评分降低($P<0.05$),而研究组较对照组低($P<0.05$)。两组治疗后DAS-28评分降低($P<0.05$),而研究组较对照组低($P<0.05$)。两组治疗后RF、hs-CRP、FIB、D二聚体水平均明显下降($P<0.05$),而研究组均明显低于对照组($P<0.05$)。观察组总有效率(100.00%)明显高于对照组(72.73%)($P<0.05$)。**结论:**痛敏穴刺血加艾灸能够提高RA患者的临床疗效,且能够提高机体的抗炎效应。

关键词:类风湿关节炎;痛敏穴;艾灸;临床疗效

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Study on the Clinical Efficacy of Pain Min Acupoint Acupuncture Blood and Moxibustion Therapy in Treating Rheumatoid Arthritis*

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ABSTRACT Objective: To observe the clinical effect of moxibustion therapy in patients with rheumatoid arthritis (RA). **Methods:** 44 patients with rheumatoid arthritis from January 2019 to January 2022 were randomly divided into 2 groups of 22 patients each. The control group was treated with leflunomide tablets and celecoxib capsules, and the observation group used pain sensitive point acupuncture and moxibustion therapy based on the control group. Pretherapy and Post-treatment, visual analog score (VAS) and disease activity score (DAS-28) were evaluated, and the levels of rheumatoid factor (RF), hypersensitive C reactive protein (hs-CRP), blood sink (ESR), rheumatoid factor (RF), fibrinogen (FIB), and D dimer were detected. **Results:** The VAS score was significantly lower after both groups ($P<0.05$), while the study group was significantly lower than the control group ($P<0.05$). The DAS-28 score was significantly lower after both treatment($P<0.05$), while the study group was significantly lower than the control group($P<0.05$). The levels of RF, hs-CRP, FIB and D dimer decreased significantly after both groups ($P<0.05$), while the study group was significantly lower than the control group ($P<0.05$). The total response rate of the observation group (100.00 %) was significantly higher than that of the control group (72.73 %) ($P<0.05$). **Conclusion:** Acupuncture and moxibustion can improve the clinical effect of RA patients and improve the anti-inflammatory effect of the body.

Key words: Rheumatoid arthritis; Pain sensitive point; Moxibustion; Clinical efficacy

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前言

类风湿性关节炎(Rheumatoid arthritis, RA)是一种常见的自身免疫性疾病,主要病理特征为慢性的关节滑膜炎性损伤及血管翳形成,初期主要表现为小关节的肿痛和功能异常,长期炎性反应在后期可导致软骨吸收,骨质破坏,出现关节畸形及僵硬,甚至引起组织器官的损害^[1,2]。据报道,全球RA的发病率

约为0.5%~1%,我国约为0.42%,患病人数达到500万之多,其中女性是男性的4倍^[3]。由此可见我国RA的疾病负担十分沉重。目前西医治疗以非甾体抗炎药、糖皮质激素、生物制剂等为主,疗效不一,且不良作用较多。在这种情况下,人们将目光投向中医学科。现代研究表明,在西医治疗的基础上辅以中医疗法,可提高RA患者疗效,并改善预后,其优势为:治疗手段多样性、安全性高等^[4,5]。RA在中医学属于“痹证”范畴,因其

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病程迁延难以治愈,后世医家称之为“顽痹”。其病机为气血痹阻不通,筋脉关节失于濡养所致^[6]。中医认为穴位具有治病功效。在病变部位和相应经络循行路线上切摸按压,常可触及敏感点(特殊痛感或快然感)显著增强或客观上出现痛阈值降低,称之为痛敏穴,又称阿是穴或反应点。痛敏穴是穴位敏化(痛敏、压敏、热敏、形敏、力敏等)的常见表现形式之一,是针灸治疗疾病的潜在靶点,为中医“靶向治疗”提供了新的契机。艾灸治疗的原理是对某些特定穴位产生温热效应而发挥治疗作

用^[7,8]。本研究采用痛敏穴刺血加艾灸疗法治疗 RA,报道如下。

1 资料与方法

1.1 临床资料

选取 2019 年 1 月~2022 年 1 月在我科住院诊断为 RA 患者 44 例,依据随机数字表法分为观察组和对照组,各 22 例,两组患者一般资料对比无差异($P>0.05$),具有可比性。

表 1 一般资料比较
Table 1 Comparison of general data

Groups	Gender:(Male/ Female)	Age (year)	Disease duration (years)	BMI(kg/m ²)	Joint function classification	
					Class III	Class III
Observation group(n=22)	6/16	63.00± 11.90	8.77± 9.79	22.93± 1.03	11	11
Control group(n=22)	5/17	62.77± 11.58	8.76± 7.38	22.45± 1.36	12	10

纳入标准:①符合美国风湿病学会的类风湿关节炎诊断分类标准中的诊断标准^[9];②处于疾病活动期,疾病活动评分(Disease activity score, DAS-28)^[10]>5.1 分;③年龄 18~83 岁;④同意参加本研究,签署知情同意书。

排除标准:①合并严重的心脑血管、肝脏、肾脏、造血及凝血系统等疾病;②合并其他结缔组织病;③近 2 周内使用过免疫抑制剂或雷公藤制剂治疗者;④有针刺及艾灸禁忌;⑤孕期或哺乳期的女性;⑥合并严重精神障碍,不能配合完成试验。

1.2 治疗方法

对照组:口服来氟米特片(美罗药业公司,国药准字 H20080047,10 mg/片),每天 1 次,每次 20 mg;口服塞来昔布胶囊(青岛百洋制药有限公司,国药准字 H20203325,0.2 g/片),每日 2 次,每次 0.2 g,以 21 d 为一疗程。

观察组在对照组治疗基础上加用以下治疗:①痛敏穴刺血:操作者用右手拇指指腹前缘进行触诊(所需力度为:持续均匀;触诊顺序为:从前到后、从上至下、先左后右、先阴经后阳经)^[11],以达到肌肉层为度的力量按压检查部位。当患者自觉压痛、快然感或患处远部伴有异样感(如麻木、放射)等,所按压部位即可视为痛敏穴,根据患者病情选取 3-5 个痛敏穴。痛敏穴局部常规消毒,操作者穿戴一次性医用橡胶检查手套,左手按压周围皮肤,右手持一次性使用无菌刺血针(国械注准 20173150867)迅速刺入后快速出针,令局部自然出血,待血止后清除施术部位的残余血液,常规消毒以预防感染。每周 2 次,21 d 为 1 个疗程。②艾灸疗法:取坐位或卧位,充分暴露患者痛敏穴所在部位,选取直径为 1.7 cm、长为 20 cm、质量为 30 g 的圆柱状香烟型艾条(烟台爱心药业,国药准字 Z37021259),将艾条一端点燃,并将其插入单孔艾灸盒,对准穴位并固定灸盒

进行熏灼,保持距离皮肤 2 cm,进而确保患者局部皮肤有温热感而无灼痛,皮肤红晕而不出现水泡为度。所有痛敏穴同时进行艾灸,每穴灸 30 min,每天 1 次,每周 6 次,21 d 为 1 个疗程。

1.3 观察指标

所有患者于入院次日及试验结束(治疗 21 d)次日清晨抽取空腹静脉血,采用免疫散射比浊法检测类风湿因子(Rheumatoid factor, RF)和超敏 C 反应蛋白(Hypersensitive C-reactive protein, hs-CRP);采用魏氏法检测血沉(Erythrocyte sedimentation rate, ESR);采用全自动凝血仪检测纤维蛋白原(Fibrinogen, FIB)、D 二聚体。

采用视觉模拟评分法(VAS)评估患者的疼痛程度,分数范围 0~10 分,分数与疼痛成正比。

采用 DAS-28 系统对患者进行评估,包括触痛关节数、肿胀关节数及 ESR 三个方面,DAS28 总分 = $[0.56 \times \text{关节压痛数} + 0.28 \times \text{关节肿胀数} + 0.70 \times \ln(\text{ESR})] \times 1.08 \div 0.16$,分数范围 0~10 分,分数越高则病情活动性越高。

1.4 临床疗效判断标准

临床缓解:DAS28 总分 <2.6 分;控制:DAS28 总分 2.6~3.2;无效:未达到有效标准。总有效 = 临床缓解 + 控制。

1.5 统计学方法

采用 SPSS 24.0 进行分析,计量资料以($\bar{x} \pm s$)表示,采用方差分析,计数资料以 n%表示,以 $P<0.05$ 为差异有统计学意义。

2 结果

2.1 两组治疗前后 VAS 评分比较

两组治疗后 VAS 评分降低($P<0.05$),而研究组较对照组低($P<0.05$),见表 2。

表 2 治疗前后 VAS 评分比较(分)

Table 2 Comparison of VAS scores pretherapy and post-treatment (points)

Groups	Pretherapy	Post-treatment
Observation group(n=22)	6.34± 1.04	2.73± 0.70**
Control group(n=22)	6.57± 1.55	3.63± 0.62*

Note: Compared with the group Pretherapy, * $P<0.05$, compared with the control group, ** $P<0.05$, the same below.

2.2 两组治疗前后 DAS-28 评分比较

组低($P<0.05$),见表 3。两组治疗后 DAS-28 评分降低($P<0.05$),而研究组较对照

表 3 治疗前后 DAS-28 评分比较

Table 3 Comparison of DAS-28 scores pretherapy and post-treatment

Groups	Number of tender joints		Number of swollen joints		ESR(mm/h)		Total score	
	Pretherapy	Post-treatment	Pretherapy	Post-treatment	Pretherapy	Post-treatment	Pretherapy	Post-treatment
Observation group(n=22)	17.63± 3.64	7.62± 2.61* [#]	14.93± 3.37	5.21± 1.77* [#]	49.58± 20.83	30.18± 11.62* [#]	6.43± 0.79	2.64± 0.41* [#]
Control group (n=22)	16.88± 5.68	11.19± 2.53*	14.49± 3.10	8.92± 1.65*	48.00± 22.82	38.63± 11.08*	6.39± 0.71	3.59± 0.66*

2.3 两组治疗前后 RF、hs-CRP、FIB、D 二聚体水平比较

($P<0.05$),而研究组均较对照组低($P<0.05$),见表 4。

两组治疗后 RF、hs-CRP、FIB、D 二聚体水平均明显下降

表 4 治疗前后 RF、hs-CRP、FIB、D 二聚体水平比较

Table 4 Comparison of RF, hs-CRP, FIB, D-dimer levels pretherapy and Post-treatment

Groups	RF(umol/L)		hs-CRP(mg/L)		FIB(g/L)		D-D(g/L)	
	Pretherapy	Post-treatment	Pretherapy	Post-treatment	Pretherapy	Post-treatment	Pretherapy	Post-treatment
Observation group(n=22)	237.76± 76.27	131.64± 38.39* [#]	27.45± 14.69	5.86± 4.46* [#]	4.22± 0.78	1.94± 0.21* [#]	2.92± 1.49	1.06± 0.46* [#]
Control group (n=22)	223.40± 88.46	164.22± 59.19*	24.12± 9.87	14.48± 8.12*	3.76± 0.75	2.66± 0.44*	2.86± 1.69	1.71± 1.34*

2.4 两组临床疗效比较

05),见表 5。

观察组总有效率(100.00 %)较对照组高(72.73 %)($P<0.$

表 5 临床疗效比较[n(%)]

Table 5 Comparison of clinical efficacy [n(%)]

Groups	Clinical remission	Control	Invalid	Always valid
Observation group(n=22)	8(36.36)	14(63.64)	0(0.00)	22(100.00)
Control group(n=22)	3(13.64)	13(59.09)	6(27.27)	16(72.73)

3 讨论

目前 RA 尚无特效疗法,临床治疗原则为缓解疼痛,改善关节功能,阻止或延缓病情进展,改善生活质量。中医认为,痹者,经脉阻塞不通也。《类证治裁》云:"诸痹良由营卫先虚,腠理不密,风寒湿乘虚内袭,正气为邪气所阻,不能宣行,因而留滞,气血凝涩,久而成痹"。《素问·痹论》云:"风寒湿三气杂至,合而为痹也"。肾主骨,肝主筋,一旦肝肾亏虚,骨髓空虚,卫气不固,将任由风寒湿邪侵袭,无以抵御。《素问·痹论》云:"风寒湿三气杂至,合而为痹也"。风寒湿留滞体内,致脉阻血凝而不通,筋脉关节失于濡养,最终出现疼痛、关节屈伸不利、僵硬、变形等症状。总的来说,本病属本虚标实之证,本虚为肝肾亏虚,标实为风、寒、湿邪痹阻经络,而瘀血是病理产物^[10-12]。

《灵枢·经筋》指出穴位所在之处为体表所出现的"痛点",该点是机体病变在体表的阳性反应点。本研究对 RA 患者的痛敏穴予以刺血和艾灸干预,结果显示,治疗后观察组的 VAS 和 DAS-28 评分均明显低于对照组,对照组的总有效率为 72.73 %,

而观察组则进一步提高至 100.00 %,提示痛敏穴刺血联合艾灸治疗可有效缓解 RA 患者的疼痛,并减轻疾病活动性,对临床疗效具有增益作用。其中的原因与机制目前尚不完全清楚,分析可能与以下有关:① 穴位效应的最大发挥取决于穴位的状态,即"静息"或"激活"状态,这对应者内脏功能的变化^[13-15]。痛敏既是一种阳性体征,其是由机体在疾病状态下所呈现的状态,同时也是穴位本身病理学改变,与靶器官具有关联,因而对痛敏穴进行刺血和艾灸刺激,循着脏腑-经络-体表路径,可对脏腑功能起到调整作用,达到由表至内、由内及表治病的目的。有 Meta 分析显示,刺激痛敏穴的效果优于刺激常规穴位^[16-18]。② 此外,刺血疗法还可通过放出适量血液,可使瘀血及各种壅塞之物从经络中疏导排泄,给邪以去路,达到通泄作用,通利气血之瘀滞,通则不痛。现代研究表明,刺血疗法的效应机制与调节凝血-纤溶系统、改善局部微循环、促进血液循环、调节内分泌免疫等多重作用机制有关^[19-21]。③ 艾灸可激发全身经络之气,发挥行气活血之效,进而温通经络、活血逐痹,消瘀散结。现代研究表明,艾灸可通过物理热效应及艾叶焦油的化学成分等对

经穴的刺激作用,激活血管的自律运动,从而改善局部微循环^[2]。艾灸产生的热量可使局部微小血管扩张,促进血液、淋巴液循环,促进新陈代谢,减轻炎症反应^[23-25]。此外,艾灸还可能通过影响钙平衡,改善骨破坏、抑制血管翳生成、降低内源性的致热源水平、调节免疫等途径发挥对 RA 的治疗作用^[26-29]。

本结果显示,治疗后观察组 hs-CRP、FIB、D 二聚体水平明显低于对照组。hs-CRP 是一种急性时相反应蛋白,具有激活补体、促进吞噬细胞吞噬的表达、调节免疫功能的作用,其可反映炎症水平。FIB 是一种具有凝血功能的蛋白质,在凝血酶的作用下生成纤维蛋白单体,其表达水平升高被看作是一种非特异性炎症反应。D 二聚体是一种特异性的纤溶过程标记物,其水平的升高在一定程度上反映出继发性纤溶活性的增强。从微观上证明痛敏穴刺血加艾灸疗法确有抗炎、活血化瘀的作用。RF 是 RA 的标志性自身抗体,在 RA 诊断中具有重要作用,可辅助判断 RA 的活动度,并预测预后^[30-32]。本结果显示,治疗后研究组 RF 水平明显低于对照组,提示痛敏穴刺血加艾灸疗法对改善 RA 患者的病情及预后有益。

综上,痛敏穴刺血加艾灸疗法可从多途径、多靶点治疗 RA,可为临床治疗提供新的治疗方法和思路,值得大样本、多中心深入研究。

参考文献(References)

- [1] Kitas GD, Nightingale P, Armitage J, et al. Trial of atorvastatin for the primary prevention of cardiovascular events in patients with rheumatoid arthritis (TRACE RA): A multicenter, randomized, placebo controlled trial[J]. *Arthritis Rheumatol*, 2019, 71(9): 1437-1449
- [2] Dai Y, Wang W, Yu Y, et al. Rheumatoid arthritis-associated interstitial lung disease: an overview of epidemiology, pathogenesis and management[J]. *Clin Rheumatol*, 2021, 40(4): 1211-1220
- [3] 中华医学会风湿病学分会. 2018 中国类风湿关节炎诊疗指南[J]. *中华内科杂志*, 2018, 57(4): 242-251
- [4] Figus FA, Piga M, Azzolin I, et al. Rheumatoid arthritis: Extra-articular manifestations and comorbidities [J]. *Autoimmun Rev*, 2021, 20(4): 102776
- [5] Xing Q, Fu L, Yu Z, et al. Efficacy and Safety of Integrated Traditional Chinese Medicine and Western Medicine on the Treatment of Rheumatoid Arthritis: A Meta-Analysis [J]. *Evid Based Complement Alternat Med*, 2020, 20(2): 4348709
- [6] 武旭,贺素容,王晶,等. 祖师麻治疗类风湿性关节炎的网络药理学研究[J]. *中国药理学通报*, 2021, 37(8): 8
- [7] Ding N, Liu X, Chen N, et al. Lack of association between acupoint sensitization and microcirculatory structural changes in a mouse model of knee osteoarthritis: A pilot study [J]. *J Biophotonics*, 2019, 12(6): e201800458
- [8] Zhang M, Zhao C, Jiang L, et al. Clinical effect and mechanism of moxibustion combined with western medication for rheumatoid arthritis of liver-kidney deficiency [J]. *Chinese acupunct & moxibust*, 2021, 41(5): 489-492
- [9] Arnett FC, Edworthy SM, Bloch DA, et al. The American Rheumatism Association 1987 revised criteria for the classification of rheumatoid arthritis[J]. *Arthritis Rheum*, 1988, 31(3): 315-324
- [10] Aditi, Shah, Seema, et al. Use of Disease Activity Score (DAS28) and Routine Assessment of Patient Index Data 3 (RAPID3) for Assessment of Rheumatoid Arthritis Disease Activity, in the Indian Setting [J]. *J Associat Phy India*, 2019, 67(7): 58-60
- [11] 葛俊德,黄娜娜,李晓骄阳,等. 火把花根片"异病同治"红斑狼疮和类风湿性关节炎的功效网络与机制探讨 [J]. *中草药*, 2020, 51(16): 13
- [12] Seca S, M Patrício, Kirch S, et al. Effectiveness of Acupuncture on Pain, Functional Disability, and Quality of Life in Rheumatoid Arthritis of the Hand: Results of a Double-Blind Randomized Clinical Trial [J]. *J Alternat Complement Med*, 2018, 25(1): 86-97
- [13] Luo H, Peng J, Ma Q, et al. Correction to: Intradermal acupuncture for rheumatoid arthritis: study protocol for a randomised controlled trial[J]. *Trials*, 2021, 22(1): 533
- [14] 毛珍,范建超,张红星. 电针"痛敏穴"联合热敏灸对膝骨性关节炎的临床观察及对血脂水平、ADAMTS-4 的影响 [J]. *海南医学院学报*, 2021, 27(16): 1213-1217
- [15] Guo YG, Sun GW, Yang L, et al. Differential metabolites and metabolic pathways involving acupuncture-induced improvement of rheumatoid arthritis patients based on gas chromatography-mass spectrometry[J]. *Acupunct res*, 2021, 46(2): 145-151
- [16] Jensen TS, Finnerup NB. Allodynia and hyperalgesia in neuropathic pain: clinical manifestations and mechanisms [J]. *Lancet Neurol*, 2014, 13(9): 924-35
- [17] Lin Y F, Lu J M, Su Y N, et al. Clinical Trials for Treatment of Allergic Rhinitis with Heat Sensitive Moxibustion and Its Regularity of Heat-sensitization Acupoint Distribution [J]. *Acupunct Res*, 2017, 42(6): 527-532
- [18] Tan H, Tumilty S, Chapple C, et al. Understanding Acupoint Sensitization: A Narrative Review on Phenomena, Potential Mechanism, and Clinical Application[J]. *Evid Based Complement Alternat Med*, 2019, 20(6): 1-9
- [19] 孟英,朱梓辉,朱洁好,等. 刺血疗法临床效应特征及作用机制[J]. *针刺研究*, 2020, 45(10): 835-839
- [20] Huang YQ, Li MX, Wang C, et al. Effect of blood-letting puncture of "Well-points" on hippocampal mitophagy-related protein expression in rats with acute brain injury due to hypobaric hypoxia[J]. *Acupunct Res*, 2021, 46(4): 301-305
- [21] Yao Q, Zhang X, Mu Y, et al. Bloodletting Therapy for Patients with Chronic Urticaria: A Systematic Review and Meta-Analysis [J]. *Biomed Res Int*, 2019, 17(5): 8650398
- [22] Zhang H H, Shen L. Clinical observation on prevention of chemotherapy infection in gastric cancer by moxa-stick moxibustion plus rhG-CSF and its effect on immune function[J]. *J Acupunct Tuina Sci*, 2020, 18(2): 116-121
- [23] Xie Y Y, Li S S, Ben Y H. Clinical observation on electroacupuncture plus long-snake moxibustion for rheumatoid arthritis due to kidney deficiency and cold coagulation [J]. *J Acupunct Tuina Sci*, 2020, 18(2): 467-473
- [24] Zhou Y, Luo Y, Yu Z, et al. Effectiveness of grain-sized moxibustion for rheumatoid arthritis: Study protocol for a randomized controlled trial[J]. *Eur J Integrat Med*, 2020, 35(5): 101094
- [25] Zhang M, Zhao C, Jiang L, et al. Clinical effect and mechanism of moxibustion combined with western medication for rheumatoid arthritis of liver-kidney deficiency [J]. *Chine acupunct & moxibust*, 2021, 41(5): 489-492

- lation for Constipation and Fecal Incontinence in Children: A Systematic Review[J]. *Eur J Pediatr Surg*, 2019, 29(6): 495-503
- [17] 张永春.通便汤联合思连康治疗婴幼儿功能性便秘 38 例[J].*山东中医药大学学报*, 2015, 39(2): 144-145
- [18] 钱慧莉,赵娜,焦朝艳.酪酸梭菌活菌片联合琥珀酸亚铁片治疗儿童缺铁性贫血的疗效观察 [J]. *河北医科大学学报*, 2020, 41(11): 1317-1320
- [19] 贺媛媛,贺陈龙,李雅然,等.槐杞黄颗粒联合聚乙二醇 4000 散治疗儿童便秘疗效及对患儿肠道菌群、免疫功能的影响[J].*药物评价研究*, 2020, 43(4): 729-733
- [20] 杨婷,江米足.儿童功能性便秘的诊治进展[J].*中华儿科杂志*, 2020, 58(7): 611-614
- [21] 江米足.儿童功能性胃肠病的诊断与治疗进展[J].*中华实用儿科临床杂志*, 2018, 33(7): 486-490
- [22] Iacona R, Ramage L, Malakounides G. Current State of Neuromodulation for Constipation and Fecal Incontinence in Children: A Systematic Review[J]. *Eur J Pediatr Surg*, 2019, 29(6): 495-503
- [23] 陈运培,王勇.小麦纤维联合低聚果糖治疗儿童功能性便秘的效果[J].*临床医学*, 2021, 41(4): 108-109
- [24] 黄金,高若飞,于静,等.小麦纤维素与布拉氏酵母菌散剂治疗小儿功能性便秘的效果[J].*临床医学研究与实践*, 2019, 4(21): 50-51
- [25] 程莹.小麦纤维素联合布拉氏酵母菌散剂治疗小儿功能性便秘疗效及对患儿血清指标影响分析 [J]. *陕西医学杂志*, 2018, 47(10): 1328-1330
- [26] 彭蕾,万君.四磨汤、小麦纤维素颗粒联合微生态制剂治疗婴幼儿功能性便秘的临床疗效[J].*中国妇幼保健*, 2017, 32(18): 4448-4450
- [27] 罗真东,梁鉴坤,王哲,等.小麦纤维素联合乳果糖治疗儿童功能性便秘的临床观察[J].*中国现代医学杂志*, 2018, 28(36): 96-99
- [28] 高校校,王文奕,司梦冉,等.基于中医传承辅助平台的数据挖掘分析小儿功能性便秘的推拿选穴规律 [J]. *中国医药导报*, 2021, 18(25): 146-149
- [29] 候味,李书晓,高燕,等.小儿推拿配合口服益生菌治疗儿童功能性便秘的临床效果[J].*临床医学研究与实践*, 2021, 6(5): 40-42
- [30] Madempudi RS, Neelamraju J, Ahire JJ, et al. *Bacillus coagulans* Unique IS2 in Constipation: A Double-Blind, Placebo-Controlled Study[J]. *Probiotics Antimicrob Proteins*, 2020, 12(2): 335-342
- [31] Gubbiotti M, Balboni G, Bini V, et al. Bladder and bowel dysfunction, adaptive behaviour and psychiatric profiles in adults affected by autism spectrum disorders [J]. *Neurourol Urodyn*, 2019, 38 (7): 1866-1873
- [32] Cochrane DJ. Care planning, diagnosis and management in paediatric functional constipation[J]. *N Z Med J*, 2021, 134(1536): 113-143

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- [26] Han K, Kim M, Kim EJ, et al. Moxibustion for treating cancer-related fatigue: A multicenter, assessor-blinded, randomized controlled clinical trial[J]. *Cancer Med*, 2021, 10(14): 4721-4733
- [27] Choi Y, Kwon O, Kim AR, et al. Electric moxibustion for patients with Hwa-byung (anger syndrome): A randomized, sham-controlled, participant and assessor-blinded pilot clinical trial[J]. *Asian J Psychiatry*, 2021, 63(2): 102757
- [28] Zhong Y M, Wu F, Luo X C, et al. Mechanism on moxibustion for rheumatoid arthritis based on PD-1/PD-L1 signaling pathway [J]. *Chine acupunct & moxibust*, 2020, 40(9): 976-982
- [29] Hao F, Wu L B, Hu J, et al. Effect of moxibustion on PI3K/Akt/mTOR signaling pathway in foot-pad synovium in rats with rheumatoid arthritis [J]. *Chine acupunct & moxibust*, 2020, 40(11): 1211-1216
- [30] Rohini, Han da. Rheumatoid factor and rheumatoid arthritis[J]. *J Clin Orthopaed & Trauma*, 2019, 10(3): 629-630
- [31] Vadell AKE, Barebring L, Hulander E, et al. Anti-inflammatory Diet In Rheumatoid Arthritis (ADIRA)-a randomized, controlled crossover trial indicating effects on disease activity [J]. *Am J Clin Nutr*, 2020, 111(6): 1203-1213
- [32] Miyata M, Kuroda M, Unakami M, et al. Validation of the fibrosis-4 (FIB-4) index in the diagnosis of liver disease of rheumatoid arthritis patients treated with methotrexate [J]. *Mod Rheumatol*, 2019, 29(6): 936-942