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论 著

偏好食物刺激联合口香糖咀嚼与下肢功能锻炼操优化 妇科腹腔镜手术患者术后胃肠功能的效果观察*

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摘要: **目的** 探究偏好食物刺激联合口香糖咀嚼与下肢功能锻炼操对妇科腹腔镜手术患者术后胃肠功能的影响。**方法** 按随机数表法将患者分为食物刺激联合口香糖咀嚼与下肢锻炼组(FCL组)和口香糖咀嚼与下肢锻炼组(CL组), 每组60例。患者均行妇科腹腔镜手术, FCL组在术后采用食物刺激联合口香糖咀嚼与下肢锻炼法改善胃肠功能, CL组在术后采用口香糖咀嚼与下肢锻炼法改善胃肠功能。比较两组患者血浆胃泌素水平、第一次排气及排便时间、数字分级评分法(NRS)、不良反应发生情况的差异性。**结果** 手术后72 h, FCL组血浆胃泌素水平为(350.75±27.46) pmol/L, 明显高于CL组的(269.63±14.96) pmol/L ($P < 0.05$); CL组第一次排气及排便时间为(25.56±2.46)和(48.74±5.97) h, FCL组为(16.74±2.01)和(34.95±4.92) h, FCL组明显短于CL组 ($P < 0.05$); 手术后24 h, CL组NRS评分为(5.83±1.46)分, FCL组为(3.17±1.02)分, 手术后72 h, CL组NRS评分为(4.74±1.75)分, FCL组为(2.13±0.89)分, FCL组明显低于CL组 ($P < 0.05$); FCL组不良反应情况发生率为6.67%, 明显低于CL组的25.00% ($P < 0.05$)。**结论** 偏好食物刺激联合口香糖咀嚼与下肢功能锻炼对妇科腹腔镜手术患者术后胃肠功能的改善效果明显优于口香糖咀嚼与下肢功能锻炼。

关键词: 口香糖咀嚼; 偏好食物刺激; 下肢功能锻炼操; 胃肠功能; 腹腔镜

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Effect of preferential food stimulation combined with chewing gum chewing and lower limb functional exercise to optimize postoperative gastrointestinal function in patients underwent gynecological laparoscopic surgery*

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Abstract: Objective To explore the effect of preference food stimulation combined with chewing gum chewing and lower limb functional exercise to optimize postoperative gastrointestinal function in patients underwent gynecological laparoscopic surgery. **Methods** Patients were divided into food stimulation combined with chewing gum chewing and lower limb exercise group (FCL group) and chewing gum chewing and lower limb exercise group

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(CL group) according to the random number table method, there were 60 patients in each group. Food stimulation after gynecological laparoscopic surgery combined with chewing gum chewing and lower limb exercise for gastrointestinal function in FCL group; The patients after gynecological laparoscopic surgery were treated with chewing gum chewing and lower limbs to treat gastrointestinal function in CL group. The differences in the levels of plasma gastrin, the time of first gas and defecation, NRS score, and adverse reactions between the two groups were analyzed. **Results** 72 h after the operation, plasma gastrin was (350.75 ± 27.46) pmol/L in the FCL group, there was significantly higher than that in the CL group $[(269.63 \pm 14.96)$ pmol/L] ($P < 0.05$). The first exhaust and defecation time was (25.56 ± 2.46) h and (48.74 ± 5.97) h in the CL group, (16.74 ± 2.01) h and (34.95 ± 4.92) h in the FCL group, and the first exhaust and defecation time in the FCL group, there was significantly shorter than that in the CL group ($P < 0.05$). 24 h after the operation, the NRS score of the CL group was (5.83 ± 1.46) , the FCL group was (3.17 ± 1.02) . 72 h after the operation, the NRS score of the CL group was (4.74 ± 1.75) , the FCL group was (2.13 ± 0.89) , the FCL group was significantly lower than that in the CL group ($P < 0.05$). The incidence of adverse events in the FCL group was 6.67%, there was significantly lower than that in CL group (25.00%) ($P < 0.05$). **Conclusion** The preference for food stimulation combined with chewing gum chewing and lower limb functional exercise is better than the chewing gum chewing and lower limb functional exercise.

Keywords: chewing gum chewing; preference for food stimulation; lower limb functional exercises; gastrointestinal function; laparoscopy

腹腔镜手术在外科手术中发展迅速, 逐渐代替了许多开放性手术, 如: 子宫肌瘤切除术、卵巢囊肿切除术、十二指肠溃疡穿孔修补手术等^[1-2], 其具有创伤较小、瘢痕少、愈合快和疼痛轻等优点^[3-6]。食物偏好是指: 有两种或多种食物可选择时, 更倾向于选择某一种食物, 大多数由遗传因素决定, 也受个体的生活经验和生理状况影响^[7]。食物偏好可以刺激味觉系统, 引起交感神经兴奋, 从而促进胃肠道蠕动, 增强胃肠道功能。用咀嚼口香糖来模拟食物进食, 被认为是一种假饲^[8]。咀嚼口香糖的机械刺激及味觉刺激, 使唾液分泌明显增加, 而消化液的分泌可增加患者的食欲, 减少术后肠梗阻的发生, 改善患者的情绪状态^[9-10]。临床中, 患者术后恢复多采用运动和清淡饮食, 常规的术后锻炼不能加快肠胃功能恢复, 影响患者预后。目前, 锻炼联合食物刺激来促进肠胃功能恢复的报道较少。本文旨在观察偏好食物刺激联合口香糖咀嚼与下肢功能锻炼操优化妇科腹腔镜手术患者术后胃肠功能的效果。

1 资料与方法

1.1 一般资料

选取 2020 年 1 月—2020 年 12 月于海南省肿瘤医院行妇科腹腔镜手术的患者 120 例, 按随机数表法分为食物刺激联合口香糖咀嚼与下肢锻炼组 (food stimulation combined with chewing gum chewing and

lower limb exercise, FCL 组) 和口香糖咀嚼与下肢锻炼组 (chewing gum chewing and lower limb exercise, CL 组), 每组 60 例。患者年龄 18~75 岁, 平均 (32.65 ± 4.96) 岁, 手术类型: 子宫肌瘤切除术 48 例、卵巢囊肿切除术 72 例。两组患者年龄和手术类型等一般资料比较, 差异均无统计学意义 ($P > 0.05$), 具有可比性。见表 1。本研究经海南省肿瘤医院伦理委员会审批通过。

表 1 两组患者一般资料比较

Table 1 Comparison of general data between the two groups

| 组别 | 年龄/岁 | 手术类型/例 | |
|--------------------|-------------------|---------|---------|
| | | 子宫肌瘤切除术 | 卵巢囊肿切除术 |
| FCL 组 ($n = 60$) | 31.97 ± 5.18 | 26 | 34 |
| CL 组 ($n = 60$) | 32.93 ± 6.27 | 22 | 38 |
| t/χ^2 值 | 0.91 [†] | 0.56 | |
| P 值 | 0.362 | 0.456 | |

注: [†] 为 t 值

1.2 纳入和排除标准

1.2.1 纳入标准 ①无精神疾病、意识清楚者; ②同意参加本研究并签字者; ③接受腹腔镜手术并签署知情同意书者。

1.2.2 排除标准 ①调查期间无故退出活动者;

②存在检查禁忌者;③合并严重肝肾功能不全、心肺疾病者。

1.3 治疗方法

FCL组在术后采用食物刺激联合口香糖咀嚼与下肢锻炼法改善胃肠功能,CL组在术后采用口香糖咀嚼与下肢锻炼法治疗胃肠功能。两组均使用同一品牌、同一口味的口香糖。

1.3.1 CL组 在患者清醒后60 min开始咀嚼口香糖,20 min/次,3次/d,当患者频繁感觉口干时,可增加咀嚼1次。在咀嚼口香糖的同时进行下肢运动锻炼,如:床上双下肢功能锻炼操、扶床行走、室内及室外自行行走、坐于椅上或他人扶持下于室内行走等,10~15 min/次,3~5次/d,直至肛门排气为止。

1.3.2 FCL组 咀嚼口香糖及下肢运动锻炼同CL组。在咀嚼口香糖及下肢运动锻炼的基础上采用偏好食物刺激,患者麻醉完全清醒后2 h可以喝水,喝水后无恶心不适等症状,6 h后可以让患者按平时爱好饮食,先以清淡的流质为主,如无不适,次日逐步过渡到半流食、普食。

1.4 观察指标

分别在手术前及手术后72 h、空腹状态下抽取5 mL静脉血,测量血浆胃泌素水平;记录第一次排便排气时间;采用数字分级评分法(numerical rating scale, NRS)评估患者疼痛程度;记录所有胃肠道不良反应。

1.5 统计学方法

选用SPSS 23.0统计软件进行分析。计量资料以均数±标准差($\bar{x} \pm s$)表示,组间比较行独立样本 t 检验;计数资料以例(%)表示,组间比较采用 χ^2 检验。 $P < 0.05$ 为差异有统计学意义。

2 结果

2.1 两组患者手术前后血浆胃泌素水平比较

手术前,CL组血浆胃泌素水平为(346.37 ± 21.35) pmol/L, FCL组为(345.98 ± 20.74) pmol/L,两组比较,差异无统计学意义($P > 0.05$);手术后72 h,CL组血浆胃泌素水平为(269.63 ± 14.96) pmol/L, FCL组为(350.75 ± 27.46) pmol/L, FCL组术后血浆胃泌素水平明显较CL组高,差异有统计学意义($P < 0.05$)。见表2。

2.2 两组患者第一次排气及排便时间比较

CL组第一次排气及排便时间分别为(25.56 ± 2.46)和(48.74 ± 5.97) h, FCL组为(16.74 ± 2.01)和(34.95 ± 4.92) h, FCL组明显较CL组短,差异有统计学意义($P < 0.05$)。见表3。

2.3 两组患者NRS评分比较

手术后24 h,CL组NRS评分为(5.83 ± 1.46)分, FCL组为(3.17 ± 1.02)分,两组比较,差异有统计学意义($P < 0.05$);手术后72 h,CL组NRS评分为(4.74 ± 1.75)分, FCL组为(2.13 ± 0.89)分, FCL组明显较CL组低,差异有统计学意义($P < 0.05$)。见表4。

表2 两组患者手术前后血浆胃泌素水平比较 (pmol/L, $\bar{x} \pm s$)

Table 2 Comparison of plasma gastrin between the two groups before and after surgery (pmol/L, $\bar{x} \pm s$)

| 组别 | 手术前 | 手术后72 h |
|------------------|--------------------|--------------------|
| CL组($n = 60$) | 346.37 ± 21.35 | 269.63 ± 14.96 |
| FCL组($n = 60$) | 345.98 ± 20.74 | 350.75 ± 27.46 |
| t 值 | 0.01 | 20.19 |
| P 值 | 0.990 | 0.000 |

表3 两组患者第一次排气及排便时间比较 (h, $\bar{x} \pm s$)
Table 3 Comparison of the first exhaust and defecation time between the two groups (h, $\bar{x} \pm s$)

| 组别 | 排气时间 | 排便时间 |
|------------------|------------------|------------------|
| FCL组($n = 60$) | 16.74 ± 2.01 | 34.95 ± 4.92 |
| CL组($n = 60$) | 25.56 ± 2.46 | 48.74 ± 5.97 |
| t 值 | 21.51 | 23.82 |
| P 值 | 0.000 | 0.000 |

表4 两组患者NRS评分比较 (分, $\bar{x} \pm s$)

Table 4 Comparison of NRS scores between the two groups (score, $\bar{x} \pm s$)

| 组别 | 手术后24 h | 手术后72 h |
|------------------|-----------------|-----------------|
| CL组($n = 60$) | 5.83 ± 1.46 | 4.74 ± 1.75 |
| FCL组($n = 60$) | 3.17 ± 1.02 | 2.13 ± 0.89 |
| t 值 | 11.57 | 10.30 |
| P 值 | 0.000 | 0.000 |

2.4 两组患者不良反应发生率比较

CL 组患者不良反应发生率为 25.00%，FCL 组为 6.67%，FCL 组明显较 CL 组低（ $P<0.05$ ）。见表 5。

表 5 两组患者不良反应发生率比较 例(%)
Table 5 Comparison of occurrence of adverse reactions between the two groups n (%)

| 组别 | 腹胀 | 恶心 | 呕吐 | 发生率 |
|----------------|---------|----------|---------|-----------|
| CL 组 (n = 60) | 5(8.33) | 6(10.00) | 4(6.67) | 15(25.00) |
| FCL 组 (n = 60) | 1(1.67) | 2(3.33) | 1(1.67) | 4(6.67) |
| χ^2 值 | / | | | 11.64 |
| P 值 | / | | | 0.000 |

3 讨论

随着腹腔镜技术的发展，该类手术已广泛应用于临床中，医生技术亦日渐娴熟，让更多患者获得了手术机会^[11]。与传统手术比较，腹腔镜手术可以直接观察腹腔内变化，内环境干扰小，增加了手术成功的概率，且创伤面积小，符合美学要求，患者术后恢复快，后遗症发生概率小，是未来发展的趋势^[12]。

由于手术、麻醉等原因，在腹腔镜手术后，患者胃肠道蠕动减弱，暂时处于麻痹状态。因此，术后极易引发患者胃肠道功能变化，并伴随各种胃肠道不良反应，术后早期干预可以改善局部血液循环，加快胃肠蠕动，促进排气与排便^[13]。本研究显示，CL 组患者术前血浆胃泌素与 FCL 组比较，差异无统计学意义，FCL 组术后血浆胃泌素较 CL 组高，第一次排气及排便时间明显较 CL 组短，术后 24 和 72 h 的 NRS 评分明显较 CL 组低，不良反应发生率也明显较 CL 组低。生理学研究证明，食物能刺激胃蛋白酶和消化液的分泌，胃蛋白酶的消化能力最强，受食欲的影响最大，依据患者饮食喜好，术后给予其偏好食物刺激，可促进胃蛋白酶分泌，进一步恢复胃肠功能^[14]。此外，食物偏好刺激可以让患者获得进食时的愉悦感和熟悉感，引起交感神经兴奋，促进胃肠蠕动，从而加快胃肠道功能恢复^[15]。有研究^[16]发现，根治性前列腺切除术后咀嚼口香糖对恢复肠动力和减少住院时间有积极的影响。有研究^[10]表明，咀嚼口香糖可以降低患者肠梗阻的发生概率。另有研究^[17-18]在临床中得到了类似的结果，术后咀嚼口香糖能刺激患者口腔味觉，促进胃肠蠕动，减少术后肠梗阻的持续时间。还有研

究^[19]证明，妇科腹腔镜手术患者术后早期行下肢功能锻炼，如转踝、摆腿和提臀等，能促进患者下肢血液循环，增加肠胃道的血流量，改善患者胃肠道功能，减少胃肠道不适症状，加快胃肠蠕动和切口愈合，降低术后感染率。

综上所述，偏好食物刺激联合口香糖咀嚼与下肢功能锻炼对妇科腹腔镜手术患者术后胃肠功能的改善效果明显优于口香糖咀嚼与下肢功能锻炼。食物刺激联合口香糖咀嚼与下肢功能锻炼能多方面刺激胃蛋白酶和消化液的分泌，激发患者口腔味觉，有助于进一步恢复胃肠功能，此方法安全、简便、经济，患者易接受，值得临床推广。

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