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腹腔镜与开腹直肠癌全直肠系膜切除治疗直肠癌临床疗效

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摘要 目的:探讨腹腔镜与开腹直肠癌全直肠系膜切除治疗直肠癌的临床疗效。**方法:**选择我院 2012 年 12 月~2013 年 12 月行腹腔镜直肠癌根治术(A 组)和开腹直肠癌全直肠系膜切除术(B 组)的患者,各 40 例,比较两组患者手术时间、肠道排气时间、住院时间、术后下床时间、术后并发症和标本病理情况。**结果:**①相比 B 组,A 组手术时间较长,术中出血量少,肠道排气时间短,住院时间短,术后下床活动时间短,术后并发症发生率低,差异有统计学意义($P < 0.05$)。②A、B 两组淋巴结清扫数、切除标本长度、肿瘤距远切端、标本切缘情况比较差异无显著性(P 均 > 0.05)。**结论:**腹腔镜手术相比开腹直肠癌系膜切除治疗直肠癌具有手术时间短、创伤小、术后恢复快,并发症少的优点,值得在临床上推广应用。

关键词:腹腔镜;开腹手术;直肠癌

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Clinical Curative Effect of Laparoscopic and Open Excision of Total Mesorectum in Treatment of Rectal Cancer

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ABSTRACT Objective: To study the clinical curative effect of laparoscopic and open excision of total mesorectum in treatment of rectal cancer. **Methods:** Patients administered from December 2012 to December 2012 were selected, 40 patients in group A received laparoscopic colorectal cancer radical prostatectomy and 40 patients in group B received open resection of total mesorectum and rectal cancer, operation time, intestinal exhaust time, length of hospital stay, postoperative bed time, postoperative complications and specimen pathology of patients were compared between two groups. **Results:** (1) Compared with group B, group A had longer operation time, less intraoperative blood loss, less intestinal exhaust time, shorter hospital stay, shorter postoperative bed activity time, lower incidence of postoperative complications, and the differences were statistically significant ($P < 0.05$). (2) There was no significant difference in lymph node cleaning, removal of length, tumor from far off, and specimen margins between the two groups ($P > 0.05$). **Conclusions:** Laparoscopic surgery presents shorter operation time, small trauma, quicker recovery, and less complications advantages than open total mesorectum excision in the treatment of rectal cancer, and it is worth popularization and application in clinic.

Key words: Laparoscopic; Open operation; Colorectal cancer

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前言

直肠癌是常见的下消化道恶性肿瘤,手术是其主要治疗方式,作为比较成熟的直肠癌根治性手术的开腹直肠癌全直肠系膜切除术,已得到临床的广泛认可,而近十几年来所发展起来的腹腔镜技术在直肠癌治疗上的应用亦取得了较好的效果^[1,2]。为探讨二者在临床疗效上的不同,我们选择 2012 年 12 月~2013 年 12 月于我院行腹腔镜直肠癌根治术的 40 例和同期行开腹直肠癌全直肠系膜切除术的 40 例患者进行对比观察,

现报道如下:

1 资料和方法

1.1 一般资料

选择我院 2012 年 12 月~2013 年 12 月行腹腔镜直肠癌根治术(A 组)患者 40 例,其中 Dixon 手术 18 例, Miles 手术 22 例,年龄 23~76 岁,平均 54.5 ± 12.4 岁,男 23 例,女 17 例,肿瘤直径 2~8 cm,平均 3.8 ± 1.6 cm, Duke A 期 12 例, B 期 13 例, C 期 15 例,高分化 4 例,中分化 30 例,低分化 6 例。选择同期开腹直肠癌全直肠系膜切除术(B 组)患者 40 例,其中 Dixon 手术 17 例, Miles 手术 23 例,年龄 24~77 岁,平均 53.8 ± 11.9 岁,男 22 例,女 18 例,肿瘤直径 2~9 cm,平均 3.7 ± 1.5 cm, Duke A

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期 13 例, B 期 14 例, C 期 13 例, 高分化 5 例, 中分化 31 例, 低分化 4 例。所有患者均于同一治疗组内接受治疗, 并由同一组医师完成手术。两组患者在性别、年龄、手术类型、肿瘤直径、

Duke 分期上比较差异无统计学意义 ($P > 0.05$), 具有可比性, 见表 1。

表 1 两组的一般临床资料对比

Table 1 Comparison of the general clinical data between two groups

组别 Groups	A 组 (n=40) Group A(n=40)	B 组 (n=40) Group B(n=40)	T/ χ^2	P
男 / 女 M/F	23/17	22/18	0.051	0.822 > 0.05
年龄(岁) Age(years)	54.5 $\pm$ 12.4	53.8 $\pm$ 11.9	0.258	0.399 > 0.05
肿瘤直径 Tumor diameter	3.8 $\pm$ 1.6	3.7 $\pm$ 1.5	0.288	0.387 > 0.05
手术类型 Operation type			0.051	0.822 > 0.05
Dixon 手术 Dixon operation	18	17		
Miles 手术 Miles operation	22	23		
Duke 分期 Duke staging			0.220	0.896 > 0.05
A 期 Stage A	12	13		
B 期 Stage B	13	14		
C 期 Stage C	15	13		
分化程度 differential degree			0.528	0.768 > 0.05
高分化 Well-differentiated	4	5		
中分化 Moderately differentiated	30	31		
低分化 Poorly differentiated	6	4		

1.2 手术方法

A 组行腹腔镜直肠癌根治术: 行气管插管, 静吸符合全身麻醉后, 取膀胱截石位, 头低 30°, 建立气腹, CO₂ 气腹维持 12 mmHg, 脐下腹腔镜穿孔, 于左、右上腹分别置 5 mm 套管, 左右下腹分别置 10 mm 套管, 以右下腹为主操作孔, 通过强生超声刀将乙状结肠和直肠分离, 并将左侧结肠游离至脾区, 辨别左侧输尿管位置后通过带锁扣结扎钉或血管切割器对肠系膜或乙状结肠血管进行处理。分离直肠系膜到无血管平面以保证其切除完整, 于系膜前和 Waldeyer 筋膜后行钝性分离, 分离至盆底, 此过程中应注意保护双侧输尿管、下腹下神经、盆腔副交感神经丛等。Dixon 手术时于肿瘤下缘 5 cm 处对直肠系膜做环形分离, 于肿瘤下缘 2~5 cm 处用线性切割吻合器将肠管切断, 并在左下腹作小切口将肠段取出, 在肿瘤上缘 10 cm 左右切断乙状结肠, 近端结肠予吻合器钉座并行荷包缝合。肠段回纳后, 建立气腹, 于肠镜下做直肠低位吻合。Miles 手术时则在游离直肠后于左下腹做一 5 cm 左右切口, 将肠段取出后在肿瘤上缘 13 cm 上下将乙状结肠切断, 肛侧肠段回纳腹腔, 行会阴部手术后取出, 近侧肠段造瘘。B 组以标准肿瘤切除方案进行, 将直

乙结肠左侧系膜分离后, 再行右侧分离, 双侧汇合后再将直肠后壁与骶前间隙分离至腹膜返折下或肛提肌水平, 直肠前壁及侧壁分离同腹腔镜相同, 肠段吻合时采用荷包关闭器和吻合器。

1.3 观察指标

比较两组患者手术时间、肠道排气时间、住院时间、术后下床时间、术后并发症和标本病理情况。

1.4 统计方法

采用 SPSS13.0 统计软件进行数据分析, 计量资料采用均数 $\pm$ 标准差($\bar{x} \pm s$)表示, 计量资料比较采用 t 检验, 计数资料比较采用 χ^2 检验。以 $P < 0.05$ 认为差异有统计学意义。

2 结果

2.1 两组患者手术情况比较

A 组患者腹腔镜手术均顺利完成, 无中转开腹病例。相比 B 组, A 组手术时间较长, 术中出血量少, 肠道排气时间短, 住院时间短, 术后下床活动时间短, 术后并发症发生率低, 差异有统计学意义 ($P < 0.05$), 见表 2。

表 2 两组患者手术情况比较

Table 2 Comparison of operation situation of patients between two groups

指标 Indexes	A 组 (n=40) Group A(n=40)	B 组 (n=40) Group B(n=40)	t/ χ^2	P
手术时间(min) Operation time(min)	186 $\pm$ 20	132 $\pm$ 30	9.472	0.000
术中出血量(mL) Intraoperative blood loss(mL)	123 $\pm$ 18	371 $\pm$ 25	50.915	0.000
肠道排气时间(h) Intestinal exhaust time(h)	2.6 $\pm$ 0.5	4.8 $\pm$ 0.7	16.175	0.000
住院时间(d) Length of hospital stay(d)	6.9 $\pm$ 3.5	12.8 $\pm$ 4.5	6.545	0.000
术后下床活动时间(h) Postoperative bed time(h)	3.7 $\pm$ 0.9	6.8 $\pm$ 1.4	11.78	0.000
术后并发症发生率(%) Incidence of postoperative complications(%)	5	27.5	9.931	0.000

2.2 两组患者手术切除标本病理情况比较

A、B 两组淋巴结清扫数、切除标本长度、肿瘤距远切端、标本切缘情况比较差异无显著性(P 均 > 0.05),以肿瘤外科角度

来看切除标本的长度两者均合理,组织学检查远近切缘均无肿瘤。见表 3。

表 3 两组患者手术切除标本病理情况比较

Table 3 Comparison of operation excision biopsy pathology of patients between two groups

指标 Indexes	A 组(n=40) Group A(n=40)	B 组(n=40) Group B(n=40)	t/x ²	P
淋巴结清扫数(个)Lymph node cleaning(n)	8.3± 2.1	7.9± 2.7	0.739	0.461
切除标本的长度(l/cm)Removal of length(l/cm)	21.8± 5.2	22.5± 4.9	0.619	0.537
肿瘤距远切端(l/cm)Tumor from far off(l/cm)	4.2± 1.2	4.5± 1.4	1.029	0.307
标本切缘情况(阴性个数) Specimen margins (the number of negative)	40	40	-	-

3 讨论

本组研究中 A 组患者接受腹腔镜手术,全部成功完成直肠癌手术,相比接受开腹直肠癌系膜切除治疗的 B 组,术后手术时间较长,主要与前者术式操作步骤相对繁琐有关,而术中出血量则较少,且肠道排气时间短,住院时间及术后下床活动时间亦短,术后并发症发生率低,与该术式通过腹腔镜操作,避免了大范围组织切开和破坏有关,腹腔镜手术采用 30 度腹腔镜科耿好的暴露腹腔狭小空间,并对局部解剖结构放大,术中操作精细,伤口小,采用超声刀减少了术中创面渗血,便于组织的暴露和分离,对出血点处理及时,促进了伤口的快速愈合,进而降低了术后并发症发生率^[3-6]。两种手术方法切除后的组织病理结果并无显著差异,提示腹腔镜手术可达到传统开腹手术相同的疗效,同既往研究结果一致^[7-9]。有学者认为,由于在癌肿相应的侧方淋巴结转移和壁内侵犯发生率较低,能保证直肠系膜的完全切除,采用腹腔镜直肠全系膜切除术对于 T₁ 或 T₂ 期肿块或 $< 3\text{cm}$ 的低位直肠癌患者更为适用^[10-14]。本组中的患者均为 T₁ 或 T₂ 期肿块,直径相对较大,术中在充分游离直肠后上提肿块下缘,可对下切缘及直肠周围脂肪组织全面清扫,达到彻底切除的目的^[15-18]。

目前国内外学者对于腹腔镜手术治疗直肠癌认可度较高,其对周围脏器干扰小,创口小,术后疼痛轻,早期活动快,胃肠功能恢复早,并能避免对膀胱的强力牵拉,明显加快排尿功能恢复速度,术后整体状况显著优于开腹手术^[19,20]。不过住院费用相对传统手术仍较高,随着操作技术的不断熟练,手术时间和术后恢复时间将会逐渐变短,医疗费用也会进一步降低,最大程度促进患者病情恢复。

综上所述,我们认为腹腔镜手术相比开腹直肠癌系膜切除治疗直肠癌具有手术时间短、创伤小、术后恢复快,并发症少的优点,值得在临床上推广应用。

参考文献(References)

[1] 王海燕.舒适护理在直肠癌根治患者术中应用的对照研究[J]. 辽宁医学院学报,2010,31(5):462-463
Wang Hai-yan. Comparative study on Application of comfort nursing in patients with radical resection of rectal cancer [J]. Journal of

Liaoning Medical University,2010,31(5):462-463

- [2] Green B L, Marshall H C, Collinson F, et al. Long-term follow-up of the Medical Research Council CLASICC trial of conventional versus laparoscopically assisted resection in colorectal cancer [J]. British Journal of Surgery,2013,100(1):75-82
- [3] Guerrieri M, Campagnacci R, De Sanctis A, et al. Laparoscopic versus open colectomy for TNM stage III colon cancer:results of a prospective multicenter study in Italy [J]. Surgery today,2012,42(11): 1071-1077
- [4] Kim S J, Ryu G O, Choi B J, et al. The short-term outcomes of conventional and single-port laparoscopic surgery for colorectal cancer[J]. Annals of surgery, 2011,254(6):933-940
- [5] 冯珊珊,杨博,王安平,等.不同发病部位结直肠癌患者的临床特点分析[J]. 宁夏医科大学学报,2013,35(5):525-527
Feng Shan-shan, Yang Bo, Wang An-ping, et al. The Clinical Characteristics Analysis in 702 Cases with Colorectal Carcinoma at Different Affected Sites [J]. Journal of ningxia medical university, 2013,35(5):525-527
- [6] Taylor G W, Jayne D G, Brown S R, et al. Adhesions and incisional hernias following laparoscopic versus open surgery for colorectal cancer in the CLASICC trial [J]. British Journal of Surgery,2010,97 (1):70-78
- [7] Poon J T C, Law W L, Chow L C Y, et al. Outcome of laparoscopic resection for colorectal cancer in patients with high operative risk[J]. Annals of surgical oncology,2011,18(7):1884-1890
- [8] Law W L, Poon J T C, Fan J K M, et al. Survival following laparoscopic versus open resection for colorectal cancer [J]. International journal of colorectal disease, 2012,27(8):1077-1085
- [9] Fujii S, Watanabe K, Ota M, et al. Single-incision laparoscopic surgery using colon-lifting technique for colorectal cancer:a matched case-control comparison with standard multiport laparoscopic surgery in terms of short-term results and access instrument cost [J]. Surgical endoscopy,2012,26(5):1403-1411
- [10] Lujan J, Valero G, Biondo S, et al. Laparoscopic versus open surgery for rectal cancer: results of a prospective multicentre analysis of 4,970 patients[J]. Surgical endoscopy,2013,27(1):295-302

- retention in posts comprising fiber post and core resin[J]. Dent Mater J,2013,32(4):659-666
- [7] Soejima H, Takemoto S, Hattori M, et al. Effect of adhesive system on retention in posts comprising fiber post and core resin[J]. Dent Mater J,2013,32(4):659-666
- [8] Makarewicz D, Le Bell-Ronnlof A M, Lassila L V, et al. Effect of cementation technique of individually formed fiber-reinforced composite post on bond strength and microleakage [J]. Open Dent J, 2013,7:68-75
- [9] Saraiva L O, Aguiar T R, Costa L, et al. Effect of different adhesion strategies on fiber post cementation: Push-out test and scanning electron microscopy analysis [J]. Contemp Clin Dent,2013,4 (4): 443-447
- [10] Alaghemand H, Mirzae M, Ahmadi E, et al. Effect of different post-space pretreatments on fiber post bonding to root dentine [J]. Dent Res J (Isfahan),2013,10(4):545-552
- [11] Mobilio N, Borelli B, Sorrentino R, et al. Effect of fiber post length and bone level on the fracture resistance of endodontically treated teeth[J]. Dent Mater J,2013,32(5):816-821
- [12] Mirmohammadi H, Gerges E, Salameh Z, et al. Effect of post diameter and cement thickness on bond strength of fiber posts [J]. Quintessence Int,2013,44(10):801-810
- [13] Aktemur T S, Uzunoglu E, Yilmaz Z. Effects of dentin moisture on the push-out bond strength of a fiber post luted with different self-adhesive resin cements [J]. Restor Dent Endod,2013,38 (4): 234-240
- [14] Arslan H, Kurklu D, Ayranci L B, et al. Effects of post surface treatments including Er:YAG laser with different parameters on the pull-out bond strength of the fiber posts[J]. Lasers Med Sci,2013
- [15] Scotti N, Bergantin E, Alovizi M, et al. Evaluation of a simplified fiber post removal system[J]. J Endod,2013,39(11):1431-1434
- [16] Vichi A, Carrabba M, Goracci C, et al. Extent of cement polymerization along dowel space as a function of the interaction between adhesive and cement in fiber post cementation [J]. J Adhes Dent,2012,14(1):51-57
- [17] Sterzenbach G, Karajouli G, Naumann M, et al. Fiber post placement with core build-up materials or resin cements-an evaluation of different adhesive approaches [J]. Acta Odontol Scand,2012,70 (5): 368-376
- [18] 苏丽芹. 玻璃纤维桩核及瓷甲冠修复青少年上前牙冠折临床疗效观察[J]. 辽宁医学院学报,2011,32(2):159-160
Su Li-jin. Observation on the Clinical Effect of Glass Fiber Pile Core and Porcelain Amour Crown Restoration of Teenagers' Anterior Crown Fracture [J]. Journal of Liaoning Medical University,2011,32 (2):159-160
- [19] Braga N M, Souza-Gabriel A E, Messias D C, et al. Flexural properties,morphology and bond strength of fiber-reinforced posts: influence of post pretreatment[J]. Braz Dent J,2012,23(6):679-685
- [20] Zogheib L V, Vasconcellos L G, Salvia A C, et al. Fracture resistance of bovine incisors restored with different glass fiber posts:effect of the diameter of fiber post[J]. Indian J Dent Res,2012,23(5):623-627

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- [11] She W H, Poon J T C, Fan J K M, et al. Outcome of laparoscopic colectomy for cancer in elderly patients [J]. Surgical endoscopy, 2013,27(1):308-312
- [12] Hida K, Hasegawa S, Kinjo Y, et al. Open versus laparoscopic resection of primary tumor for incurable stage IV colorectal cancer:a large multicenter consecutive patients cohort study [J]. Annals of surgery,2012,255(5):929-934
- [13] Hatwell C, Bretagnol F, Farges O, et al. Laparoscopic resection of colorectal cancer facilitates simultaneous surgery of synchronous liver metastases[J]. Colorectal Disease,2013,15(1):e21-e28
- [14] Wu Z, Zhang S, Aung L H H, et al. Lymph node harvested in laparoscopic versus open colorectal cancer approaches:a meta-analysis [J]. Surgical Laparoscopy Endoscopy & Percutaneous Techniques,2012,22(1):5-11
- [15] Taylor E F, Thomas J D, Whitehouse L E, et al. Population-based study of laparoscopic colorectal cancer surgery 2006-2008[J]. British Journal of Surgery,2013,100(4):553-560
- [16] Bagshaw P F, Allardyce R A, Frampton C M, et al. Long-term outcomes of the Australasian randomized clinical trial comparing laparoscopic and conventional open surgical treatments for colon cancer: the Australasian Laparoscopic Colon Cancer Study trial [J]. Annals of surgery,2012,256(6):915-919
- [17] Day A, Smith R, Jourdan I, et al. Retrospective analysis of the effect of postoperative analgesia on survival in patients after laparoscopic resection of colorectal cancer [J]. British journal of anaesthesia, 2012,109(2):185-190
- [18] Cianchi F, Cortesini C, Trallori G, et al. Adequacy of lymphadenectomy in laparoscopic colorectal cancer surgery:a single-centre, retrospective study[J]. Surgical Laparoscopy Endoscopy & Percutaneous Techniques,2012,22(1):33-37
- [19] Roscio F, Bertoglio C, De Luca A, et al. Outcomes of laparoscopic surgery for colorectal cancer in elderly patients [J]. JSLS,Journal of the Society of Laparoendoscopic Surgeons,2011,15(3):315-321
- [20] Verheijen P M, Stevenson A R L, Lumley J W, et al. Laparoscopic resection of advanced colorectal cancer[J]. British Journal of Surgery, 2011,98(3):427-430