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腹腔镜微创手术对胃穿孔患者的疗效及胃肠动力的影响

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摘要 目的:探讨腹腔镜微创手术治疗胃穿孔患者的疗效及对胃肠动力的影响。**方法:**收集我院于2015年6月~2016年6月间收治的胃穿孔患者92例。通过随机数表法分为观察组及对照组各46例,给予观察组患者腹腔镜微创手术治疗,给予对照组患者开腹手术治疗,比较两组患者临床相关指标及胃肠动力指标,采用放射免疫法测定两组术前、术后第1h、1d、2d、3d血清中胃泌素(GAS)水平,统计两组患者并发症情况。**结果:**观察组患者术中出血量、住院时间均低于对照组,差异均有统计学意义($P<0.05$);观察组患者肠鸣音恢复时间、肛门排气时间均低于对照组,差异均有统计学意义($P<0.05$);观察组患者手术时间高于对照组,差异有统计学意义($P<0.05$)。两组患者术后第1d、2d、3d GAS水平均明显高于术前,且观察组患者均高于对照组,差异均有统计学意义($P<0.05$);观察组并发症发生率低于对照组,差异有统计学意义($P<0.05$)。**结论:**腹腔镜微创手术治疗胃穿孔具有出血量少,住院时间更短,胃肠动力恢复更快,并发症较少等多方面的优势,具有良好的应用前景。

关键词:腹腔镜微创手术;胃穿孔;胃肠动力

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The Effect of Laparoscopic Minimally Invasive Surgery in the Treatment of Patients with Gastric Perforation and its Influence on Gastrointestinal Motility

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ABSTRACT Objective: To investigate the effect of laparoscopic minimally invasive surgery in the treatment of patients with gastric perforation and its influence on gastrointestinal motility. **Methods:** Selected 92 cases of patients with gastric perforation in our hospital from June 2015-June 2016. They were divided into observation group and control group according to the random number table method, with 46 patients in each group. The observation group was underwent laparoscopic minimally invasive surgery, while the control group was underwent open surgery, Compared the related indicators of surgery and gastrointestinal motility in two groups, detected the serum gastrin (GAS) levels in two groups by radioimmunoassay method before surgery and 1h, 1d, 2d, 3d after surgery, in the end, recorded the complications of the two groups. **Results:** The intraoperative blood loss, hospital stay in observation group were lower than the control group, the difference was statistically significant ($P<0.05$); And the recovery time of bowel sounds and anal exhaust time in observation group were lower than the control group, the differences were statistically significant ($P<0.05$), but the operation time was higher than the control group, the difference was statistically significant ($P<0.05$). GAS levels in the two groups 1 d, 2 d, 3 d after surgery were significantly increased than before surgery, at the same time, the observation group were higher than the control group, the differences were statistically significant ($P<0.05$). Complication rate in observation group was lower than the control group, the difference was statistically significant ($P<0.05$). **Conclusion:** Laparoscopic minimally invasive surgery in the treatment of patients with gastric perforation has many advantage of less bleeding, shorter period of hospitalization, faster gastrointestinal motility recovery, and fewer complications, which has a good prospect of application.

Key words: Laparoscope minimally invasive surgery; Gastric perforation; Gastrointestinal motility

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前言

胃穿孔是消化道溃疡较为常见的并发症,其主要的发病机

制包括幽门螺杆菌感染、胃酸过度分泌、胃黏膜保护作用降低等,通常起病迅速,如不及时进行治疗可能危及患者生命^[1,2]。临床调查显示,近些年生活习惯的改变,胃穿孔的发病率呈现上升趋势^[3]。以往多采用开腹手术治疗胃穿孔,疗效虽显著,但手术治疗患者恢复周期较长,手术对患者的损伤较大,并且在术后长时间内可能出现并发症,患者预后不良,因此在临床使用中具有明显的局限性^[4]。随着科技的进步以及医疗水平的提高,腹腔镜手术凭借其创伤小、并发症少、患者住院时间短等优

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势在各个科室中广泛应用^[56]。本研究通过比较腹腔镜微创手术及开腹手术治疗胃穿孔患者的疗效及对胃肠动力的影响,旨在为临床选择最佳手术方案提供参考,现报道如下。

1 资料与方法

1.1 一般资料

收集我院于2015年6月~2016年6月间收治的胃穿孔患者92例。纳入标准:所有患者经诊断均符合WHO制定的胃穿孔诊断标准^[7];均经影像学检查确诊;均未使用影响胃肠动力的药物。排除标准:胃肠道恶性肿瘤者;合并幽门梗阻者;心、肝、肾等器官功能不全者;手术禁忌症者。通过随机数表法分为观察组及对照组各46例,观察组中,男28例,女18例;年龄23~61岁,平均年龄为 (39.53 ± 7.36) 岁;穿孔部位位于胃窦的有36例,位于大弯的有7例,位于小弯的有3例。穿孔时间为2~15h,平均为 (6.18 ± 1.24) h。对照组中,男27例,女19例;年龄21~59岁,平均年龄为 (40.10 ± 7.35) 岁;穿孔部位位于胃窦的有34例,位于大弯的有8例,位于小弯的有4例。穿孔时间为2~16h,平均为 (6.46 ± 1.13) h。两组患者性别、年龄、发病时间、发病部位比较,均无统计学意义(均 $P>0.05$)。本次研究由伦理委员会批准,患者均知情同意。

1.2 治疗方法

两组患者均采用气管插管全身麻醉的方式,给予观察组患者腹腔镜微创手术治疗,腔镜品牌为奥林巴斯,具体方法为:患者取头高足低位,于脐缘行一弧形切口建立CO₂气腹,压力为12~14 mmHg。将观察镜从脐部置入,在左、右肋骨中线距离3 cm处作为操作孔,观察腹腔情况,在腹腔镜下对腹腔积液进行清除,找到穿孔位置后使用腔剪剪一部分穿孔部位少许组织进

行活检,排除癌性穿孔。在腹腔镜的观察下采用0/1Dexon线进行1~2针间断全层缝合,大网膜覆盖后固定,再次确认修补穿孔的部位无渗漏后,采用生理盐水清洗腹腔,腹腔液较粘稠时,采用少量生理盐水进行多次冲洗,最后吸尽冲洗液。在接近穿孔处以及下腹部均置一根引流管,术后3 d拔出。给予对照组患者传统的开腹手术治疗。两组患者术后均给予补液、胃肠减压、抗感染、肠外营养支持等治疗。

1.3 观察指标

比较两组临床相关指标:手术时间、出血量及住院时间。观察两组胃肠动力指标:肠鸣音恢复时间及肛门排气时间。术后每隔3 h对患者的腹部进行听诊,在两个以上的区域听见3次/min及以上的肠鸣音则视为肠鸣音恢复;由患者自行记录肛门排气的最早时间。所有患者均于术前、术后第1 h、第1 d、第2 d、第3 d分别抽取静脉血2 mL,经3500 r/min的速度离心15 min,采用放射免疫法测定血清中胃泌素(gastrin, GAS)水平,试剂盒由上海樊克生物科技有限公司提供。统计两组患者并发症发生情况,包括:肠梗阻、伤口开裂、腹腔感染等。

1.4 统计学处理

采用SPSS20.0软件对数据进行处理,计数资料由n或%表示,经由卡方 χ^2 检验进行比较,计量资料由 $(\bar{x} \pm s)$ 表示,经由t检验, $P<0.05$ 时代表差异有统计学意义。

2 结果

2.1 两组患者手术相关指标及胃肠动力指标比较

观察组的术中出血量和住院时间均低于对照组($P<0.05$);观察组的肠鸣音恢复时间和肛门排气时间均低于对照组($P<0.05$);观察组中手术时间高于对照组($P<0.05$)。

表1 两组患者手术相关指标及胃肠动力指标比较

Table 1 Comparison of operation indexes and gastrointestinal motility in two groups

Groups	n	Operation time (min)	Intraoperative blood loss (mL)	Hospital stay(d)	The recovery time of bowel sounds(h)	Anal exhaust time (h)
Observation group	46	95.72± 21.45	42.25± 23.45	6.28± 1.09	13.56± 3.67	58.56± 12.67
Control group	46	78.51± 24.37	77.17± 34.79	8.46± 2.21	22.93± 5.54	69.93± 14.54
t		3.595	5.645	6.000	9.563	3.998
P		0.001	0.00	0.00	0.00	0.00

2.2 两组患者 GAS 水平比较

两组患者术前、术后第1h的GAS水平比较差异无统计学意义($P>0.05$)。两组患者术后1d、2d、3d GAS水平均明显高于

术前,且观察组患者均高于对照组,差异均有统计学意义($P<0.05$)。见表2。

表2 两组患者 GAS 水平比较(pg/mL)

Table 2 Comparison of GAS levels in two groups(pg/mL)

Groups	n	Before surgery	1 h	1 d	2 d	3 d
Observation group	46	37.23± 8.32	37.89± 8.54	45.96± 9.63*	57.64± 10.34*	60.59± 11.27*
Control group	46	37.42± 7.42	38.12± 7.36	39.26± 8.54*	48.53± 10.21*	54.40± 9.19*
t		0.116	0.138	3.530	4.233	2.887
P		0.908	0.890	0.001	0.000	0.005

Note: Compared with before surgery, * $P<0.05$.

2.3 两组患者并发症情况比较

观察组中出现伤口感染1例,腹腔感染1例,肠梗阻2例,

并发症发生率为8.70%(4/46);对照组中出现伤口感染3例,伤口开裂1例,腹腔感染3例,肠梗阻3例,并发症发生率为

21.74 (10/46), 两组并发症发生率比较, 观察组低于对照组 ($\chi^2=6.589, P=0.010$)。

3 讨论

胃穿孔为临床中较为常见的急腹症,也是消化道溃疡最为严重的并发症之一,患者临床症状表现为突然出现剧烈腹痛,部分患者伴有恶心、呕吐、休克等症状^[89]。胃穿孔的患者腹腔内部会积聚大量胃肠液,极易导致患者出现腹膜炎,如果不及时进行合理的治疗,很可能威胁患者生命^[10]。以往临床中多采用开腹修补术治疗,文献表明,开腹修补术疗效虽较为显著,但手术治疗后出现并发症的几率较高,术后恢复较慢,严重影响患者的生活质量^[11,12]。而腹腔镜微创手术治疗胃穿孔,术中视野暴露充分,对患者的创伤小,术后留下的疤痕较小,发生并发症的情况少^[13]。

本次研究中,我院采用腹腔镜微创手术及传统开放手术治疗胃穿孔,旨在探讨两种术式对胃穿孔患者的疗效及对胃肠动力影响。结果显示,观察组患者术中出血量、住院时间均低于对照组 ($P<0.05$),以上结果表明,腹腔镜微创手术与传统开放手术相比,具有出血量少,患者恢复更快,住院时间更短等优势,这与之前的报道相似^[14]。观察组患者肠鸣音恢复时间、肛门排气时间均低于对照组 ($P<0.05$),两组患者术后 1 d、2 d、3 d GAS 水平均明显高于术前,且观察组患者均高于对照组,差异均有统计学意义 ($P<0.05$),以上结果表明,腹腔镜微创手术更有利于患者术后胃肠动力的恢复,其机制可能包含以下几方面:开腹手术对患者造成的创伤较大,促使机体分泌儿茶酚胺,儿茶酚胺会抑制 GAS 水平,低水平的 GAS 会导致肠道功能紊乱;正常情况下,交感神经会参与调节人体肠道功能,手术造成的应激反应会使交感神经兴奋从而抑制胃和小肠的运动;同时腹腔镜微创手术经腹腔镜观察进行手术,充分暴露手术视野前提下对组织结构及病灶能准确的定位,减少了传统手术中对脏器的牵拉,减小了对人体的损伤^[15-17]。观察组并发症发生率低于对照组 ($P<0.05$)。以上结果表明,通过腹腔镜微创手术治疗有助于减少并发症的发生^[18]。因此,腹腔镜微创手术的优点是多方面的,其原因和腹腔镜微创手术本身特点有关,腹腔镜微创手术切口较小,减少了手术对造成的创伤,从而降低了术后住院时间及恢复时间。同时采用腹腔镜进行观察,可充分暴露手术视野,探查准确性较高,减少了手术对脏器的牵拉。腹腔镜微创手术未采用电刀、电凝及冲洗腹腔等,对腹腔干扰较少^[18]。但腹腔镜微创手术时间比开腹手术时间更长,这是由于在腹腔镜下对创口进行缝合相比开腹手术难度更高,打结时要求的力度更精确,对盆腔的冲洗要求更为细致。因此术者应对腹腔镜微创手术的操作十分熟练,以降低术中中转开腹率及手术时间。目前,腹腔镜微创手术由于技术层面的限制,无法完全替代开腹手术^[19]。结合多年诊疗经验及参考文献笔者认为实施腹腔镜微创手术的患者应具有以下的适应证:患者一般情况良好,未出现严重的心、肺并发症;穿孔时间不超过 24 h,腹腔内未出现严重感染;未出现幽门梗阻^[20];排除肿瘤导致的穿孔;穿孔直径小于 1 cm。因此在对患者行腹腔镜微创手术前,应对患者进行全面的检查,考察患者手术适应证,术中严格监测患者生命指征,如果出现恶化的情况应及时转为开腹手术治疗。

综上所述,腹腔镜微创手术治疗胃穿孔具有出血量少,患者恢复更快,住院时间更短,胃肠动力恢复更快,并发症较少等多方面的优势,具有良好的应用前景。

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