

doi: 10.13241/j.cnki.pmb.2018.03.022

董氏指压法治疗积滞患儿的临床疗效及对血清 Ghrelin 水平和胃肠动力的影响 *

王树霞 陈伟斌[△] 乐臻琳 姚敏 韩群 赵萍 徐钢

(上海中医药大学附属岳阳中西医结合医院儿科 上海 200437)

摘要 目的:探讨董氏指压法治疗积滞患儿临床疗效及对血清 Ghrelin 水平和胃肠动力的影响。**方法:**选取 2015 年 12 月-2016 年 12 月上海中医药大学附属岳阳中西医结合医院儿科收治的积滞乳食内积证患儿 120 例作为研究对象,按随机数字表法分为两组,其中治疗组 60 例予以董氏指压法,对照组 60 例予以针刺四缝,两组均治疗 8 周。比较两组治疗前后血清 Ghrelin 水平以及胃半排空时间、胃窦收缩频次,并对比两组的临床疗效。**结果:**治疗组总有效率为 98.33%(59/60),与对照组的 95.00%(57/60)比较无统计学差异($P>0.05$)。两组治疗 4 周后、8 周后胃半排空时间均显著低于治疗前,而胃窦收缩频次以及血清 Ghrelin 水平均显著高于治疗前(均 $P<0.05$),且治疗组治疗 4 周后、8 周后胃半排空时间显著低于对照组(均 $P<0.05$),治疗 8 周后治疗组胃窦收缩频次和血清 Ghrelin 水平显著高于对照组,差异均有统计学意义(均 $P<0.05$)。**结论:**董氏指压法治疗小儿积滞的疗效良好,可显著升高血清 Ghrelin 水平,增进食欲,改善胃肠蠕动,值得临床推广。

关键词:积滞;董氏指压法;Ghrelin;胃肠动力;疗效

中图分类号:R725.7 文献标识码:A 文章编号:1673-6273(2018)03-500-04

Clinical Efficacy of Dong's Finger-Pressure Method on Children with Stagnation and Its effect on Serum Ghrelin Level and Gastrointestinal Motility*

WANG Shu-xia, CHEN Wei-bin[△], LE Li-lin, YAO Min, HAN Qun, ZHAO Ping, XU Gang

(Department of Pediatrics, Yueyang Hospital of Integrated Traditional Chinese and Western Medicine, Shanghai University of Traditional Chinese Medicine, Shanghai, 200437, China)

ABSTRACT Objective: To investigate the clinical efficacy of Dong's finger-pressure method on children with stagnation and its effect on serum Ghrelin level and gastrointestinal motility. **Methods:** A total of 120 children with indigestion with syndrome of milk and food stagnation, who were treated in Paediatrics of Yueyang Traditional Chinese and Western Medicine Hospital Affiliated to Shanghai University of Traditional Chinese Medicine from December 2015 to December 2016, were selected and randomly divided into treatment group ($n=60$) and control group ($n=60$). The treatment group was treated with "Dong Acupressure", while the control group was given acupuncture four joints. The two groups were treated for 8 weeks. The level of serum Ghrelin, gastric emptying time and frequency of gastric antrum contraction were compared between the two groups before and after treatment, and the clinical efficacy of the two groups was compared. **Results:** The total effective rate of the treatment group was 98.33% (59/60), the total effective rate of the control group was 95% (57/60), there was no statistical difference between the two groups($P>0.05$). After 4 and 8 weeks of treatment, the gastric emptying time of the two groups was significantly lower than those before treatment, while the frequency of gastric antrum contraction and serum Ghrelin level were significantly higher than that before treatment ($P<0.05$); After 4 and 8 weeks of treatment, gastric emptying time in the treatment group was significantly shorter than that in the control group ($P<0.05$). After 8 weeks of treatment, the frequency of gastric antrum contraction and serum Ghrelin level were significantly higher than those of the control group, the differences were statistically significant ($P<0.05$). **Conclusion:** The curative effect of Dong's finger-pressure method for children with stagnation is good. It can significantly increase the level of Ghrelin and appetite, and improve gastrointestinal motility, which is worthy of clinical application.

Key words: Stagnation; Dong acupressure; Ghrelin; Gastrointestinal motility; Curative effect

Chinese Library Classification(CLC): R725.7 **Document code:** A

Article ID: 1673-6273(2018)03-500-04

前言

积滞属于儿科临床上较为常见的一种胃肠疾病^[1,2]。临床以不思乳食,脘腹胀满,食而不化,嗳腐吐酸,大便酸臭或便秘为

* 基金项目:上海市卫生和计划生育委员会中医药科研基金项目(2014LP102A)

作者简介:王树霞(1983-),女,硕士,主治医师,从事儿童消化、呼吸系统疾病诊断和治疗方面的研究,E-mail:hdhuchf@163.com

[△] 通讯作者:陈伟斌(1965-),女,本科,主任医师,从事儿童消化、呼吸、内分泌系统疾病诊断和治疗方面的研究,E-mail:jhgffgdi@163.com

(收稿日期:2017-10-06 接受日期:2017-10-30)

特征,是儿科常见的脾系疾病之一,西医将积滞归属于消化不良症中的功能性消化不良^[3-5]。临床治疗上主要是对症处理,改善症状,其中促动力药物由于其副作用,又限制了其在临床的应用,中医药治疗小儿积滞有很多优势,中药内服以及外治法如中药敷贴疗法、针刺四缝等针刺疗法、推拿疗法等可以互相结合使用,发挥出了中医特色和优势^[6,7]。其中四缝穴属于经外奇穴,是手三阴经所过之处,针刺该穴位有泻热解毒、调和气血以及健脾消积的功效。然而在治疗过程患儿通常哭闹厉害,可能影响治疗的顺利完成,从而影响临床治疗效果^[8-10]。本文通过研究董氏指压法治疗积滞患儿的临床疗效及其对血清 Ghrelin 水平与胃肠动力的影响。现作如下报道。

1 资料和方法

1.1 临床资料

选取 2015 年 12 月 -2016 年 12 月上海中医药大学附属岳阳中西医结合医院儿科收治的 120 例积滞患儿。纳入标准如下:① 所有患儿中医辨证均为乳食内积型;② 年龄<6 岁;③ 患儿父母均知情并签署了同意书。排除标准如下:① 伴有其他消化疾病或全身性感染者;② 合并神经系统疾病者;③ 由药物或中毒等因素导致的积滞者;④ 入院前 30 d 内接受过其他临床研究。终止标准如下:① 研究过程中出现继发感染或其他可能对疗效以及安全性造成影响的疾病;② 依从性较差者;③ 因各种原因无法继续完成研究者;④ 因各种原因无法完成随访者。按照随机数字表法分为治疗组和对照组各 60 例。本研究经上海中医药大学附属岳阳中西医结合医院临床研究伦理委员会备案并批准。

1.2 诊断标准

所有患儿均符合 2012 国家中医药管理局《中医病证诊断疗效标准》^[11]中所制定的相关标准:① 临床特征表现包括不思饮食、消化不良、腹部胀满以及便秘;② 存在腹部胀满,呕吐或夜间哭闹症状;③ 既往存在伤乳食史;④ 便检结果显示存在不消化食物残渣或脂肪滴;⑤ 入院前 7 d 内未接受过任何疗法治疗者。

1.3 治疗方法

治疗组患儿予以董氏指压法治疗,而对照组患儿则采用针刺四缝手法治疗。

治疗组:于患儿进食后 3 小时开始治疗,首先对手部进行

常规消毒处理,患儿均取坐位,告知其张口且以医生能看到咽喉部为度。使用左手拖住并固定患儿下巴,然后弯曲右手食指并直接伸入舌根部,于会厌软骨部上进行按压,并在按压完成后立即退出,以此为一次完整治疗。治疗后 1h 内禁止患儿饮水或摄食。1 次/周,以 4 周为 1 个疗程,所有患儿均予以 2 个疗程的治疗。

对照组:首先对医生手部进行消毒处理,同时以酒精棉球帮助患儿进行双手的消毒。随后采用三棱针对四缝穴进针,进针深度为 0.2 mm,然后将黄白色黏液排出。1 次/周,以 4 周为 1 个疗程,所有患儿均予以 2 个疗程的治疗。

1.4 观察指标

1.4.1 临床疗效 具体判定标准如下:治疗 8 周后患儿食欲恢复,排便正常,且起色趋于正常即为临床治愈;治疗 8 周后患儿食欲显著改善,大便趋于正常,且气色有所好转即为显效;治疗 8 周后患儿食欲有所好转,大便基本恢复正常,气色有所改善即为有效;治疗 8 周后患儿临床症状无好转,甚至加重即为无效。总有效率=(临床治愈人数+显效人数+有效人数)/总人数×100%。

1.4.2 胃动力 B 超 于治疗前、治疗 4 周后、8 周应用单切面胃动力实时胃超声显像法进行胃排空测定,包括胃半排空时间和胃窦收缩频次。

1.4.3 血清 Ghrelin 水平测定 于治疗前、治疗后 4 周、8 周采集两组患儿清晨空腹静脉血 5 mL,以 2500 r/min 离心 10 min,取血清采用酶联免疫吸附法进行测定,操作步骤务必根据试剂盒说明书进行。

1.5 统计学方法

本研究数据均采用 SPSS20.0 软件进行检测分析,性别比例、总有效率等计数资料用例数或率(%)表示,两组间比较采用 χ^2 检验,胃半排空时间、胃窦收缩频次以及血清 Ghrelin 水平等计量资料用($\bar{x} \pm s$)表示,两组间比较采用 t 检验。 $P < 0.05$ 表明两组数据对比差异具有统计学意义。

2 结果

2.1 两组一般资料比较

两组性别、年龄、身高、体重、病程等方面比较,差异均无统计学意义($P > 0.05$),存在可比性。见表 1。

表 1 两组基线资料比较($\bar{x} \pm s$)

Table 1 Comparison of general data between the two groups

Groups	n	Gender(male/female)	Age(years old)	Height(cm)	Weight(kg)	Course of disease(d)
Control group	60	32/28	5.35± 2.21	115.67± 13.74	20.12± 5.44	7.78± 5.71
Treatment group	60	29/31	5.20± 2.33	117.29± 16.00	22.04± 6.21	8.15± 3.69
χ^2/t		0.300	0.362	0.595	1.801	0.422
P		0.58	0.718	0.553	0.074	0.674

2.2 两组临床疗效比较

治疗组临床治愈 15 例,显效 39 例,有效 5 例,无效 1 例。对照组临床治愈 12 例,显效 35 例,有效 10 例,无效 3 例。治疗组治疗总有效率为 98.33%(59/60),与对照组的 95.00%

(57/60)比较无统计学差异($P > 0.05$)。见表 2。

2.3 两组治疗前后胃半排空时间、胃窦收缩频次以及血清 Ghrelin 水平比较

两组治疗 4 周后、8 周后胃半排空时间均显著低于治疗

前,而胃窦收缩频次以及血清 Ghrelin 水平均显著高于治疗前, 而治疗 8 周后胃窦收缩频次和血清 Ghrelin 水平显著高于对照组,且治疗组治疗 4 周后、8 周后胃半排空时间显著低于对照组, 组,差异均有统计学意义(均 $P<0.05$)。见表 3。

表 2 两组临床疗效比较

Table 2 Comparison of clinical efficacy between the two groups

Groups	n	Healing	Excellence	Effective	Ineffective	Total effective rate [n (%)]
Treatment group	60	15	39	5	1	59(98.33)
Control group	60	12	35	10	3	57(95.00)
χ^2	-	-	-	-	-	1.034
P	-	-	-	-	-	0.309

表 3 两组治疗前后胃半排空时间、胃窦收缩频次以及血清 Ghrelin 水平比较($\bar{x} \pm s$)

Table 3 Comparison of gastric emptying time, frequency of gastric antrum contraction, serum Ghrelin level between two groups before and after treatment ($\bar{x} \pm s$)

Groups	n	Time	Gastric emptying time (min)	Frequency of gastric antrum contraction(times/min)	Serum Ghrelin level (pg/mL)
Control group	60	Before treatment	49.02± 4.01	1.33± 0.50	38.32± 4.20
		4 weeks after treatment	31.15± 1.22*	1.78± 0.78*	39.81± 3.94*
		8 weeks after treatment	22.21± 1.62*	2.08± 0.93*	42.13± 4.08*
Treatment group	60	Before treatment	48.65± 3.33	1.35± 0.55	38.13± 4.65
		4 weeks after treatment	29.50± 1.43**	1.90± 0.68*	40.90± 3.64*
		8 weeks after treatment	19.33± 1.54**	2.85± 0.88**	47.62± 2.38**

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

3 讨论

宋朝刘防在《幼幼新书·卷二十二》多处提及积滞的治疗。"积"指聚集,有积蓄、堆积之意;"滞"指停滞,为停滞不畅之意。早在《内经》、《难经》中已有多处关于"积"的记载,历代医著中,被称作"食积"、"食不消"、"食滞"、"伤食"等,也是导致其它多种疾病如疳证、咳嗽、泄泻,感冒夹积、癫痫等的重要内在因素。明朝王肯堂在《幼科证治准绳》指出"积滞中脘不化,久亦成疳。"清朝陈复正的《幼幼集成·咳嗽证治》著有"以时而言之,清晨咳者属痰火,午前嗽者属肾火,午后嗽者属阴虚,黄昏嗽者火浮于肺,五更嗽者食积滞于三焦。"元朝曾世荣在《活幼心书·卷中·明本论·诸泻》则谈到"积泻,脾气虚弱,乳食入胃,不能运化,积滞日久,再为冷食所伤,传之大肠,遂成泄泻,留连不止,诸药不效。"元朝曾世荣在《活幼心书·卷中·明本论·伤寒》再次讲到"夹食伤寒,其证鼻流清涕,头疼发热,昼轻夜重,时复吐逆,噎气酸馊,面黄红白,变之不一,目胞微浮,乍凉乍热,心烦发渴,腹痛胀满,皆因饮食过伤,又感风寒,激搏而热。"明朝鲁伯嗣的《婴童百问·卷之二·惊痫第十九问》著有"食痢者,食时得惊,停宿结滞,其初吐乳不哺,大便酸臭,或结成乳癖,先寒后热是也。食痢则先为之消积,续以定痢等剂主之。"所以小儿疾患与积滞关系甚为密切,在一定条件下,对疾病的发生、发展起重要作用,治疗需审慎。

明朝万全《幼科发挥·卷之四·调理脾胃》论述了对于积滞调理脾胃重在调节饮食:"人以脾胃为本,所当调理。小儿脾常不足,尤不可不调理也。调理之法,不专在医,唯调乳母,节饮

食,慎医药。使脾胃无伤。则根本常固矣。"小儿脏腑轻灵,治病选方应轻巧灵便,选用方药宜少,用量易轻,如药多、量大,君、臣、佐、使不明,则既浪费资源,又损伤小儿稚体,弊端彰显。所以本研究以董氏指压法治疗小儿积滞,即可免除药物之苦,又可避免针刺之痛,又能节省推拿之繁琐,因小儿耐心之有限,心灵之敏感,采用此法以简便有效,虽有短暂不适亦在耐受范围之内。故采用董氏指压法治疗小儿积滞,是充分认识到了小儿积滞在儿科常见疾病发病中的地位,同时也遵循小儿生理病理之特点^[12-14]。

积滞在现代医学归为功能性消化不良一类,与胃排空延迟、胃肠功能障碍有关,因此改善胃排空延迟是积滞治疗的关键^[15-17]。本研究结果显示:治疗组治疗总有效率为 98.33%(59/60),与对照组的 95.00%(57/60)相比,无统计学差异($P>0.05$)。这说明了两种治疗方式均有较好的临床治疗疗效。与此同时,治疗组治疗 4 周后、8 周后胃半排空时间显著低于对照组,而治疗 8 周后治疗组胃窦收缩频次和血清 Ghrelin 水平显著高于对照组($P<0.05$)。这再次提示了董氏指压法可显著改善积滞患儿胃肠动力以及血清 Ghrelin 水平,原因主要可能与董氏指压法发挥了较好的清除积滞的作用有关^[18,19]。Ghrelin 是日本科学家 kojim,1999 年发现迄今唯一一生长激素释放激素受体(GH-SR)的天然配体。其主要作用包括促进生长素分泌,增加食欲,促进胃肠蠕动与机体能量平衡调节等,有利于促进胃排空以及小肠内容物通过^[20,21]。另有研究报道显示,通过将 Ghrelin 注射进腹腔、静脉或侧脑中,可显著促进机体胃的排空,且作用效果存在一定的浓度依赖^[22-24]。这与本研究的结果一致,董氏指压

法可以有效改善积滞临床症状, 升高 Ghrelin 水平, 促进胃排空。Ghrelin 属于脑 - 肠肽以及胃肠激素之一, 主要作用是参与了胃肠运动与部分消化液的分泌^[25-27]。研究显示 Ghrelin 及其激动剂是通过兴奋肠神经系统的胆碱能神经和迷走神经来加快胃排空^[28-30]。提示我们今后以 Ghrelin 为媒介深入探讨指压法在 "迷走神经介导机制", "肠神经元介导机制" 方面的临床意义。

综上所述, 董氏指压法应用于小儿积滞中具有显著的疗效, 且有效提高患者血清 Ghrelin 水平, 改善胃肠蠕动, 具有较高的临床推广应用价值。

参考文献(References)

- [1] 潘青青, 张骅. 张骅教授治疗小儿积滞的经验[J]. 浙江中医药大学学报, 2017, 41(5): 394-396
Pan Qing-qing, Zhang Biao. The Experience of Professor Zhang Biao in the Treatment of Infantile Dyspepsia [J]. Journal of Zhejiang Chinese Medical University, 2017, 41(5): 394-396
- [2] Wauters L, Nightingale S, Talley NJ, et al. Functional dyspepsia is associated with duodenal eosinophilia in an Australian paediatric cohort [J]. Aliment Pharmacol Ther, 2017, 45(10): 1358-1364
- [3] Paul SP, Basude D. Non-pharmacological management of abdominal pain-related functional gastrointestinal disorders in children[J]. World J Pediatr, 2016, 12(4): 389-398
- [4] Goymann W, Lupi S, Kaiya H, et al. Ghrelin affects stopover decisions and food intake in a long-distance migrant[J]. Proc Natl Acad Sci USA, 2017, 114(8): 1946-1951
- [5] Carbone F, Tack J, Hoffman I. The Intra-gastric Pressure Measurement: A Novel Method to Assess Gastric Accommodation in Functional Dyspepsia Children [J]. J Pediatr Gastroenterol Nutr, 2017, 64(6): 918-924
- [6] 许华, 张雪丽, 陈火莲, 等. 中药内外合治治疗小儿积滞 120 例疗效观察[J]. 中国中西医结合儿科学, 2013, 5(2): 113-115
Xu Hua, Zhang Xue-li, Chen Huo-lian, et al. Clinical observation of traditional Chinese medicine Internal and external treatment on 120 children with indigestion [J]. Chinese Pediatrics of Integrated Traditional and Western Medicine, 2013, 5(2): 113-115
- [7] 李博萍, 庞宏威, 贺毅洁, 等. 中医针药联合治疗结肠癌患者术后胃肠功能障碍的疗效观察 [J]. 现代生物医学进展, 2017, 17(12): 2310-2313
Li Bo-ping, Pang Hong-wei, He Yi-jie, et al. Curative Effect Observation of Acupuncture Combined with Chinese Medicine in Treatment of Postoperative Gastrointestinal Dysfunction of Colorectal Cancer Patients[J]. Progress in Modern Biomedicine, 2017, 17(12): 2310-2313
- [8] Friesen CA, Rosen JM, Schurman JV. Prevalence of overlap syndromes and symptoms in pediatric functional dyspepsia[J]. BMC Gastroenterol, 2016, 16(1): 75
- [9] Uusijärvi A, Alm J, Lindblad F, et al. Irritable bowel syndrome and functional abdominal pain in five-year-old children are related to lifestyle[J]. Acta Paediatr, 2016, 105(8): 971-978
- [10] Correa Silva RG, Machado NC, Carvalho MA, et al. Helicobacter pylori infection is high in paediatric nonulcer dyspepsia but not associated with specific gastrointestinal symptoms [J]. Acta Paediatr, 2016, 105(5): e228-231
- [11] 胥丹桂, 侯梦晓, 齐玲, 等. 中药穴位敷贴防治小儿哮喘缓解期的临床研究[J]. 河北医学, 2008, 14(12): 1405-1409
Xu Dan-gui, Hou Meng-xiao, Qi Ling, et al. Clinical Study on Treatment of Remission of Asthma in Children by Chinese Medicine Point Application[J]. Hebei Medicine, 2008, 14(12): 1405-1409
- [12] Turco R, Russo M, Martinelli M, et al. Do Distinct Functional Dyspepsia Subtypes Exist in Children [J]. J Pediatr Gastroenterol Nutr, 2016, 62(3): 387-392
- [13] Kansu A, Kuloğlu Z, Demir A, et al. Yield of coeliac screening in abdominal pain-associated functional gastrointestinal system disorders [J]. J Paediatr Child Health, 2015, 51(11): 1066-1070
- [14] Hijaz NM, Friesen CA, Schurman JV, et al. Plasma ghrelin and liquid gastric emptying in children with functional dyspepsia consistent with post-prandial distress syndrome [J]. Neurogastroenterol Motil, 2015, 27(8): 1120-1126
- [15] Kumar N, Barai S, Gambhir S, et al. Effect of Mirtazapine on Gastric Emptying in Patients with Cancer-associated Anorexia[J]. Indian J Palliat Care, 2017, 23(3): 335-337
- [16] Liu Y, Gao YK, Yao L, et al. Modified B-ultrasound method for measurement of antral section only to assess gastric function and guide enteral nutrition in critically ill patients[J]. World J Gastroenterol, 2017, 23(28): 5229-5236
- [17] Yang CG, Liao ZF, Qiu WC, et al. Function of ghrelin and ghrelin receptors in the network regulation of gastric motility [J]. Mol Med Rep, 2014, 10(5): 2453-2458
- [18] Vandermeeren C, Loi P, Closset J. Does Pancreaticogastrostomy Decrease the Occurrence of Delayed Gastric Emptying After Pancreatoduodenectomy[J]. Pancreas, 2017, 46(8): 1064-1068
- [19] Khan AS, Williams G, Woolsey C, et al. Flange Gastroenterostomy Results in Reduction in Delayed Gastric Emptying after Standard Pancreaticoduodenectomy: A Prospective Cohort Study [J]. J Am Coll Surg, 2017, 225(4): 498-507
- [20] 潘彤彤, 徐彰, 黄开宇, 等. 功能性消化不良患儿血浆 ghrelin 变化及其与胃排空的关系[J]. 临床儿科杂志, 2009, 27(10): 935-937
Pan Tong-tong, Xu Zhang, Huang Kai-yu, et al. Variation of plasma ghrelin levels and its correlation with gastric emptying in children with functional dyspepsia[J]. Journal of Clinical Pediatrics, 2009, 27(10): 935-937
- [21] 邓朝晖, 许春娣. Ghrelin 对胃肠功能的影响及临床应用[J]. 国际儿科学杂志, 2008, 35(1): 81-83
Deng Zhao-hui, Xu Chun-di. Influence and clinic application of ghrelin on gastrointestinal function[J]. International Journal of Pediatrics, 2008, 35(1): 81-83
- [22] Ricken R, Bopp S, Schlattmann P, et al. Ghrelin Serum Concentrations Are Associated with Treatment Response During Lithium Augmentation of Antidepressants[J]. Int J Neuropsychopharmacol, 2017, 20(9): 692-697
- [23] Chowen JA, Argente J. Ghrelin: A Link Between Energy Homeostasis and the Immune System [J]. Endocrinology, 2017, 158(7): 2077-2081
- [24] Santiago-Fernández C, García-Serrano S, Tome M, et al. Ghrelin levels could be involved in the improvement of insulin resistance after bariatric surgery[J]. Endocrinol Diabetes Nutr, 2017, 4(7): 355-362

- [8] Capobianchi MR, Uleri E, Caglioti C, et al. Type I IFN family members: similarity, differences and interaction [J]. Cytokine & Growth Factors Reviews, 2015, 26(2): 103-111
- [9] Roh MR, Zheng Z, Kim HS, et al. Difference of interferon- α and interferon- β on melanoma growth and lymph node metastasis in mice [J]. Melanoma Research, 2013, 23(2): 114-124
- [10] Shi WY, Cao C, Liu L. Interferon α Induces the Apoptosis of Cervical Cancer HeLa Cells by Activating both the Intrinsic Mitochondrial Pathway and Endoplasmic Reticulum Stress-Induced Pathway [J]. International Journal of Molecular Sciences, 2016, 17(11): 1832
- [11] Einat M, Resnitzky D, Kimchi A. Close link between reduction of c-myc expression by interferon and G0/G1 arrest [J]. Nature, 1985, 313(6003): 597-600
- [12] Raig ET, Jones NB, Varker KA, et al. VEGF secretion is inhibited by interferon-alpha in several melanoma cell lines[J]. Journal of Interferon and Cytokine Research, 2008, 28(9): 553-561
- [13] 李涛, 智绪亭, 周建炜, 等. 小剂量阿司匹林协同干扰素- α 抑制肝细胞肝癌生长转移的实验研究[J]. 中华肝胆外科杂志, 2012, 18(1): 50-53
Li Tao, Zhi Xu-ting, Zhou Jian-wei, et al. Mechanism of low-dose aspirin with IFN- α in inhibiting growth and metastasis of hepatocellular carcinoma[J]. Chin J Hepatobiliary Surg, 2012, 18(1): 50-53
- [14] Frakas A, Kemeny L. Interferon- α in the generation of monocyte-derived dendritic cells: recent advances and implications for dermatology [J]. The British Journal of Dermatology, 2011, 162(2): 247-254
- [15] Uedaab K, Akibaa J, Ogasawaraa S, et al. Growth inhibitory effect of an injectable hyaluronic acid - tyramine hydrogels incorporating human natural interferon- α and sorafenib on renal cell carcinoma cells [J]. Acta Biomaterialia, 2016, 29: 103-111
- [16] Galani V, Kastamoulas M, Varouktsi A, et al. IFNs-signaling effects on lung cancer: an-up-date pathways-specific review [J]. Clinical and Experimental Medicine, 2016: 1-9
- [17] Kiladjian JJ, Giraudier S, Cassinat B. Interferon-alpha for the therapy of myeloproliferative neoplasms: targeting the malignant clone [J]. Leukemia, 2015, 30(4): 776-781
- [18] Davey RJ, Westhuizen AV, Bowden NA. Metastatic melanoma treatment: Combining old and new therapies [J]. Critical Reviews in Oncology/hematology, 2015, 98: 242-253
- [19] TR Di, E Simeone, LG Di, et al. The use of interferon in melanoma patients: A systematic review[J]. Cytokine & Growth Factor Reviews, 2014, 26(2): 203-212
- [20] Hauschild A, Gogas H, Tarhini A, et al. Practical guidelines for the management of interferon-alpha-2b side effects in patients receiving adjuvant treatment for melanoma: expert opinion [J]. Cancer, 2008, 112(5): 982-994
- [21] Heise R, Amann PM, Ensslen S, et al. Interferon Alpha Signalling and Its Relevance for the Upregulatory Effect of Transporter Proteins Associated with Antigen Processing (TAP) in Patients with Malignant Melanoma[J]. PLoS ONE, 2016, 11(1): 1-19
- [22] Minakshi N, Jiangqiang W, Gary SW. Methotrexate inhibits the viability of human melanoma cell lines and enhances Fas/Fas-ligand expression, apoptosis and response to interferon-alpha: Rationale for its use in combination therapy [J]. Arch Biochem Biophys, 2014, 563: 101-107
- [23] Ana L RW, Hsiang WW, Hakan C S, et al. Resistance to IFN-alpha-induced apoptosis is linked to a loss of STAT2 [J]. Mol Cancer Res, 2010, 8(1): 80-92

(上接第 503 页)

- [25] Nelson AD, Camilleri M, Acosta A, et al. Effects of ghrelin receptor agonist, relamorelin, on gastric motor functions and satiation in healthy volunteers [J]. Neurogastroenterol Motil, 2016, 28 (11): 1705-1713
- [26] Soong YY, Lim WX, Leow MK, et al. Combination of soya protein and polydextrose reduces energy intake and glycaemic response via modulation of gastric emptying rate, ghrelin and glucagon-like peptide-1 in Chinese[J]. Br J Nutr, 2016, 115(12): 2130-2137
- [27] Saliakellis E, Karatzas N, Iakovou I, et al. Serum levels of ghrelin and obestatin in children with symptoms suggestive of delayed gastric emptying of unclear etiology [J]. Ann Gastroenterol, 2015, 28 (4): 452-456
- [28] Ariyasu H, Iwakura H, Yukawa N, et al. Clinical effects of ghrelin on gastrointestinal involvement in patients with systemic sclerosis [J]. Endocr J, 2014, 61(7): 735-742
- [29] 王树霞, 韩海琼, 陈伟斌, 等. 董氏指压法治疗小儿积滞临床疗效观察[J]. 中国中医药信息杂志, 2015, 22(10): 21-24
Wang Shu-xia, Han Hai-qiong, Chen Wei-bin, et al. Observation of Clinical Efficacy of Dong's Pushing Epiglottis Cartilage Method for the Treatment of Children Food Retention [J]. Chinese Journal of Information on Traditional Chinese Medicine, 2015, 22(10): 21-24
- [30] 宋辰斐, 宣小平, 夏以琳, 等. 董氏指压法治疗小儿厌食症 100 例临床观察[J]. 天津中医药, 2015, 32(11): 657-659
Song Chen-fei, Xuan Xiao-ping, Xia Yi-lin, et al. Clinical observation on 100 cases of infantile anorexia treated by Dong's finger-pressure method[J]. Tianjin Journal of Traditional Chinese Medicine, 2015, 32 (11): 657-659