

doi: 10.13241/j.cnki.pmb.2021.21.034

腹腔镜下头侧中间入路治疗直肠癌患者的近期疗效 及对第 253 组淋巴结的清扫效果分析 *

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摘要 目的:分析头侧中间入路对腹腔镜直肠癌患者的近期疗效及第 253 组淋巴结的清扫效果。方法:2017 年 6 月到 2020 年 6 月选择在江苏省中医院诊治的 80 例直肠癌作为研究对象,根据手术入路方式的不同分为中间组 42 例与外侧组 38 例。所有患者都给予腹腔镜直肠癌根治术治疗,中间组采用头侧中间入路,外侧组给予外侧入路,记录与随访近期疗效及第 253 组淋巴结的清扫效果。结果:所有患者手术过程顺利,吻合后系膜、肠管均无张力;中间组的第 253 组淋巴结清扫时间少于外侧组($P<0.05$),两组的第 253 组淋巴结清扫数量对比差异无统计学意义($P>0.05$)。两组的手术时间、术中出血量对比差异无统计学意义($P>0.05$),中间组的术后肛门首次排气时间、术后拔除引流管时间、术后住院时间显著少于外侧组($P<0.05$)。中间组术后 9 个月的肠梗阻、吻合口漏、吻合口出血、切口感染等并发症发生率为 4.8%,显著低于外侧组 23.7%($P<0.05$)。所有患者术后随访 9 个月,中间组的复发率为 2.4%,显著低于外侧组的 15.8%($P<0.05$)。结论:头侧中间入路在腹腔镜直肠癌患者中的应用能提高第 253 组淋巴结的清扫效率,促进患者康复,减少术后并发症的发生,降低近期复发率。

关键词: 头侧中间入路;腹腔镜;直肠癌;253 组淋巴结;近期疗效

中图分类号: R735.3 **文献标识码:** A **文章编号:** 1673-6273(2021)21-4163-04

Short-term Effect of Laparoscopic Treatment of Rectal Cancer by Cephalic Middle Approach and Analysis of Group 253 Lymph Node Dissection*

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ABSTRACT Objective: To analyze the short-term efficacy of the anterior middle approach for laparoscopic rectal cancer and the group 253 lymph node dissection. **Methods:** A total of 80 cases of rectal cancer, who were diagnosed and treated in Jiangsu Provincial Hospital of Traditional Chinese Medicine from June 2017 to June 2020, were selected and were divided into middle group($n=42$) and lateral group ($n=38$) according to the different surgical approaches. All the patients were treated with laparoscopic rectal cancer resection, the middle group was received the anterior approach and the lateral group, received the lateral approach. The short-term efficacy and the group 253 lymph nodes dissection effects were recorded and followed up. **Results:** All the patients underwent smooth operation, and there was no tension in the mesentery and intestine after anastomosis. The group 253 lymph node dissection time in the middle group was less than that in the lateral group ($P<0.05$), and there was no statistical difference in the number of group 253 lymph node dissection between the two groups ($P>0.05$). There was no significant difference in the operation time and intraoperative blood loss between the two groups ($P>0.05$). The postoperative anal first exhaust time, postoperative drainage tube removal time, and postoperative hospital stay in the middle group were significantly less than those in the lateral group ($P<0.05$). The postoperative 9 months of incidences of complications such as intestinal obstruction, anastomotic leakage, anastomotic bleeding, and wound infection in the middle group was 4.8%, which was significantly lower than that(23.7%) in the lateral group ($P<0.05$). All the patients were followed up for 9 months, and the recurrence rate of the middle group was 2.4%, which was significantly lower than that (15.8%) of the lateral group ($P<0.05$). **Conclusion:** The application of the anterior middle approach in patients with laparoscopic rectal cancer can improve the cleaning efficiency of the group 253 lymph node, promote the recovery of patients, reduce the incidence of postoperative complications, and reduce the short-term recurrence rate.

Key words: Cephalad approach; Laparoscopic; Rectal cancer; group 253 lymph nodes; Short-term efficacy

Chinese Library Classification(CLC): R735.3 **Document code:** A

Article ID: 1673-6273(2021)21-4163-04

* 基金项目:江苏省中医药科技发展计划项目(YB201916)

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(收稿日期:2021-04-06 接受日期:2021-04-28)

前言

直肠癌多发于发达国家和地区,近年来随着国民生活节奏及饮食结构的改变,我国直肠癌发病人数逐年攀升,目前临床上直肠癌治疗仍以手术为主,如:腹腔镜直肠癌根治术逐渐广泛应用于临床,不但显著提高了患者的生存时间,也可以有效地降低局部复发率^[1,2]。该手术入路上可以分为外侧入路和中间入路,外侧入路为早期常用的方法,可达到正确的解剖层面,但是容易误伤周围组织与器官,游离肠系膜下动脉根部时小肠影响视野,也可能造成第 253 组淋巴结有效清扫困难,也伴随有左结肠动脉与肠系膜下静脉关系辨认不清^[3]。而头侧中间入路是以骶骨岬水平为起始,沿着腹主动脉向上打开直乙结肠系膜,进而裸化肠系膜血管根部,有利于血管神经和输尿管等重要脏器的保护,也有利于淋巴结的清扫,最大限度减少对左侧结肠系膜完整性的破坏^[4,5]。同时该方法在临床上的应用也具有

解剖更清晰、中转开腹率相低、手术时间短等优势^[6]。本文具体分析头侧中间入路对腹腔镜直肠癌患者的近期疗效及第 253 组淋巴结的清扫效果,并进一步分析其临床应用价值。

1 资料与方法

1.1 研究对象

2017 年 6 月到 2020 年 6 月选择在江苏省中医院诊治的 80 例直肠癌作为研究对象,纳入标准:根据术前肠镜活组织病理学检查结果证实为直肠癌;病理类型为腺癌;年龄 20-75 岁,具有手术指征;临床资料与调查资料完整;患者及家属术前均签署手术知情同意书;医院伦理委员会批准了此次研究。排除标准:既往有腹部手术史且腹腔广泛粘连;急诊手术病例;妊娠期、危重病及有其他手术禁忌证。

根据手术入路方式的不同为中间组 42 例与外侧组 38 例,两组患者一般资料差异无统计学意义($P>0.05$)。见表 1。

表 1 两组一般资料对比

Table 1 Comparison of general data between two groups

Groups	n	Clinical stage (Phase I / II / III)	Surgical approach (Dixon/Miles/Hartmann)	Gender (Male/Female)	Ages(years)	Distance from tumor to anal margin(mm)	BMI(kg/m ²)
middle group	42	22/10/10	35/5/2	19/23	64.33± 5.54	51.52± 14.82	22.94± 1.48
lateral group	38	19/11/8	31/4/3	18/20	65.01± 3.29	50.20± 12.85	22.10± 2.74
t/χ^2		0.156	0.317	0.035	0.633	0.432	0.781
P		0.925	0.853	0.852	0.482	0.677	0.299

1.2 治疗方法

所有患者都给予腹腔镜直肠癌根治术治疗,严格遵守全直肠系膜切除原则。

中间组:采用头侧中间入路,患者取截石位,左侧抬高,头低脚高。采用 4 孔气腹法,将左手无损伤钳推开屈氏韧带处的空肠,并用超声刀切断附着的筋膜及韧带。显露屈氏韧带和左侧结肠系膜,将小肠肠袢完全推至右上腹部,将结肠系膜向腹侧牵拉起来。保护左侧输尿管和生殖血管,清扫由第 253 组淋巴结。打开乙结肠系膜,清扫该处淋巴结。结扎处理相关血管,将直乙结肠完全撑起,辨识和游离直肠后间隙,选择性保留左结肠血管等。

外侧组:给予外侧入路,步骤参照文献^[5]。

1.3 观察指标

(1)观察组两组的第 253 组淋巴结清扫时间、第 253 组淋巴结数量。(2)记录两组的手术时间、术中出血量、术后肛门首次排

气时间、术后拔除引流管时间、术后住院时间等。(3)记录两组术后 9 个月出现的肠梗阻、吻合口漏、吻合口出血、切口感染等并发症情况。(4)所有患者术后随访 9 个月,随访至 2021 年 3 月 1 日,调查两组复发情况。

1.4 统计学方法

数据处理采用 SPSS19.00 统计软件,计量资料以(均数±标准差)表示(t 检验),计数资料采用%表示(χ^2 检验),检验水准为 $\alpha=0.05$ 。

2 结果

2.1 第 253 组淋巴结清扫效果对比

所有患者都手术过程顺利,吻合后系膜、肠管均无张力;中间组的第 253 组淋巴结清扫时间少于外侧组($P<0.05$),两组的第 253 组淋巴结清扫数量对比差异无统计学意义($P>0.05$)。见表 2。

表 2 两组第 253 组淋巴结清扫效果对比($\bar{x} \pm s$)

Table 2 Comparison of effect of lymph node dissection in 253rd group between two groups($\bar{x} \pm s$)

Groups	n	The times of lymph node dissection in the 253rd group(min)	The numbers of lymph node dissection in the 253rd group(n)
middle group	42	9.84± 1.49	5.02± 1.40
lateral group	38	15.40± 2.19*	5.21± 1.11

Note: Compared with the middle group, * $P<0.05$.

2.2 围手术指标对比

两组的手术时间、术中出血量对比差异无统计学意义

($P>0.05$),中间组的术后肛门首次排气时间、术后拔除引流管时间、术后住院时间显著少于外侧组($P<0.05$)。见表 3。

表 3 两组围手术指标对比($\bar{x} \pm s$)Table 3 Comparison of perioperative indexes between two groups($\bar{x} \pm s$)

Groups	n	Operation time (min)	Intraoperative blood loss(ml)	Time of first air exhaust after operation(d)	Postoperative drainage tube removal time(d)	Postoperative hospital stay(d)
Middle group	42	129.44± 23.04	22.87± 10.44	4.29± 1.00	4.09± 1.48	16.76± 1.48
Lateral group	38	124.87± 19.48	23.09± 9.11	5.99± 0.48*	5.76± 1.22*	22.72± 2.47*

Note: Compared with the middle group, * $P < 0.05$.

2.3 并发症情况对比

中间组术后 9 个月的肠梗阻、吻合口漏、吻合口出血、切口

感染等并发症发生率为 4.8%，显著低于外侧组 23.7%($P < 0.05$)。见表 4。

表 4 两组术后并发症发生情况对比(n)

Table 4 Comparison of postoperative complications between two groups (n)

Groups	n	Intestinal obstruction	Anastomotic leakage	Anastomotic bleeding	Incision infection	Totals
Middle group	42	1	0	1	0	2(4.8 %)
Lateral group	38	2	3	2	2	9(23.7 %)*

Note: Compared with the middle group, * $P < 0.05$.

2.4 近期疗效对比

所有患者术后随访 9 个月,中间组的复发率为 2.4%,显著

低于外侧组的 15.8%($P < 0.05$)。见表 5。

表 5 两组术后随访近期疗效对比(n)

Table 5 Comparison of short-term efficacy in the follow-up after operation between two groups (n)

Groups	n	relapse	relapse rate
Middle group	42	1	2.4 %
Lateral group	38	6	15.8 %*

Note: Compared with the middle group, * $P < 0.05$.

3 讨论

当前直肠癌的发病率在我国逐渐升高,开腹手术能够有效根治该病,但是对于患者的创伤比较大,导致患者免疫力降低,间接导致了术后复发及并发症发生,而近年来伴随着腹腔镜设备逐渐更新,腹腔镜直肠癌切除术得到了广泛的应用,其可防止肿瘤细胞在手术操作过程中扩散,也具有神经保护和超低位保肛等作用^[7,8]。不过传统外侧入路时左结肠动脉与肠系膜下静脉关系辨认不清,对第 253 组淋巴结有效清扫可能稍显困难。头侧中间入路通常是自屈氏韧带水平打开结肠系膜并牵拉,可有效减少小肠肠袢对血管根部视野的影响^[9,10];可充分显示整个直乙结肠牵拉与对抗牵拉的效果,使得 253 组淋巴结的清扫更加彻底^[11,12]。本研究显示所有患者都手术过程顺利,吻合后系膜、肠管均无张力;中间组的第 253 组淋巴结清扫时间少于外侧组($P < 0.05$),两组的第 253 组淋巴结清扫数量对比差异无统计学意义($P > 0.05$)。特别是经头侧中间入路可合理使用各种手术器械,可在较大范围的层面清扫血管周围淋巴结的清扫^[13,14]。

结直肠癌是消化系统恶性肿瘤之一,目前随着该癌症外科手术及辅助治疗手段的进一步发展和优化,该癌症患者术后的总体预后显著改善,但是部分患者术后仍出现复发与转移现象,且手术本身引起的生理创伤等也导致了患者不良身体机

能、精神状态等的出现,均直接影响了患者的手术预后^[15,16]。相关研究显示:结直肠癌的转移涉及新生血管形成、肿瘤细胞的黏附改变、细胞增殖改变、肿瘤细胞的迁移、细胞外基质降解增加等^[17-19]。结直肠的淋巴引流系统高度发达,不过淋巴结的转移规律与机制还不清楚。在结直肠癌淋巴结转移的检测中,异硫蓝染料标记法准确标记结直肠癌淋巴结微转移,从而能较好地反映整个淋巴结转移状况,从而帮助外科医生确定适当的淋巴清扫范围,可避免不必要的过分清扫,也有利于将含有转移的淋巴结清除,从而改善患者的预后^[20,21]。

在直肠癌腹腔镜切除术中,外侧入路容易识别位于结肠系膜和腹膜后器官之间的筋膜间隙,可清晰流畅显示该层面的解剖面^[22,23]。但是有时易产生层次不清楚的情况,限制结肠的移动度,有时会在吻合时遇到张力,不利于手术的顺利实施,从而造成手术治疗效果不佳^[24,25]。本研究显示:中间组的术后肛门首次排气时间、术后拔除引流管时间、术后住院时间显著少于外侧组($P < 0.05$)。从机制上分析,头侧中间入路更符合人体工学原则可减少系膜内淋巴脂肪组织外露,左侧结肠系膜自腹膜后分离,血管分离裸化更容易,有利于减少潜在肿瘤细胞脱落沾染风险,容易拓展并保证筋膜完整,有利于保持术野清晰干净,从而促进患者康复^[26,27]。

本研究显示中间组术后 9 个月的肠梗阻、吻合口漏、吻合

口出血、切口感染等并发症发生率为 4.8%，显著低于外侧组 23.7%($P<0.05$)；所有患者术后随访 9 个月，中间组的复发率为 2.4%，显著低于外侧组的 15.8%($P<0.05$)。当前直肠癌手术治疗效果得到了显著提升，但术后并发症和复发仍是影响术后近期及远期总体疗效的重要因素^[28]。有研究报道，直肠癌术后吻合口漏的发生率在 5% 左右，其发生主要取决于吻合肠管的血供和张力^[29]。外侧入路虽然能较好地保证术后吻合口的血运，但是也为增加吻合口张力，从而诱发吻合口漏的形成。头侧中间入路能够充分游离降结肠系膜及肠管，不增加吻合口的张力，最大限度减少对左侧结肠系膜完整性的破坏，完成无张力吻合，从而减少术后并发症的发生^[30]。并且该入路为左结肠动脉的选择性保留都创造了很好的空间，为后续直肠后间隙的分离提供更为充分的张力，也使得直乙结肠牵拉和直肠间隙游离等步骤变得更便捷而快速，能降低术后复发率。本研究也有一定的不足，样本数量较少，且只判断了近期疗效，并未判断远期疗效，尚需更多病例积累和进一步高质量随访研究加以证实。

总而言之，头侧中间入路在腹腔镜直肠癌患者中的应用能提高第 253 组淋巴结的清扫效率，促进患者康复，减少术后并发症的发生，降低近期复发率。

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