

穴位贴敷联合经皮穴位电刺激对腹腔镜术后胃肠蠕动功能的影响

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【摘要】目的:探讨穴位贴敷联合经皮穴位电刺激对腹腔镜术后胃肠蠕动功能的影响。**方法:**选取拟择期实施腹腔镜手术的116例患者为研究对象,根据简单随机数表法将所有研究对象分为观察组(58例)和对照组(58例)。两组患者均行腹腔镜手术,观察组给予穴位贴敷联合经皮穴位电刺激治疗,对照组仅给予经皮穴位电刺激治疗。比较两组患者的治疗效果、胃肠蠕动功能相关指标、术前术后胃动素水平、术后3 d内恶心呕吐及腹胀发生率。**结果:**观察组有效率显著高于对照组(96.55% vs 79.31%, $P<0.05$)。观察组胃肠蠕动恢复时间、首次排气时间及首次排便时间均短于对照组($P<0.05$)。两组患者术前胃动素水平比较,差异无统计学意义($P>0.05$);观察组胃动素水平术后第1、2天显著低于术前($P<0.05$),第3天与术前比较差异无统计学意义($P>0.05$);对照组术后第1、2、3天胃动素水平显著低于术前($P<0.05$);观察组术后第1、2、3天胃动素水平均高于对照组($P<0.05$)。观察组术后3 d内恶心呕吐、腹胀发生率均低于对照组($P<0.05$)。**结论:**穴位贴敷联合经皮穴位电刺激能够有效改善腹腔镜术后胃肠蠕动功能,提升胃动力,促使胃肠蠕动功能尽快恢复,减少术后恶心呕吐及腹胀发生,有较好的临床推广应用价值。

【关键词】腹腔镜手术;胃肠蠕动功能;穴位贴敷;经皮穴位电刺激

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Effects of acupoint application combined with transcutaneous acupoint electrical stimulation on gastrointestinal peristalsis after laparoscopic surgery

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Abstract: Objective To investigate the gastrointestinal peristalsis after acupoint application combined with transcutaneous acupoint electrical stimulation following laparoscopic surgery. Methods A total of 116 patients who were scheduled for laparoscopic surgery were selected as the research objects. According to random number table method, the research subjects were divided into observation group (58 cases) and control group (58 cases). Both groups of patients underwent laparoscopic surgery. The patients in observation group were given acupoint application combined with transcutaneous acupoint electrical stimulation, while those in control group were treated by transcutaneous acupoint electrical stimulation only. The treatment effect, motilin level before and after surgery, gastrointestinal peristalsis related indexes, and the incidences of nausea and vomiting and abdominal distension within 3 days after surgery were compared between two groups. Results The effective rate of observation group was 96.55%, which was significantly higher than 79.31% of control group ($P<0.05$). The recovery time of gastrointestinal peristalsis, time to first exhaust and time to first defecation in observation group were shorter than those in control group ($P<0.05$). There was no significant difference in presurgical motilin level between two groups ($P>0.05$). However, at 1, 2, and 3 days after surgery, the motilin level in observation group was higher than those in control group ($P<0.05$). Compared with that before surgery, the motilin level in observation group was significantly decreased at 1 and 2 days after surgery ($P<0.05$), and then returned to the level before surgery at 3 days after surgery, without significant difference ($P>0.05$). The motilin level in control group at 1, 2 and 3 days after surgery were significantly lower than that before surgery ($P<0.05$). The incidences of nausea, vomiting, and abdominal distension within 3 days after surgery in observation group were lower than those in control group ($P<0.05$). Conclusion Acupoint application combined with transcutaneous acupoint electrical stimulation can effectively improve the gastrointestinal peristalsis after laparoscopic surgery, enhance gastric motility, promote the functional recovery of gastrointestinal peristalsis as soon as possible, and reduce the incidences of nausea, vomiting and abdominal distension after surgery, worthy for

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clinical application.

Keywords: laparoscopic surgery; gastrointestinal peristalsis; acupoint application; transcutaneous acupoint electrical stimulation

前言

行腹腔镜手术时,气腹建立、手术麻醉、机械刺激及术中牵拉等因素会对患者胃肠蠕动功能造成影响,引发术后恶心呕吐、腹胀、肛门不排气排便等不良反应,进而延缓术后身体机能康复^[1]。腹腔镜术后胃肠蠕动功能障碍在腹腔镜术后十分常见,如何预防胃肠蠕动功能障碍,加快术后胃肠蠕动功能恢复对行腹腔镜手术患者的预后意义重大^[2]。已有多项研究表明,围术期给予经皮穴位电刺激对调节行腹部手术患者的胃肠功能、减少术后恶心呕吐及腹胀等不良反应有积极作用^[3-4]。也有研究提示,中药穴位贴敷在改善胃肠功能、促进术后排气排便方面有一定效果^[5]。但目前临幊上关于二者联合治疗腹腔镜手术患者胃肠蠕动功能障碍的研究较少。本研究选取116例拟行腹腔镜手术的患者进行对比研究,旨在探讨穴位贴敷联合经皮穴位电刺激对腹腔镜术后胃肠蠕动功能的影响。

1 资料与方法

1.1 一般资料

选取2019年1月~2020年2月于上海交通大学医学院附属第九人民医院接收的拟择期实施腹腔镜手术的116例患者为研究对象。纳入标准^[6]:①均为行腹腔镜手术者;②年龄18~60岁;③手术均为全麻,ASA为I~III级;④体质指数为18~24 kg/m²。排除标准:①入组前1个月内接受过经皮穴位电刺激治疗者;②入组前1个月服用过止吐药及其他影响胃肠动力药物者;③术中转开腹手术者;④穴位处皮肤出现发红、破损、感染者;⑤有胃肠道手术史者;⑥有严重肝肾功能疾病及内分泌系统、免疫系统-血液系统疾病者。根据简单随机数表法进行分组,58例为观察者,58例为对照组。观察组年龄21~59岁,平均(48.71±6.32)岁;手术时间39~121 min,平均(72.64±10.58) min。对照组年龄19~60岁,平均(47.24±6.51)岁;手术时间42~123 min,平均(74.10±10.17) min。两组患者一般资料差异无显著性($P>0.05$),具有可比性。本研究已与患者及家属签订知情同意书,且获得医院伦理委员会批准。

1.2 方法

两组患者均接受全麻腹腔镜手术,术前术后给予常规护理措施。

对照组给予经皮穴位电刺激治疗,具体方法:进入手术室后,开放患者的静脉通路,监测患者各项生命体征。经皮穴位电刺激治疗从麻醉诱导前30 min

开始,通过连接HANS-200A型经皮穴位刺激仪对患者的足三里穴、太冲穴、内关穴及上巨虚穴进行持续电针刺激,起始电流强度为1 mA,逐渐增强,至患者可耐受最大强度。全程电流强度不可超过12 mA,手术结束即停止电刺激。

观察组在经皮穴位电刺激治疗基础上给予穴位贴敷联合治疗,具体方法:(1)中药穴位贴敷:由医院药房统一进行配药,组方为生大黄、厚朴、青皮、枳实、牵牛子、莱菔子、木香、甘遂、冰片按比例混合,研磨成粉状后加香油调制成药膏。术毕30 min后用生理盐水清洗患者的神阙穴、天枢穴和双侧足三里穴,然后将调制好的药膏贴服于此。每4~6 h更换一次,直至患者排气为止。(2)经皮穴位电刺激治疗方法同对照组。

1.3 观察指标

(1)比较两组患者的治疗效果。(2)比较两组患者术后胃肠蠕动功能相关指标,包括胃肠蠕动功能恢复时间(肠鸣音恢复)、首次排气时间及首次排便时间。(3)观察两组患者术前和术后3 d的胃动素水平变化。胃动素水平检测采用酶联免疫法进行测定。抽取肘部静脉血4 mL进行离心分离,取上层清液进行检测。检测试剂盒来自上海恒远生物科技有限公司,操作步骤按试剂盒说明执行。(4)比较两组患者术后3 d内恶心呕吐及腹胀发生率。腹胀判定标准:患者腹围增≥2 cm,且自觉腹部不适,有胀痛感,严重者休息和睡眠受影响^[7]。

1.4 疗效评价

治疗效果判定标准^[8]如下。(1)优:患者于术后1 d内肛门自行排气或排便,排便次数为1次/d,肠鸣音恢复,3~5次/min,体温、进食正常。(2)良:患者于术后2 d内肛门自行排气或排便,排便次数不规律,肠鸣音恢复但较弱,1~2次/min,体温37~38 °C,可进流食,有轻度腹胀症状。(3)中:患者于术后3 d内肛门自行排气或排便,肠鸣音恢复后0~2次/min,体温高于38 °C,可进流食或禁食,腹胀症状明显。(4)差:患者术后3 d内排气或排便,肠鸣音未恢复,体温高于38 °C,禁食,有明显恶心呕吐及腹胀症状,需要给予胃肠减压。有效率=(优+良+中)例数/总例数×100%。

1.5 统计学方法

采用SPSS19.0软件对数据进行统计分析,符合正态分布的计量资料采用均数±标准差表示,比较采用t检验,计数资料采用百分比(%)表示,比较采用χ²检验,以 $P<0.05$ 为差异有统计学意义。

2 结果

2.1 两组患者治疗效果比较

观察组有效率显著高于对照组(96.55% vs 79.31%, $P<0.05$), 见表1。

表1 两组患者治疗效果比较[例(%)]
Tab.1 Comparison of treatment effects between two groups [cases (%)]

组别	n	优	良	中	差	总有效
观察组	58	31(53.45)	13(22.41)	12(20.69)	2(3.45)	56(96.55)
对照组	58	24(41.38)	11(18.97)	11(18.97)	12(20.69)	46(79.31)
χ^2 值						8.123
P值						0.004

2.2 两组患者胃肠蠕动功能相关指标比较

观察组胃肠蠕动恢复时间、首次排气时间及首次排便时间均小于对照组($P<0.05$), 见表2。

表2 两组患者胃肠蠕动功能相关指标比较($h, \bar{x} \pm s$)
Tab.2 Comparison of gastrointestinal peristalsis related indexes between two groups ($h, Mean \pm SD$)

组别	n	胃肠蠕动恢复时间	首次排气时间	首次排便时间
观察组	58	12.18±3.23	27.59±6.17	34.34±7.09
对照组	58	18.53±4.56	36.57±7.92	49.55±8.26
t值		8.654	6.811	10.641
P值		0.000	0.000	0.000

表3 两组患者术前术后胃动素水平比较(pg/mL, $\bar{x} \pm s$)
Tab.3 Comparison of motilin level before and after surgery in two groups (pg/mL, Mean±SD)

组别	n	术前	术后		
			第1天	第2天	第3天
观察组	58	264.52±61.09	164.72±29.25 ^{ab}	197.86±38.49 ^{ab}	263.41±57.62 ^b
对照组	58	267.41±62.38	126.47±25.31 ^a	156.29±34.55 ^a	230.49±48.37 ^a
t值		0.252	7.531	6.120	3.332
P值		0.801	0.000	0.000	0.001

a:与同组术前比较, $P<0.05$; b:与对照组同期比较, $P<0.05$

表4 两组患者术后3 d内恶心呕吐、腹胀发生率比较[例(%)]
Tab.4 Comparison of the incidences of nausea and vomiting and abdominal distension within 3 days after surgery between two groups [cases(%)]

组别	n	恶心呕吐	腹胀
观察组	58	3(5.17)	2(3.45)
对照组	58	10(17.24)	8(13.79)
χ^2 值		4.245	3.939
P值		0.039	0.047

轻、并发症少等优势^[9]。但在腹腔镜术后仍有相当一部分患者会出现胃肠蠕动功能障碍。胃肠蠕动功能障碍会引发恶心呕吐、腹痛腹胀、肛门不排气排便等不适症状, 严重者可引起肠梗阻、全身炎症反应等, 对术后康复造成不良影响^[10]。近年, 随着腹腔镜手术的应用越来越广泛, 如何促进腹腔镜术后患者胃肠功能改善已成为临床关注的焦点之一。

西医对腹腔镜手术所致胃肠蠕动功能障碍尚无特异性疗法, 虽可通过胃动力药物、止吐药物、胃肠减压等措施缓解术后胃肠蠕动功能障碍, 但效果有

限^[11]。近年,中医在治疗胃肠功能紊乱方面的优势逐渐凸显^[12]。虽然中医中无关于外科术后胃肠蠕动功能障碍相关的记载,但根据胃肠蠕动功能障碍恶心呕吐、腹痛腹胀、便秘等症状,可将其归于“呕吐”、“肠痹”、“腹满”、“腹痛”等范畴,其根本病机在于气机不畅,六腑不通^[13]。经穴位电刺激治疗是指通过电刺激将特定脉冲电流经由疾病关联穴位输入患者机体获得有某种疗效^[14]。足三里穴、太冲穴、内关穴、上巨虚穴诸穴配伍可达升降气机、和胃健脾、通腹降浊、理气止痛之效,常用于腹部疾病、胃肠道疾病治疗^[15]。已有研究证实,运用经皮穴位电刺激足三里、内关穴等对于外科术后胃肠功能紊乱有确切的治疗效果,可促使术后胃肠功能尽快恢复,且操作方便、副作用小^[16]。穴位贴敷也是治疗外科术后胃肠功能紊乱的常用方法之一。穴位贴敷通过将治疗胃肠蠕动功能的中药材炮制成膏状后贴敷于疾病相关穴位,药物经皮穴位吸收发挥治疗作用^[4]。该治疗方法结合了穴位刺激和药物效应,具有作用持续时间长、危害小的优点。根据腹腔镜术后胃肠蠕动功能障碍的病机,穴位贴敷所选药方由生大黄、厚朴、青皮、枳实、牵牛子、来菜子、木香、甘遂、冰片组成,取穴神阙穴、天枢穴和双侧足三里穴,药物兼穴位刺激可共奏疏通气血、调理脏腑、止痛止吐之效^[17]。穴位贴敷在外科术后胃肠功能紊乱方面的疗效已被临床认可。

本研究将穴位贴敷和经皮穴位电刺激联合运用于行腹腔镜手术的患者,结果表明:穴位贴敷联合经皮穴位电刺激治疗腹腔镜术后胃肠蠕动功能的有效率明显高于仅采用经皮穴位电刺激治疗的患者。由此可见,在患者行腹腔镜手术期间给予足三里穴、太冲穴、内关穴、上巨虚穴持续的经皮穴位电刺激,加上术后穴位贴敷,能够发挥协同作用,改善患者腹腔镜术后胃肠蠕动功能,显著提高治疗效果^[18]。胃肠蠕动功能相关指标也可看出,穴位贴敷联合经皮穴位电刺激治疗的患者腹腔镜术后胃肠蠕动恢复时间、首次排气时间及首次排便时间均短于仅采用经皮穴位电刺激治疗的患者,这与联合治疗的协同作用有关,既发挥了所取诸穴的穴位刺激对腹部、胃肠道疾病的调理作用,减轻手术对胃肠功能的影响,同时在术后通过中药药理功效及穴位吸收进一步巩固治疗效果。胃动素是机体消化时促使胃肠蠕动的主要胃肠激素之一,其水平变化对于机体胃肠收缩有着重要影响,常用于外科术后胃肠功能评估^[19]。从胃动素水平变化来看,穴位贴敷联合经皮穴位电刺激治疗的患者腹腔镜术后胃动素水平明显高于同期仅采用经皮穴位电刺激治疗的患者,说明二者联合应用能够减轻腹腔镜手术各因素对患者胃动素的影

响,促进胃动素分泌,尽快上调胃动素水平,达到调节胃肠蠕动功能的作用。此外,采用穴位贴敷联合经皮穴位电刺激治疗的患者腹腔镜术后3 d 恶心呕吐及腹胀发生率明显低于仅采用经皮穴位电刺激治疗的患者,也证实术后辅以药物贴敷治疗对减少腹腔镜术后胃肠蠕动功能障碍所引起的恶心呕吐、腹胀等不良反应有显著效果。

综上所述,穴位贴敷联合经皮穴位电刺激能够有效改善腹腔镜术后胃肠蠕动功能,提升胃动力,促使胃肠蠕动功能尽快恢复,减少术后恶心呕吐及腹胀发生,有较好的临床推广应用价值。

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