

doi: 10.13241/j.cnki.pmb.2019.14.042

阿洛司琼联合微生态制剂治疗腹泻型肠易激综合征的临床研究 *

马雪芹 王学红 马臻棋 马旭翔 王方

(青海大学附属医院消化内科 青海 西宁 810000)

摘要 目的:探究阿洛司琼联合微生态制剂治疗腹泻型肠易激综合征的临床效果。方法:选择 2016 年 1 月 -2018 年 1 月于我院进行治疗的 96 例腹泻型肠易激综合征患者为研究对象,按照随机数字表法将其均分为实验组与对照组,每组各 48 例。对照组患者单纯使用阿洛司琼治疗,实验组患者在对照组患者基础上加用微生态制剂,两组患者治疗时间均为 4 周,分别于干预前及干预后对两组患者症状进行评分,使用 IBS 病情严重程度调查表(IBS-SSS)对两组患者干预前后治疗效果进行评估,并比较两组患者干预前后肠道乳酸杆菌、肠球菌及酵母样真菌菌群数及生活质量(SF-36)评分。结果:干预后,实验组患者症状评分及 IBS-SSS 量表评分均显著低于对照组($P<0.05$),SF-36 生理功能、心理功能及生活功能得分、乳酸菌及肠球菌菌群数均显著高于对照组,而酵母样真菌菌群数低于对照组($P<0.05$)。结论:阿洛司琼联合微生态制剂治疗腹泻型肠易激综合征能够有效改善患者的肠道菌群、有效缓解临床症状,并可显著提高患者的生活质量。

关键词:阿洛司琼;微生态制剂;腹泻型肠易激综合征

中图分类号:R574.4 文献标识码:A 文章编号:1673-6273(2019)14-2793-04

A Clinical Study on the Alosetron Combined with Probiotics in the Treatment of Diarrhea Predominant Irritable Bowel Syndrome*

MA Xue-qin, WANG Xue-hong, MA Zhen-qi, MA Xu-xiang, WANG Fang

(Gastroenterology Department, the Affiliated Hospital of Qinghai University, Xining, Qinghai, 810000, China)

ABSTRACT Objective: To explore the clinical effect of alosetron combined with probiotics in the treatment of diarrhea predominant irritable bowel syndrome. **Methods:** 96 patients with diarrhea-predominant irritable bowel syndrome who were treated in our hospital from January 2016 to January 2018 were divided into the experimental group and the control group according to the random number table method with 48 cases in each group. The control group was treated with alosetron alone. Patients in the experimental group were given probiotics on the basis of the control group. The treatment time of both groups was 4 weeks. The symptoms of patients were scored before and after the intervention. The therapeutic effect was evaluated by IBS-SSS. The number of intestinal lactobacillus, Enterococcus and yeast-like fungi and quality of life (SF-36) scores were compared before and after intervention between the two groups. **Results:** After intervention, the symptom score and IBS-SSS score of experimental group were significantly lower than those of the control group ($P<0.05$). The scores of physiological function of SF-36, mental function and life function, the number of lactic acid bacteria and Enterococcus bacteria were significantly higher than those of the control group, while the number of yeast-like fungi was significantly lower than that of the control group ($P<0.05$). **Conclusion:** Alosetron combined with probiotics can improve the intestinal flora in the treatment of patients with diarrhea-predominant irritable bowel syndrome, it can effectively alleviate the clinical symptoms and significantly improve the patients' quality of life.

Key words: Alosetron; Probiotics; Diarrhea predominant irritable bowel syndrome

Chinese Library Classification(CLC): R574.4 Document code: A

Article ID: 1673-6273(2019)14-2793-04

前言

肠易激综合征(irritable bowel syndrome, IBS)是一类持续或间接性发作,以腹泻、腹痛、排便习惯改变等为典型临床症状,但检查缺乏胃肠道结构或生化异常的肠道功能紊乱性疾病。因该病临床症状与过敏性结肠炎、神经官能症等类似^[1],诊断时易

混淆,以往未能引起人们的广泛重视。流行病学调查显示全球 IBS 发病率约为 11.2%,西方国家发病率略低于东方国家,我国 IBS 的发病率为 4.6%-5.67%,其中高发群体为青少年,老年患者较少见,有研究显示 45 岁以后人群患腹泻型肠易激综合征的发病率随年龄的增加而降低^[2,3]。根据患者临床症状可将 IBS 分为腹泻型、便秘型、混合型和不定型,以腹泻型为主^[4]。

* 基金项目:青海省科技厅自然科学基金项目(YWJKJJHKJJ-B16250-027; 2017-2018)

作者简介:马雪芹(1973-),女,本科,副主任医师,研究方向:消化病学、功能性胃肠病,电话:13519735091,E-mail:maxueqin_287@163.com

(收稿日期:2018-11-23 接受日期:2018-12-17)

阿洛司琼是国外治疗 IBS 的常用药物,其起效快,但其不良反应明显,影响总体治疗效果,患者不易接受^[5]。临床研究发现,微生态制剂可通过控制肠道菌群与黏膜间的平衡,恢复肠道菌群黏膜屏障,调节肠道免疫力,从而发挥肠道抗炎功能,对于 IBS 的治疗机制可能包括调节肠道微生态环境,调节肠道免疫状态以及加固肠黏膜屏障功能等^[6,7]。本研究结果显示阿洛司琼联合微生态制剂对腹泻型肠易激综合征具有较好的治疗效果,可有效改善患者肠道菌群,现详述如下:

1 资料与方法

1.1 一般资料

选择 2016 年 1 月 -2018 年 1 月于我院进行治疗的 96 例腹泻型肠易激综合征患者为研究对象,按照随机数字表法将其均分为实验组(阿洛司琼,n=48)与对照组(阿洛司琼+微生态制剂,n=48)。对照组患者中,男性 19 例,女性 29 例,年龄 22-62 岁,平均年龄(38.56±6.32)岁;实验组患者中,男性 20 例,女性 28 例,年龄 21-60 岁,平均年龄(39.01±5.98)岁。两组一般资料比较差异均无统计学意义($P>0.05$),具有可比性。

纳入标准:(1)病历资料齐全;(2)符合罗马 III 标准中腹泻型肠易激综合征诊断标准^[8];(3)年龄 18-70 岁;(4)经医院伦理学会批准实施,且患者签署知情同意书。

排除标准:(1)合并精神障碍者;(2)合并凝血功能障碍者;(3)合并其他器质性疾病如冠心病、肾衰竭患者;(4)合并消化道器质性病变者;(5)合并腹部手术者;(6)正在服用影响胃肠道功能药物者;(7)妊娠或哺乳期女性。

1.2 治疗方法

对照组患者给予口服阿洛司琼(规格:0.5 mg/片),服用剂量为 1 mg/日,1 次/d,连续服用 14 d。实验组患者在对照组基础上口服双歧杆菌三联活菌片,服用剂量为 1g/片,2 次/d,温开水送服,连续治疗 14 d。

1.3 观察指标及评测标准

1.3.1 干预前后症状评分及 IBS-SSS 量表评分 分别于干预前后对两组患者的症状评分及 IBS-SSS 量表评分进行评估。症状评分量表选择学者董文珠制定量表,包括腹痛时间、腹痛频率、排便形状异常、排便过程异常、黏液便和排便时腹胀 6 大项,每项评分 0-3 分,满分为 18 分,得分越高代表症状越严重^[9];IBS-SSS 量表共包括 5 大项,每项分为 1-5 级,满分均为 100 分,5 项相加即为总分,总分 75-175 为轻度,175-300 为中度,300 分以上为重度^[10]。

1.3.2 干预前后两组患者肠道微生物菌群对比 于无菌条件下采集两组患者新鲜排出粪便 10 g,置于厌氧罐中送检,分别检测两组患者粪便中乳酸菌、酵母样真菌及肠球菌菌群数,检测方式选择光冈法^[11,12]。

1.3.3 干预前后生活质量对比 使用 SF-36 量表对干预前后两组患者的生活健康水平进行评估,该量表分为生理功能、活力、情感职能等 8 个方面,能够对患者的生命质量进行评估,临床应用较为广泛,分为生理功能、心理功能及生活功能 3 大部分,得分越高代表生活质量越高^[13,14]。

1.4 统计学方法

使用 SPSS16.0 对采集的数据进行统计学分析,计数资料以率(%)的形式表示,组间比较采用卡方检验,计量资料以($\bar{x} \pm s$)的形式表示,组间比较采用 t 检验,以 $P<0.05$ 为差异有统计学意义。

2 结果

2.1 两组患者干预前后症状评分及 IBS-SSS 量表评分比较

干预后,两组症状评分及 IBS-SSS 量表评分均较干预前显著降低($P<0.05$),且实验组患者上述量表得分均明显低于对照组($P<0.05$),具体数据如表 1 所示。

表 1 两组干预前后症状评分及 IBS-SSS 量表评分比较

Table 1 Comparison of the symptom score and IBS-SSS scale score before and after intervention between two groups

Groups	n	Symptom score		IBS-SSS scale score	
		Pre intervention	Post intervention	Pre intervention	Post intervention
Experimental group	48	9.32±0.15	3.01±0.16	210.32±21.02	79.68±10.21
Control group	48	9.21±0.23	4.69±0.68	211.69±20.01	136.98±20.16
t		0.968	6.321	0.898	5.236
P		>0.05	<0.05	>0.05	<0.05

2.2 两组患者干预前后肠道微生物菌群比较

干预后,实验组患者乳酸菌及肠球菌菌群数高于对照组,酵母样真菌菌群数低于对照组($P<0.05$),具体数据如表 2 所示。

2.3 两组干预前后生活质量得分对比

干预后,实验组患者生理功能、心理功能及生活功能得分均显著高于对照组($P<0.05$),具体数据如表 3 所示。

3 讨论

肠易激综合征(IBS)又被称为结肠过敏、结肠功能紊乱,是

现阶段临幊上较常见的一类功能性胃肠疾病,临幊检查显示此类患者常无明显的器质性病变,但表现出明显的腹痛、腹泻、便秘等临幊症状^[15,16]。研究显示近些年居民饮食结构的改变使 IBS 的发生率有所提升,但该病的发病机制尚不清晰^[17,18],一般认为胃肠道刺激、心理因素、遗传因素等均会对 IBS 的发生造成一定影响。腹泻型 IBS 是 IBS 的主要类型,约占全部患病者的 60%-70%,具有病程长、治疗困难、易复发等特点^[19,20],往往给患者身心造成较大的影响,降低其生活质量。目前,腹泻型 IBS 的治疗只限于对症处理,多通过调整饮食、心理行为治疗、药物

治疗等来缓解患者焦虑情绪,改善期临床症状,以达到提高其生活质量的目的^[21,22]。

表 2 两组干预前后两组肠道微生物菌群对比(CFU/g)

Table 2 Comparison of the intestinal microflora between two groups before and after intervention(CFU/g)

Groups	n	<i>Lactobacillus</i>		<i>Enterococcus</i>		<i>Yeast-like fungi</i>	
		Pre intervention	Post intervention	Pre intervention	Post intervention	Pre intervention	Post intervention
Experimental group	48	6.23± 0.21	8.36± 0.98	8.96± 0.68	8.16± 0.15	4.16± 0.56	3.26± 0.15
Control group	48	6.16± 0.36	7.01± 0.16	9.01± 0.21	7.03± 0.16	4.21± 0.36	4.01± 0.21
t	-	0.698	2.051	0.887	2.635	0.966	2.315
P	-	>0.05	<0.05	>0.05	<0.05	>0.05	<0.05

表 3 两组干预前后两组生活质量得分对比

Table 3 Comparison of the quality of life scores between two groups before and after intervention

Groups	n	Somatic function		Mental function		Vital function	
		Pre intervention	Post intervention	Pre intervention	Post intervention	Pre intervention	Post intervention
Experimental group	48	53.26± 6.25	86.29± 4.68	61.65± 4.26	86.72± 6.32	56.76± 6.26	87.28± 6.38
Control group	48	54.19± 5.86	71.37± 5.06	62.08± 5.37	73.75± 5.27	55.81± 5.96	70.68± 5.42
t	-	0.681	2.168	0.726	3.268	0.592	2.746
P	-	1.634	0.012	2.612	0.009	0.681	0.029

阿洛司琼属于 5-HT3 受体拮抗剂的一种,能够抑制内脏感觉反射和胃肠运动,临幊上主要用于治疗腹泻、缓解排便急迫感,现也被应用于腹泻型 IBS 的治疗^[23,24]。有研究显示阿洛司琼能够显著改善腹泻型 IBS 女性患者临床症状,与安慰剂相比,阿洛司琼具有长期疗效性和安全性^[25]。阿洛司琼为 FDA 第一个批准上市的 5-HT3 受体拮抗剂类药物,5-HT3 是机体调节胃肠道功能的重要神经递质,而人体 95%以上的 5-HT3 受体分布于肠道粘膜上,这些受体能够通过传导刺激来调节肠道局部的兴奋与抑制,在治疗腹泻型 IBS 方面具有较好的效果,能够缓解肠道粘膜的充血、紧张状态,有效改善患者临床症状^[26-28]。但该药不良反应明显,使用中应注意剂量^[29]。

微生态制剂是 IBS 治疗中重要的辅助用药,能够维持患者肠道菌群平衡,提高肠道的免疫力^[30]。有研究显示微生态制剂能够调节机体肠道菌群平衡,如结肠菌群能够分解小肠未分解的多糖,增加宿主能量摄入,乳酸菌能够降低肠腔 pH 以抑制病菌的成长,肠球菌能够与肠道粘膜上形成一层保护膜,有效缓解肠道炎性反应等,提示微生态制剂对缓解腹泻具有较好的效果^[31,32]。目前的研究显示腹泻型 IBS 的发生与肠道菌群失调、有害菌过度生长有一定关系,而微生态制剂的应用能够增加机体益生菌的数量,改善肠道菌群失调,减轻肠道粘膜炎性状态,降低肠道粘膜水分渗出,从而缓解腹泻状态^[33]。本研究结果显示联合应用阿洛司琼及微生态制剂的患者治疗后腹泻症状得到缓解,IBS-SSS 量表评分明显下降,其肠道内菌群数量也显著减少。

综上所述,阿洛司琼联合微生态制剂治疗腹泻型肠易激综合征能够有效改善患者的肠道菌群、有效缓解临床症状,具有较好的治疗效果,并可显著提高患者的生活质量。

参考文献(References)

[1] Dai C, Jiang M, Sun M J. Rifaximin in the Treatment of Patients with

- Diarrhea-Predominant Irritable Bowel Syndrome[J]. Gastroenterology, 2017, 152(6): 1629
- [2] Katsumata R, Shiotani A, Murao T, et al. Gender Differences in Serotonin Signaling in Patients with Diarrhea-predominant Irritable Bowel Syndrome[J]. Internal Medicine, 2017, 56(9): 993-999
- [3] He X, Cui L H, Wang X H, et al. Modulation of inflammation by toll-like receptor 4/nuclear factor-kappa B in diarrhea-predominant irritable bowel syndrome[J]. Oncotarget, 2017, 8(69): 113957-113965
- [4] Liu D R, Xu X J, Yao S K. Increased intestinal mucosal leptin levels in patients with diarrhea-predominant irritable bowel syndrome [J]. World Journal of Gastroenterology, 2018, 24(1): 46-57
- [5] Mokha J S, Hyams J S. Irritable Bowel Syndrome [J]. Clinical Evidence, 2017, 341(8844): 556-563
- [6] Rossi M, Aggio R, Staudacher H, et al. OC-024 Volatile organic compounds predict response to both low fodmap diet and probiotics in irritable bowel syndrome: a randomised controlled trial [J]. Gastroenterology, 2017, 152(5): S713-S714
- [7] Harper A, Naghibi M M, Garcha D. The Role of Bacteria, Probiotics and Diet in Irritable Bowel Syndrome[J]. Foods, 2018, 7(2): 13
- [8] Zhou T R, Huang J J, Huang Z T, et al. Inhibitory effects of patchouli alcohol on stress-induced diarrhea-predominant irritable bowel syndrome[J]. World Journal of Gastroenterology, 2018, 24(6): 693-705
- [9] Guan T, Li T, Cai W, et al. HTR3A and HTR3E gene polymorphisms and diarrhea predominant irritable bowel syndrome risk: evidence from a meta-analysis[J]. Oncotarget, 2017, 8(59): 100459-100468
- [10] Xu X, Liu L, Yao S, et al. Visceral sensitivity, gut barrier function and autonomic nerve function in patients with diarrhea-predominant irritable bowel syndrome [J]. Journal of Central South University, 2017, 42(5): 522-528
- [11] Cash B D, Heimanson Z, Lin C. Impact of Rifaximin on Health-Related Quality of Life in Patients with Diarrhea-Predominant Irritable

- Bowel Syndrome[J]. Gastroenterology, 2017, 152(5): S913
- [12] Li Q, Zhang B, Huang S, et al. Efficacy and indication optimization of Chinese medicine (Tiao-Chang Ke-Mingranules) for diarrhea-predominant irritable bowel syndrome: study protocol for a randomized controlled trial[J]. Trials, 2018, 19(1): 367
- [13] Lembo A J, Rao S S, Heimanson Z, et al. Characterization of Abdominal Pain Response in Patients with Diarrhea-Predominant Irritable Bowel Syndrome Treated with Rifaximin[J]. Gastroenterology, 2017, 152(5): S915
- [14] Yue L, Chen M, Tang T C, et al. Comparative effectiveness of pharmacological treatments for patients with diarrhea-predominant irritable bowel syndrome: Protocol of a systematic review and network meta-analysis[J]. Medicine, 2018, 97(31): e11682
- [15] Li C, Chi Y. Tu1646 - The Diagnostic Performance of Peripheral Blood Mast Cell Tryptase for Diarrhea-Predominant Irritable Bowel Syndrome[J]. Gastroenterology, 2018, 154(6): S-980
- [16] Delgadoherrera L, Lasch K, Zeiher B, et al. Evaluation and performance of a newly developed patient-reported outcome instrument for diarrhea-predominant irritable bowel syndrome in a clinical study population [J]. Therapeutic Advances in Gastroenterology, 2017, 10 (9): 673
- [17] Dai Y K, Li D Y, Zhang Y Z, et al. Efficacy and safety of Modified Tongxie Yaofang in diarrhea-predominant irritable bowel syndrome management: A meta-analysis of randomized, positive medicine-controlled trials[J]. Plos One, 2018, 13(2): e0192319
- [18] Rana A, Fernandez M, Wang Z, et al. Safety, Tolerability, and Efficacy of Serum-Derived Bovine Immunoglobulin in Children with Diarrhea-Predominant Irritable Bowel Syndrome [J]. Gastroenterology, 2017, 152(5): S652
- [19] Zheng Y, Yu T, Tang Y, et al. Efficacy and safety of 5-hydroxytryptamine 3 receptor antagonists in irritable bowel syndrome: A systematic review and meta-analysis of randomized controlled trials [J]. Plos One, 2017, 12(3): e0172846
- [20] Rey E, Mearin F, Alcedo J, et al. Optimizing the Use of Linaclootide in Patients with Constipation-Predominant Irritable Bowel Syndrome: An Expert Consensus Report [J]. Advances in Therapy, 2017, 34(3): 587-598
- [21] Han K, Wang J, Seo J G, et al. Efficacy of double-coated probiotics for irritable bowel syndrome: a randomized double-blind controlled trial[J]. Journal of Gastroenterology, 2017, 52(4): 432-443
- [22] Qin Z S, Wu J, Bo L, et al. Acupuncture for chronic diarrhea in adults [J]. Medicine, 2017, 96(4): e5952
- [23] Downs I A, Aroniadis O C, Kelly L, et al. Postinfection Irritable Bowel Syndrome: The Links Between Gastroenteritis, Inflammation, the Microbiome, and Functional Disease [J]. Journal of Clinical Gastroenterology, 2017, 51(10): 869
- [24] Gallotta S, Bruno V, Catapano S, et al. High risk of temporomandibular disorder in irritable bowel syndrome: Is there a correlation with greater illness severity? [J]. World Journal of Gastroenterology, 2017, 23(1): 103-109
- [25] Nee J, Lembo A. Editorial: ONO-2952 in irritable bowel syndrome with diarrhoea [J]. Alimentary Pharmacology & Therapeutics, 2017, 45(7): 1004
- [26] Chao G, Wang Y, Zhang S. MicroRNA-29a increased the intestinal membrane permeability of colonic epithelial cells in irritable bowel syndrome rats[J]. Oncotarget, 2018, 9(21): 15816-15816
- [27] Sayuk G S, Wolf R, Chang L. Comparison of Symptoms, Healthcare Utilization, and Treatment in Diagnosed and Undiagnosed Individuals With Diarrhea-Predominant Irritable Bowel Syndrome [J]. American Journal of Gastroenterology, 2017, 112(6): 892-899
- [28] Ishaque S M, Khosruzzaman S M, Ahmed D S, et al. A randomized placebo-controlled clinical trial of a multi-strain probiotic formulation (Bio-Kult®) in the management of diarrhea-predominant irritable bowel syndrome[J]. Bmc Gastroenterology, 2018, 18(1): 71
- [29] Wang J K, Liu J. Neuromuscular electrical stimulation as an adjunctive therapy to drotaverine hydrochloride for treating patients with diarrhea-predominant irritable bowel syndrome: A retrospective study [J]. Medicine, 2018, 97(29): e11478
- [30] Pimentel M, Heimanson Z, Lembo A J. Sustained Response and Predictors of Sustained Response in Patients who Respond to Multiple Courses of Rifaximin for Diarrhea-Predominant Irritable Bowel Syndrome[J]. Gastroenterology, 2017, 152(5): S918
- [31] Compare D, Rocco A, Coccoli P, et al. Lactobacillus casei DG and its postbiotic reduce the inflammatory mucosal response: an ex-vivo organ culture model of post-infectious irritable bowel syndrome[J]. Bmc Gastroenterology, 2017, 17(1): 53
- [32] Jiang D, Dong H, Cai W, et al. G protein beta 3(GN β 3) C825T polymorphism and irritable bowel syndrome susceptibility: an updated meta-analysis based on eleven case-control studies [J]. Oncotarget, 2018, 9(2): 2770-2781
- [33] Agnieszka Kułak-Bejda, Waszkiewicz N, Bejda G. Antidepressants for irritable bowel syndrome-a systematic review[J]. Pharmacological Reports, 2017, 69(6): 1366-1379