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腹腔镜与开腹胃楔形切除术对 GIST 患者营养状况、T 细胞亚群和预后的影响 *

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摘要 目的:探讨腹腔镜与开腹胃楔形切除术对胃间质瘤(GIST)患者营养状况、T 细胞亚群和预后的影响。**方法:**回顾性分析 2013 年 1 月~2014 年 2 月期间我院收治的 GIST 患者 97 例的临床资料,根据手术方式的不同将患者分为对照组($n=47$,开腹胃楔形切除术)和研究组($n=50$,腹腔镜胃楔形切除术),对比两组患者手术相关指标、营养状况、T 细胞亚群、预后情况。**结果:**研究组住院时间、肛门排气时间、切口长度、手术时间短于对照组,术中出血量少于对照组($P<0.05$)。两组患者术后 7 d 前白蛋白、转铁蛋白、白蛋白均降低,但研究组高于对照组($P<0.05$)。两组术后 7 d 的 $CD4^+/CD8^+$ 、 $CD3^+$ 、 $CD4^+$ 较术前下降, $CD8^+$ 较术前升高($P<0.05$);研究组术后 7 d 的 $CD4^+/CD8^+$ 、 $CD3^+$ 、 $CD4^+$ 高于对照组, $CD8^+$ 则低于对照组($P<0.05$)。研究组并发症总发生率低于对照组($P<0.05$);两组术后复发率、5 年生存率比较无统计学差异($P>0.05$)。**结论:**与开腹胃楔形切除术相比,GIST 患者采用腹腔镜胃楔形切除术治疗的远期预后效果相当,可有效改善围术期相关指标,对患者营养状况、T 细胞亚群的影响较轻,且可减少术后并发症的发生率。

关键词:腹腔镜;开腹;胃楔形切除术;胃间质瘤;营养状况;T 细胞亚群;预后

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Effect of Laparoscopic and Open Stomach Wedge Resection on Nutritional Status, T Cell Subsets and Prognosis of Patients with GIST*

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ABSTRACT Objective: To investigate the effect of laparoscopic and open wedge resection on the nutritional status, T cell subsets and prognosis of patients with gastric stromal tumor (GIST). **Methods:** The clinical data of 97 patients with GIST in our hospital from January 2013 to February 2014 were retrospectively selected. According to the different operation methods, the patients were divided into the control group ($n=47$, open stomach wedge resection) and study group ($n=50$, laparoscopic stomach wedge resection). The operation related indexes, nutritional status, T cell subsets and prognosis of the two groups were compared. **Results:** The time of hospitalization, anal exhaust, incision length and operation in the study group were shorter than those in the control group, and the amount of bleeding in the operation was less than that in the control group ($P<0.05$). The prealbumin, transferrin and albumin in the two groups at 7 days after operation were lower than those before operation, but those in the study group were higher than those in the control group ($P<0.05$). The $CD4^+/CD8^+$, $CD3^+$, $CD4^+$ in the two groups at 7 days after operation were lower than those before operation, while $CD8^+$ was higher than that before operation ($P<0.05$). The $CD4^+/CD8^+$, $CD3^+$, $CD4^+$ in the study group at 7 days after operation were higher than those in the control group, while $CD8^+$ was lower than that in the control group ($P<0.05$). The total incidence rate of complications in the study group was lower than that in the control group ($P<0.05$). There were no differences in the postoperative recurrence rate and 5-year survival rate between the two groups ($P>0.05$). **Conclusion:** Compared with open stomach wedge resection, the long-term prognosis of GIST patients treated with laparoscopic gastric wedge resection is similar, it can effectively improve the perioperative related indicators, it has less impact on the nutritional status and T cell subsets of patients, and reduce the incidence of postoperative complications.

Keyw ords: Laparoscopy; Open stomach; Stomach wedge resection; Gastric stromal tumor; Nutritional status; T cell subsets; Prognosis

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前言

胃间质瘤(Gastric stromal tumor, GIST)是发生于胃部的一种恶性肿瘤,占胃肠道恶性肿瘤的1%~3%,临床主要表现为恶心、呕吐、上腹痛、贫血、肿块与上胃肠道出血等症状^[1,2]。近年来,随着人们生活水平的改善及饮食结构的改变,GIST的发病率呈逐年递增趋势^[3]。由于GIST具有侵袭性,常规的保守治疗往往难以达到理想预期^[4]。目前,手术是治疗GIST的最有效手段,以往常用的开腹胃楔形切除术虽可获得一定的治疗效果,但该术式创伤较大,术后恢复慢,影响患者预后^[5]。由于GIST几乎不出现淋巴结转移,手术过程中无需进行淋巴结清扫,这为GIST微创切除创造了可行性^[6]。随着腹腔镜技术的发展,腹腔镜下胃楔形切除术得到了广泛的开展,有望成为治疗GIST的首选治疗方案^[7]。本研究通过整理腹腔镜与开腹胃楔形切除术治疗GIST患者的临床资料并进行疗效对比,以期为临床治疗提供参考。

1 资料与方法

1.1 临床资料

回顾性分析2013年1月~2014年2月时间段内的97例GIST患者的临床资料,本次研究经我院伦理学委员会批准进行。纳入标准:(1)经超声内镜、胃镜、腹盆腔增强CT等影像学检查确诊;(2)临床资料完整者;(3)均具备手术指征者;(4)完成随访者。排除标准:(1)妊娠及哺乳期妇女;(2)合并其他恶性肿瘤者;(3)合并重大免疫系统或血液系统疾病者;(4)既往有新辅助治疗史者;(5)依从性差或合并精神疾患者;(6)未能顺利完成本次研究者。根据手术方式的不同将患者分为对照组(n=47,开腹胃楔形切除术)和研究组(n=50,腹腔镜胃楔形切除术),其中对照组男26例,女21例,年龄26~69岁,平均(43.68±7.26)岁;平均肿瘤直径(4.25±0.41)cm;肿瘤部位:胃窦16例,胃底20例,胃体11例。研究组男28例,女22例,年龄28~73岁,平均(44.03±5.92)岁;平均肿瘤直径(4.32±0.53)cm;肿瘤部位:胃窦15例,胃体13例,胃底22例。两组一般资料对比无差异(P>0.05)。

1.2 方法

对照组患者给予开腹胃楔形切除术,具体如下:术前常规检查、呼吸道准备及常规禁饮禁食等,气管插管静脉复合麻醉,取平卧位,于腹部正中作一切口,肿瘤位置位于胃窦的,进行胃远端切除并重建消化道,肿瘤位置在胃体及胃底的,给予直接切除。研究组患者给予腹腔镜胃楔形切除术,具体如下:术前常规检查、呼吸道准备及常规禁饮禁食等,气管插管静脉复合麻醉,取平卧位,选择5孔法,建立二氧化碳气腹,维持压力在15 mmHg,选取脐下缘作一切口做观察孔,置入Trocarr(10 mm);选取左侧腋前线肋缘下方3 cm左右作为主操作孔,置入Trocarr(10 mm);选取左侧锁骨中线平脐上约2 cm处作辅助孔,置入Trocarr(5 mm),右侧对应位置作辅助器械操作孔,置入Trocarr(5 mm),置入超声刀、直线切割闭合器,根据肿瘤位置行相应的胃局部切除或楔形切除术,检查腹腔内无出血,放置19号腹腔引流管后关腹。采用门诊复查或电话询问的方式对患者进行为期5年的随访,随访终止指征为患者死亡或随访截止。

1.3 观察指标

(1)记录两组肛门排气时间、术中出血量、住院时间、手术时间、切口长度。(2)于术前、术后7 d抽取两组空腹静脉血5 mL,3800 r/min离心10 min,提取血清,采用美国贝克曼库尔特公司生产的DXC800全自动生化分析仪及其配套试剂盒检测前白蛋白、转铁蛋白、白蛋白水平及T细胞亚群:CD3⁺、CD4⁺、CD8⁺,并计算CD4⁺/CD8⁺。(3)记录两组患者随访期间并发症、术后复发、5年生存情况。

1.4 统计学方法

本研究结果的处理软件为SPSS21.0,计量资料以($\bar{x} \pm s$)表示,采用t检验,计数资料以率表示,采用 χ^2 检验,检验水准设置为 $\alpha=0.05$ 。

2 结果

2.1 围术期指标比较

研究组术中出血量少于对照组,肛门排气时间、住院时间、切口长度、手术时间短于对照组(P<0.05);详见表1。

表1 两组患者围术期指标比较($\bar{x} \pm s$)

Table 1 Comparison of perioperative indexes between the two groups($\bar{x} \pm s$)

Groups	Intraoperative hemorrhage(mL)	Anal exhaust time(d)	Hospitalization time(d)	Operation time(min)	Incision length(cm)
Control group(n=47)	122.13±9.54	4.25±0.61	14.94±1.47	148.56±10.37	13.08±1.59
Study group(n=50)	53.81±8.46	2.17±0.41	7.56±1.02	130.04±8.39	6.76±0.69
t	37.368	19.818	28.872	3.173	25.660
P	0.000	0.000	0.000	0.002	0.000

2.2 营养状况指标比较

两组术前前白蛋白、转铁蛋白、白蛋白比较无差异(P>0.05);两组术后7 d前白蛋白、转铁蛋白、白蛋白均降低,但研究组高于对照组(P<0.05);详见表2。

2.3 两组T淋巴细胞亚群比较

两组术前CD4⁺/CD8⁺、CD3⁺、CD8⁺、CD4⁺比较无统计学差异(P>0.05);两组术后7 d CD4⁺/CD8⁺、CD3⁺、CD4⁺较术前下降,CD8⁺较术前升高(P<0.05);研究组术后7 d CD4⁺/CD8⁺、CD3⁺、CD4⁺高于对照组,CD8⁺则低于对照组(P<0.05);详见表3。

表 2 两组患者营养状况指标比较($\bar{x} \pm s$)Table 2 Comparison of nutritional status indexes between the two groups($\bar{x} \pm s$)

Groups	Prealbumin(g/L)		Transferrin(g/L)		Albumin(g/L)	
	Before operation	7 days after operation	Before operation	7 days after operation	Before operation	7 days after operation
Control group(n=47)	0.19± 0.06	0.09± 0.03*	0.79± 0.12	0.21± 0.08*	8.29± 1.35	4.02± 0.65*
Study group(n=50)	0.18± 0.05	0.14± 0.04*	0.74± 0.19	0.46± 0.05*	8.36± 1.03	6.48± 0.92*
t	0.894	6.930	1.538	18.575	0.288	15.122
P	0.374	0.000	0.127	0.000	0.774	0.000

Note: compared with that before operation, * $P < 0.05$.

表 3 两组 T 淋巴细胞亚群比较($\bar{x} \pm s$)Table 3 Comparison of T lymphocyte subsets between the two groups($\bar{x} \pm s$)

Groups	CD3 ⁺ (%)		CD4 ⁺ (%)		CD8 ⁺ (%)		CD4 ⁺ /CD8 ⁺	
	Before operation	7 days after operation	Before operation	7 days after operation	Before operation	7 days after operation	Before operation	7 days after operation
Control group(n=47)	61.56± 7.92	47.34± 8.07*	44.07± 7.08	30.29± 6.34*	26.14± 8.06	36.73± 7.82*	1.69± 0.16	0.82± 0.13*
Study group(n=50)	60.42± 8.14	54.52± 7.59*	43.72± 8.29	35.35± 6.76*	26.53± 7.87	31.28± 7.73*	1.65± 0.19	1.13± 0.19*
t	0.698	4.516	0.223	3.824	0.241	3.451	1.118	9.320
P	0.487	0.000	0.824	0.000	0.810	0.000	0.266	0.000

Note: compared with that before operation, * $P < 0.05$.

2.4 并发症、术后复发、5 年生存情况比较

研究组并发症总发生率 8.00% 低于对照组 25.53% ($P < 0.05$);

两组术后复发率、5 年生存率比较无统计学差异 ($P > 0.05$);

详见表 4。

表 4 两组并发症、术后复发、5 年生存情况比较例(%)

Table 4 Comparison of complications, postoperative recurrence and 5-year survival between the two groups n(%)

Groups	Incisional infection	Delayed gastric emptying	Anastomotic leakage	Gastric bleeding	Total incidence rate	Postoperative recurrence rate	5-year survival rate
Control group(n=47)	4(8.51)	2(4.26)	3(6.38)	3(6.38)	12(25.53)	3(6.38)	44(93.62)
Study group(n=50)	1(2.00)	1(2.00)	1(2.00)	1(2.00)	4(8.00)	1(2.00)	49(98.00)
χ^2					5.406	1.177	1.177
P					0.020	0.278	0.278

3 讨论

GIST 发病隐匿,多数患者早期无明显症状,约有 4%~39% 的 GIST 的患者在行例行体检时偶然发现。随着医学器材及技术的改进及发展,GIST 的检出率不断升高,为广大 GIST 患者尽早治疗提供了安全保障^[89]。GIST 的治疗方式多样,由于 GIST 呈非浸润性生长,且恶性程度低,极少通过淋巴扩散,因此肿瘤的楔形切除即可以达到根治效果^[10-12]。GIST 术中应注意彻底切除肿瘤,以免肿瘤组织残存提高术后复发风险^[13-14]。与此同时,手术切除过程中应遵循以下原则:术后保持胃肠道通畅;术中防止胃内容物污染;包膜外切除确保其完整性^[15]。现临床常用的手术方式有开腹或腹腔镜下胃楔形切除术,其中开腹手术术后创伤大,不利于患者恢复,且易对机体多脏器造成损

伤,腹腔镜胃楔形切除术作为现今流行的微创手术,创伤小,术后恢复快^[16],但对于肿瘤直径较大者的疗效仍存在一定争议,本研究就此展开分析。

本次研究结果显示,研究组的围术期相关指标均优于对照组,这表明,GIST 患者采用腹腔镜胃楔形切除术治疗,符合微创理念,有利于患者术后早日康复,这主要是因为腹腔镜下进行胃楔形切除术,可为术者提供清晰的视野,便于其观察肿瘤位置、大小,利于术者实施手术操作,有效避免不必要的损伤,缩短手术时间;同时该术式作为微创手术,本身具有切口小、术中出血量少的优势,术后 2~3 d 即可恢复正常生活,有效促进患者康复,缩短住院时间^[17-19]。既往研究结果显示^[20],手术作为一种有创操作,术中的牵拉刺激、麻醉药物反应、术后疼痛均可引起患者不同程度的免疫功能下降情况。本次研究结果中,两

组患者术后 7 d 的 T 细胞亚群均受到一定影响,但腹腔镜胃楔形切除术治疗的免疫功能抑制程度更轻,这可能是因为,与开腹手术相比,腹腔镜下手术伤口明显缩小,减少组织创伤,不仅在身体上减轻患者痛苦,同时在外观上予以安慰,减轻患者心理负担^[21-23]。由于精神神经-内分泌-免疫系统三者相互影响,联系紧密,腹腔镜手术后患者心理和精神压力较开腹低,减轻患者免疫功能抑制^[24-25]。前白蛋白、转铁蛋白及白蛋白均是临床用于评估患者营养状态的常用指标,本研究结果显示腹腔镜手术可有效促进患者术后短期营养状态恢复,这可能与腹腔镜胃楔形切除术治疗利于患者恢复,可促进患者早日补充营养,同时该术式下患者免疫抑制程度较轻,可促进患者肠胃吸收,改善机体营养状况^[26-28]。另研究组并发症总发生率低于对照组,这主要是因为开腹胃楔形切除术易造成组织缺血、腹腔感染、异物存留、腹腔浆膜层受损等,上述因素均可增加并发症发生率,而腹腔镜胃楔形切除术切口较小,可保证腹壁膜完整性,因此术后并发症发生率较低^[29,30]。而两组术后复发率、5 年生存率比较无统计学差异,提示腹腔镜胃楔形切除术可获得与开腹胃楔形切除术相当的远期预后。

综上所述,与开腹胃楔形切除术相比,GIST 患者采用腹腔镜胃楔形切除术治疗,可有效改善围术期相关指标,减轻对患者营养状况、T 细胞亚群的影响,减少术后并发症发生率,远期预后效果更佳。

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