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· 专题研究 ·

腹腔镜与经肛腔镜辅助双镜联合代直肠切除吻合口重建术的疗效与安全性：单中心51例报告

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摘要

背景与目的: 代直肠切除吻合口重建手术可成功恢复多数直肠吻合失败及肿瘤局部复发患者的肠道连续性, 避免患者永久性肠造口。然而该手术难度大、手术相关并发症发生率高。手术方式及入路的选择在降低手术难度、确保手术安全性及降低术后并发症方面具有重要意义。因此, 本研究总结单中心8年间行腹腔镜与经肛腔镜辅助双镜联合代直肠切除吻合重建的手术经验, 以为临床提供循证参考。

方法: 回顾性收集中山大学附属第六医院结直肠外科2015年10月—2023年8月51例行代直肠切除吻合重建患者的病历资料。其中, 24例行经肛腔镜辅助双镜联合代直肠切除吻合口重建术(双镜联合组), 27例行腹腔镜代直肠切除吻合重建术(腹腔镜组)。分析全组患者的术中、术后情况, 并比较双镜联合组与腹腔镜组相关临床指标的差异。

结果: 51例患者均顺利完成代直肠切除吻合口重建手术。消化道重建吻合方式包括Bacon手术30例、Dixon手术5例、Parks手术15例、括约肌间切除术1例。51例患者中, 拖出切除二期结肠肛管吻合30例、拖出切除单吻合5例、拖出切除双吻合3例、一期手工吻合13例。其中, 术前已有肠造口患者42例、术后行新增预防性肠造口6例、术后未行预防性肠造口3例。全组中位手术时间为296(251~349)min, 术中出血量为100(50~200)mL; 双镜联合组与腹腔镜组的手术时间、术中出血量差异均无统计学意义(均 $P>0.05$)。术中经肛门取标本共24例, 其中腹腔镜组5例, 双镜联合组19例, 差异有统计学意义($P<0.05$)。全组术后住院时间为17(11~23.5)d; 双镜联合组与腹腔镜组的术后住院时间差异无统计学意义($P>0.05$), 但双镜联合组的术后排气时间、术后进食时间短于腹腔镜组(均 $P<0.05$)。全组无术后转入ICU治疗和住院期间死亡, 9例肿瘤局部复发患者术后组织病理学检查结果均显示标本切缘未见肿瘤。51例患者中, 16例发生并发症(Clavien-Dindo并发症分级Ⅱ级9例、Ⅲ级及以上7例), 其中双镜联合组4例(16.67%), 腹腔镜组12例(44.44%), 差异有统计学意义($\chi^2=4.554, P=0.033$)。

结论: 代直肠切除吻合重建手术方式及入路的选择应根据患者初次手术吻合失败类型、病变距肛门距离、患者全身情况以及单位医疗水平制定个体化方案。相比单纯的腹腔镜代直肠切除, 经肛腔镜辅助双镜联合代直肠切除吻合重建手术具有术后恢复快和术后并发症发生率低的优势。此外, 两种术式进行代直肠切除吻合口重建术后的肠造口回纳率、远期肛门功能以及生活质量方面的差异仍需要进一步随访。

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关键词

直肠肿瘤；再手术；器官保留治疗；腹腔镜；手术后并发症
中图分类号：R735.3

Efficacy and safety of laparoscopic versus transanal endoscopic-assisted dual-scope combination redo coloanal anastomosis: a single-center report of 51 cases

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Abstract

Background and Aims: Redo coloanal anastomosis after rectal resection can restore intestinal continuity in most patients with rectal anastomotic failure or local tumor recurrence, avoiding permanent enterostomy. However, this surgery is challenging and associated with a high incidence of surgical complications. The choice of surgical approach is crucial for reducing the difficulty of the procedure, ensuring surgical safety, and reducing postoperative complications. Therefore, this study summarized the experience of performing laparoscopic and transanal endoscopic-assisted dual-scope combination redo coloanal anastomosis over 8 years at a single center to provide an evidence-based reference for clinical practice.

Methods: The clinical data of 51 patients undergoing redo coloanal anastomosis in Division of Colorectal Surgery, the Sixth Affiliated Hospital of Sun Yat-sen University between October 2015 and August 2023 were retrospectively collected. Among them, 24 cases underwent transanal endoscopic-assisted dual-scope combination redo coloanal anastomosis (the dual-scope combination group), and 27 cases underwent laparoscopic redo coloanal anastomosis (the laparoscopic group). Intraoperative and postoperative conditions of all patients were analyzed, and differences in relevant clinical variables between the dual-scope combination group and the laparoscopic group were compared.

Results: All 51 patients successfully underwent redo coloanal anastomosis. Methods of digestive tract reconstruction included Bacon operation in 30 cases, Dixon operation in 5 cases, Parks operation in 15 cases, and intersphincteric resection in 1 case. Among the 51 patients, 30 underwent pull-through resection with two-stage coloanal anastomosis, 5 underwent pull-through resection with single anastomosis, 3 underwent pull-through resection with double anastomosis, and 13 underwent one-stage manual anastomosis. Among them, 42 patients had an enterostomy before surgery, 6 underwent prophylactic enterostomy after surgery, and 3 did not undergo prophylactic enterostomy after surgery. The total operative time for the entire group was 296 (251–349) min, and the intraoperative blood loss was 100 (50–200) mL. There was no statistical difference in the operative time and intraoperative blood loss between the dual-scope combination and laparoscopic groups (both $P>0.05$). A total of 24 specimens

were obtained transanally during the operation, with 5 in the laparoscopic group and 19 in the dual-scope combination group, showing a statistically significant difference ($P<0.05$). The postoperative hospital stay for the entire group was 17 (11–23.5) d. There was no statistical difference in the postoperative hospital stay between the dual-scope combination and laparoscopic groups (both $P>0.05$). However, the time to postoperative gas passage and oral intake in the dual-scope combination group was shorter than in the laparoscopic group (both $P<0.05$). There were no patients in the entire group who were transferred to the ICU for treatment after surgery or died during hospitalization. Pathological examination of specimens from 9 patients with local tumor recurrence after surgery showed no tumor at the specimen margin. Sixteen patients in the entire group experienced complications (9 cases of Clavien-Dindo grade II and 7 cases of grade III or above), including 4 cases in the dual-scope combination group (16.67%) and 12 cases in the laparoscopic group (44.44%), with a statistically significant difference ($\chi^2=4.554$, $P=0.033$).

Conclusion: The choice of surgical approach and method for redo coloanal anastomosis should be based on the type of initial anastomotic failure, the distance of the lesion from the anus, the patient's overall condition, and the level of medical care in the hospital to develop individualized treatment plans. Compared with simple laparoscopic redo coloanal anastomosis, transanal endoscopic-assisted dual-scope combination redo coloanal anastomosis has the advantages of faster postoperative recovery and a lower incidence of postoperative complications. Moreover, further follow-up is needed to evaluate the differences in enterostomy reversal rate, long-term anal function, and quality of life after redo coloanal anastomosis by the two surgical methods.

Key words

Rectal Neoplasms; Reoperation; Organ Sparing Treatments; Laparoscopes; Postoperative Complications

CLC number: R735.3

代直肠切除吻合口重建定义为直肠初次手术后因手术并发症或者疾病复发等因素需要切除代直肠并进行再次吻合的手术,目前其临床应用仍存在争论^[1-4]。临床研究^[5-8]表明该手术可成功恢复多数患者肠道连续性,避免80%~90%患者永久性肠造口,有助于改善患者生活质量。其手术难点在于代直肠血供欠佳及吻合口周围慢性纤维化粘连,缺乏正常组织层面盆腔且操作空间狭小,导致手术难度大,手术时间长。代直肠切除吻合口重建的手术相关并发症发生率为17%~40%^[6-12]。不同外科医生选择代直肠切除吻合口重建的手术方式有所差别,手术入路及术式的选择在降低手术难度、确保手术安全性及降低术后并发症方面具有重要临床意义。本文回顾性分析中山大学附属第六医院近8年间完成的51例代直肠切除吻合口重建的病例资料,比较腹腔镜与经肛腔镜辅助双镜联合两种手术方式的安全性。以期为代直肠切除吻合口重建的外科治疗提供借鉴作用。

1 资料与方法

1.1 一般资料

回顾性收集中山大学附属第六医院2015年10月—2023年8月收治的51例因直肠手术后吻合失败或局部复发行代直肠切除吻合重建患者的临床病理资料,其中男36例,女15例;年龄55(50~62.5)岁;体质指数(BMI)(22.26 ± 2.82) kg/m²;合并2型糖尿病5例,高血压病8例,术前均控制良好。原发肿瘤:直肠癌46例,宫颈癌5例。其中,26例患者合并盆腔放疗史。吻合失败42例(吻合口瘘8例、直肠阴道瘘9例、吻合口狭窄16例、吻合口缺血1例,混合型8例),局部复发9例。病变距肛缘距离范围4(3~5) cm。51例患者中,27例行腹腔镜代直肠切除吻合口重建手术(腹腔镜组),24例行经肛腔镜辅助双镜联合代直肠切除吻合口重建手术(双镜联合组)。两组患者性别、年龄、BMI、美国麻醉医

师协会 (ASA) 分级、高血压、糖尿病及病变距肛缘距离比较, 差异均无统计学意义 (均 $P>0.05$)。两组患者的一般资料有可比性 (表 1)。本研究通

过中山大学附属第六医院伦理委员会审批 (批号: 2022ZSLYEC-205)。

表 1 腹腔镜组与双镜联合组患者一般资料

Table 1 General data of patients in the laparoscopic group and the dual-scope combination group

一般资料	腹腔镜组(n=27)	双镜联合组(n=24)	t/U/χ	P
年龄[岁, M(IQR)]	56(48.5~64.5)	54(50.8~60.5)	335.500	0.835
性别[n(%)]				
女	10(37.0)	5(20.8)	1.607	0.205
男	17(63.0)	19(79.2)		
BMI(kg/m ² , $\bar{x} \pm s$)	22.21±2.19	22.33±3.46	0.146	0.885
高血压				
有	4(14.8)	4(16.7)	—	1.000
无	23(85.2)	20(83.3)		
糖尿病[n(%)]				
有	2(7.4)	3(12.5)	—	0.656
无	25(92.6)	21(87.5)		
ASA 评分[n(%)]				
I级	0(0.0)	2(8.3)		
II级	24(88.9)	19(79.2)	—	0.499
III级	3(11.1)	3(12.5)		
病变距肛缘距离[cm, M(IQR)]	4(3~5)	4(3~5)	325.500	0.985

1.2 纳入与排除标准

纳入标准: (1) 直肠肿瘤或放射性肠损伤晚期并发症 (包括直肠狭窄、直肠瘘等), 曾接受直肠切除+一期吻合术; (2) 因直肠肿瘤局部复发或直肠吻合口并发症 (吻合口狭窄、吻合口瘘) 行代直肠切除吻合口重建手术; (3) 代直肠切除吻合口重建手术前无远处转移或虽有肿瘤转移但已被有效控制; (4) 手术方式为腹腔镜手术。排除标准: (1) 合并炎性肠病或其他部位恶性肿瘤; (2) 术中探查为“冷冻骨盆”或肿瘤侵犯骨盆壁; (3) 中转开腹手术; (4) 联合代直肠以外的器官切除患者; (5) 临床病理资料缺失。

1.3 手术方法

麻醉生效后患者采取改良截石位, 主刀医师位于患者右侧。开放法建立气腹, 采用5孔法布局, 维持气腹压力在12~15 mmHg (1 mmHg=0.133 kPa)。游离脾曲结肠时视具体情况在剑突正下方增加5 mm Trocar (图 1)。

根据患者局部肿瘤复发情况、初次手术吻合情况及术中情况, 制定具体肠吻合方案。总体原则如下: (1) 代直肠远切缘须至少大于初次手术吻合口下缘1 cm; 若为直肠肿瘤局部复发, 代直肠

远切缘的长度以切缘阴性为标准。(2) 代直肠切除吻合口重建手术需要充分游离脾曲。根据直肠残端的长度, 在确保边缘弓完整及远端血运良好且无张力情况下确定吻合方式, 包括: 双吻合、拖出单吻合、拖出切除二期结肠肛管吻合以及一期手工吻合。(3) 直肠阴道瘘及有盆腔放疗史患者, 首选代直肠拖出切除二期结肠肛管吻合。

腹腔镜代直肠切除定义为经腹游离肛直肠后经肛完成吻合, 或直视下经肛门部操作辅助代直肠游离。经腹腔镜辅助双镜联合手术定义为同时经腹经肛门双镜手术辅助代直肠游离至腹盆操作会师。腹腔镜腹部操作: (1) 外侧入路法, 打开降结肠外侧系膜, 拓展Told间隙, 优先显露左侧性腺血管及输尿管, 以此解剖层面为指引, 贯通代直肠后间隙。(2) 以胰腺为导向, 游离结肠脾曲。勿损伤结肠边缘弓血管, 并确保肠管无张力吻合。注意辨认初次手术时肠系膜下动静脉的结扎位置, 根部结扎左结肠动脉及胰腺下沿结扎肠系膜下静脉。(3) 优先游离代直肠后间隙, 沿此间隙向两侧拓展。注意保护阴道壁、精囊腺、前列腺。向下游离代直肠时, 需超越初次手术吻合口所在位置, 并尽可能游离至肛提肌表面, 但不必强求。部分

情况下游离后间隙时层面丢失,经肛门部操作辅助,避免损伤骶前静脉丛。肛门部操作:在初次手术的吻合口下缘1.0 cm处做双荷包缝合以闭合肠腔。于缝线下0.5 cm处切开直肠壁全层,直视下或经肛肠镜辅助游离代直肠周围间隙,并切除代直肠周围纤维化疤痕组织,直至与经腹手术操作医师,并能顺利将代直肠经肛门脱出。

标本取出途径及吻合方式:(1)经腹切割闭合器离断直肠者,经腹部切口移除手术标本,采用双吻合技术完成一期端-端吻合。(2)若经肛离断代直肠下缘,采用经肛拖出方式移除标本,术者根据临床经验及患者实体情况来决定器械或手法吻合方式。降结肠与肛管手工吻合,采用3-0可吸收缝线行全层间断缝合或倒刺线连续缝合,操作后注意观察吻合口颜色是否良好。

根据术中吻合情况及病情需要决定预防性回肠或结肠造口。

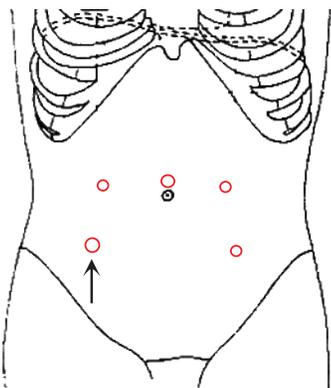


图1 Trocar孔布局示意图(红色圆圈为Trocar孔,箭头所示为主操作孔)

Figure 1 Diagram of Trocar layout (red circles indicating Trocar sites, and the arrow indicating the main operating port)

1.4 观察指标

手术情况:手术时间、术中出血量、经肛门取标本例数。术后情况:术后排气时间、术后进食时间、术后住院时间。手术并发症情况:

Clavien-Dindo 并发症分级Ⅱ级及以上并发症纳入统计。

1.5 统计学处理

应用R 4.3.3统计软件进行分析。正态分布的计量资料以均数±标准差($\bar{x} \pm s$)表示,组间对比用 t 检验,偏态分布的计量资料以中位数(四分位间距) $[M(IQR)]$ 表示,组间对比用秩和检验。计数资料以例数(百分比) $[n(%)]$ 表示,用 χ^2 检验或Fisher检验,检验标准 $\alpha=0.05$, $P<0.05$ 为差异有统计学意义。

2 结果

2.1 手术情况

51例患者均顺利完成代直肠切除吻合口重建手术。消化道重建吻合方式:Bacon手术30例、Dixon手术5例、Parks手术15例、括约肌间切除术(intersphincteric resection, ISR)1例。51例患者中,拖出切除二期结肠肛管吻合30例、拖出切除单吻合5例、拖出切除双吻合3例、一期手工吻合13例。其中,术前已有肠造口患者42例、术后行新增预防性肠造口6例,术后未行预防性肠造口3例。全组患者中位手术时间为296(251~349)min,术中出血量为100(50~200)mL。双镜联合组手术时间短于腹腔镜组,但两组患者在手术时间、术中出血量方面无统计学差异($P>0.05$)。两组患者术中经肛门取标本共24例,腹腔镜组5例,双镜联合组19例,差异有统计学意义($P<0.05$)(表2)。

2.2 术后情况

51例患者术后住院时间为17(11~23.5)d。两组术后住院时间差异无统计学意义($P>0.05$),但双镜联合组的术后排气时间、术后进食时间短于腹腔镜组(均 $P<0.05$)(表3)。51例患者中无术后转入ICU治疗和住院期间死亡,9例肿瘤局部复发患者术后组织病理学检查结果均显示标本切缘未见肿瘤。

表2 腹腔镜组与双镜联合组患者手术情况比较

Table 2 Comparison of surgical variables between the laparoscopic group and the dual-scope combination group

指标	腹腔镜组($n=27$)	双镜联合组($n=24$)	U/χ^2	P
手术时间[$\text{min}, M(IQR)$]	315(266~360)	280(249~318)	416	0.084
术中出血量[$\text{mL}, M(IQR)$]	100(50~150)	100(50~200)	265	0.252
经肛取标本[$n(%)$]	5(18.5)	19(79.2)	18.759	<0.001

表3 腹腔镜组与双镜联合组患者术后情况比较

指标	腹腔镜组(n=27)	双镜联合组(n=24)	U/χ^2	P
术后排气时间[d,M(IQR)]	3(3~4)	2(2~3)	500.0	<0.001
术后进食时间[d,M(IQR)]	3(2~4)	2(1~3)	447.5	0.017
术后住院时间[d,M(IQR)]	18(14~24.5)	14(9.5~20.8)	405.5	0.126

2.3 术后并发症及处理

51例患者中,16例发生并发症,包括吻合口瘘5例、肠造口相关并发症2例、吻合口狭窄5例、骶前积液2例、代直肠后脓肿2例、肠梗阻2例、盆腔出血1例(部分患者合并多种并发症);16例手术并发症中,双镜联合组4例(16.67%),腹腔镜组12例(44.44%),两组比较有统计学差异($\chi^2=4.554$, $P=0.033$)(表4)。

表4 腹腔镜组与双镜联合组患者术后并发症情况[n(%)]
Table 4 Postoperative complications in the laparoscopic group and the dual-scope combination group [n(%)]

Clavien-Dindo并发症分级	腹腔镜组(n=27)	双镜联合组(n=24)
II级		
代直肠后脓肿	1(3.7)	1(4.2)
肠梗阻	1(3.7)	0(0.0)
吻合口瘘A级	4(14.8)	0(0.0)
造口相关并发症	1(3.7)	1(4.2)
吻合口狭窄	2(7.4)	1(4.2)
≥III级		
骶前积液	1(3.7)	1(4.2)
吻合口狭窄	2(7.4)	0(0.0)
肠梗阻	1(4.2)	0(0.0)
盆腔出血	0(0.0)	1(4.2)
吻合口瘘B级	0(0.0)	1(4.2)

Clavien-Dindo并发症分级II级9例(双镜联合组1例,腹腔镜组8例),其中1例低位小肠梗阻患者经胃肠减压、肠外营养等保守治疗后好转;4例A级吻合口瘘患者,予抗感染、保持引流通畅等治疗后好转;2例代直肠后脓肿患者,在二期结肠肛管吻合手术时发现,予冲洗、抗感染治疗后好转。3例吻合口管状狭窄患者,予手指扩肛处理;2例术后肠造口狭窄患者继发肠梗阻,予手指扩张、置管减压、肠外营养等保守治疗后好转。Clavien-Dindo并发症分级III级及以上7例(双镜联合组3例,腹腔镜组4例),其中1例肠梗阻患者在DSA引导下置入肠梗阻导管胃肠减压、全肠外营养等治疗后续无明显好转,后开腹探查行部分小肠切除后好转。

2例环状吻合口狭窄患者,行内镜下狭窄部位切开及球囊扩张治疗;1例B级吻合口瘘患者及2例骶前积液患者,均行彩色多普勒超声检查引导下穿刺引流。1例术后盆腔出血患者经DSA造影,诊断右侧阴部内动脉假性动脉瘤,予介入栓塞治疗后好转。

3 讨论

随着我国直肠切除手术实施例数的增加,结肠直肠或结肠肛管吻合失败及局部复发病例也愈益增多。在初次肠吻合失败的患者中,若不进行吻合口重建手术,往往需要长期保留肠造口,后者将对患者生活质量及预后产生不良影响^[7,13]。研究^[5-8,14]表明,代直肠切除吻合口重建可成功恢复多数患者肠道连续性,可降低80%~90%的患者永久性肠造口率。因此,代直肠切除吻合口重建手术是直肠吻合失败及直肠肿瘤局部复发的挽救措施之一。

游离代直肠是该手术的技术难点。其主要原因在于:代直肠周围慢性纤维化粘连、缺乏正常组织的层面及亚洲人群盆腔狭窄的普遍特征。慢性放射性吻合口并发症也间接增加了经腹单向入路的手术场景下代直肠切除的难度与复杂性。经肛腹腔镜技术具有“自下而上、逆行切除”的特点,为复杂场景下的代直肠游离另辟蹊径。目前,经肛腹腔镜辅助双镜联合手术广泛应用于中低位直肠肿瘤的治疗,并取得良好的疗效^[15-20]。但该技术应用于代直肠切除吻合口重建手术报道相对较少。主要原因可能与经肛手术初期经验不足、代直肠解剖结构复杂难辨、手术并发症发生率高及成本效益等方面原因有关。尽管如此,并不能否定经肛腹腔镜辅助技术对于此类患者的可行性及安全性^[8,16,21]。国内一项单臂研究^[21]纳入直肠癌术后吻合口瘘、吻合口狭窄及直肠阴道瘘患者进行经肛腹腔镜辅助双镜联合手术代直肠切除,未发生手术

相关并发症,且所有患者在术后3个月成功关闭肠造口。故该手术应在技术成熟的团队开展,并在严格把握手术指征、筛选合适病例的前提下方可取得较为理想的临床疗效。

腹腔镜及经肛肠镜代直肠切除手术方式各有其特点。临床患者行吻合口重建的具体情况存在差异,并不是所有患者都需要应用经肛肠镜辅助途径治疗。笔者团队经验:肿瘤局部复发、无盆腔放疗史、女性,此类患者采用腹腔镜技术便能轻松实现代直肠完整切除并吻合,减少经肛门手术操作时间。而对于放射性损伤相关直肠吻合口并发症患者,由于反复慢性感染及放射性损伤,导致代直肠周围粘连、纤维化疤痕等病理改变。腹腔镜下游离代直肠困难,应该及时采用经肛肠镜技术。借助腔镜放大效应、清晰的视野特点,可实现精细操作和解剖层次的判断,提高手术效率。此外,还可规避长时间腹腔镜操作可能带来的术后并发症发生风险。可喜的是目前腹腔镜技术正处于飞速发展阶段,比如恒压气腹、3D/4K腹腔镜、机器人在临床的应用发展可能有助于进一步提高经肛肠镜辅助代直肠切除的精准度及手术安全性^[22-23]。

经肛肠镜辅助双镜联合技术应用于代直肠切除手术过程,术中应注意:在经肛手术操作前,首先应辨别初次手术吻合口位置,以便缝合封闭直肠并确定手术下切缘。对于代直肠周围纤维化疤痕,导致解剖层面丢失或结构难辨时。经肛操作应紧贴代直肠浆肌层游离或借助腹腔镜下头侧光源指引,这样有利于减少盆壁及骶前血管损伤。离断代直肠时,应充分游离脾曲,在确保吻合口张力和血供的同时,切除肠管“宁少勿多”。代直肠标本移除后,应在经肛肠镜辅助下充分剔除部分疤痕,这样有利于在确保代直肠经肛顺利拖出的同时,降低术后吻合口狭窄发生率。简而言之,经肛肠镜辅助双镜联合手术代直肠切除仍然需要遵照“去除责任病灶”的原则。

本研究结果显示:16例(31.4%)患者出现不同程度的术后并发症,其中Clavien-Dindo并发症分级Ⅲ级及以上7例(13.7%),提示术后应密切关注患者并发症发生情况。文献^[6-7, 10-12, 24]报道,不同手术方式下完成的代直肠切除吻合重建手术的围手术期总体并发症发生率为17%~40%。常见的术

后并发症包括:吻合口瘘、吻合口狭窄、盆腔感染^[7, 11]。术前病变类型、病变距肛缘距离、吻合重建方式、手术方式被认为与术后并发症关系密切^[12, 23, 25-29],此外,肿瘤安全性问题也应被纳入考量范围^[30]。本研究重点关注腹腔镜与双镜联合手术方式在手术吻合口并发症方面的差异。笔者对比两组数据发现,双镜联合组并发症发生率16.7%明显低于腹腔镜组44.4%,且前者在术后吻合口瘘及吻合口狭窄发生率方面也低于后者。笔者认为:充分游离脾曲结肠以确保无张力吻合,双镜联合下代直肠周围疤痕充分切除后经肛拖出结肠肛管吻合有利于降低再吻合相关并发症。此外,双镜联合手术也存在一定的术中血管意外事件发生率,对此也应该引起术者足够的重视。

本研究显示,双镜联合组患者手术时间短于腹腔镜组,但差异无统计学意义。这可能与本组数据样本含量小,回顾性研究的局限性有关。本研究纳入的部分双镜联合患者可能因为经腹腔镜手术操作困难时才联合经肛肠镜辅助手术操作,这也在一定程度降低了手术效率。回顾文献并结合临床实践,笔者仍然认为双镜联合组的手术时间有短于腹腔镜组的趋势^[12, 20]。从术后情况看,术后排气时间、术后进食时间优于腹腔镜组,术后住院时间两组相当。笔者认为这与双镜手术联合组大部分患者经自然腔道取出标本,腹壁术口较小,且手术时间短对组织器官刺激较轻有关。尽管,双镜联合组术后住院时间相当,但术后胃肠功能恢复较快。快速康复外科理念的普及,也将更有利于此类患者的术后恢复。我们认为在严格的手术适应证下,双镜联合组的手术安全性不亚于腹腔镜组,且能达到更好代直肠切除效果。

综上所述,经肛肠镜辅助双镜联合代直肠切除吻合重建手术是安全的,相比单纯的腹腔镜代直肠切除,具有术后恢复快和术后并发症发生率低的优势,值得临床推广应用。所得结论仍需要更多的高质量研究加以验证。代直肠切除吻合重建手术方式及入路的选择应根据患者初次手术吻合失败类型、病变距肛门距离、患者全身情况以及单位医疗水平制定个体化方案。此外,两组手术方式进行代直肠切除吻合口重建术后的肠造口回纳率、远期肛门功能以及生活质量方面的差异仍需要进一步随访。

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