

doi: 10.13241/j.cnki.pmb.2017.07.018

内镜下穿孔修补术对肝硬化合并消化道穿孔的疗效分析

郭睿¹ 戴建峰² 罗玉明¹ 徐俐¹ 沈虹¹

(1 四川省医学科学院 四川省人民医院城东病区消化内科 四川 成都 610101;

2 四川广播电视台农林卫生学院 四川 成都 610073)

摘要 目的:研究内镜下穿孔修补术对肝硬化合并消化道穿孔的临床疗效。**方法:**选择2010年1月~2015年12月在我院进行诊治的肝硬化合并消化道穿孔患者82例,随机分为观察组和对照组,各41例。观察组给予内镜下穿孔修补术治疗,对照组给予传统的手术切除治疗。观察两组的术中出血量、手术时间、术后住院时间和术后下床活动时间等围手术期指标;检测两组手术前和手术后的谷草转氨酶、谷丙转氨酶和γ-谷氨酰转移酶等肝功能指标;观察两组的并发症发生情况和生存情况。**结果:**观察组的术后出血量明显少于对照组($P<0.05$),术后住院时间和术后下床活动时间明显短于对照组($P<0.05$);两组治疗后的肝功能指标AST、ALT、γ-GT水平均比治疗前明显降低($P<0.05$),且观察组治疗后肝功能水平的下降幅度比对照组更为明显($P<0.05$);观察组的并发症发生率为4.88%(2/41),明显低于对照组的26.83%(11/41) ($P<0.05$);观察组的平均生存时间和1年生存率均明显高于对照组($P<0.05$)。**结论:**内镜下穿孔修补术对肝硬化合并消化道穿孔患者手术创伤小,可促进肝功能的恢复,且术后并发症少,从而可改善患者的远期生存情况。

关键词:内镜下穿孔修补术;肝硬化;消化道穿孔

中图分类号:R575.2 **文献标识码:**A **文章编号:**1673-6273(2017)07-1274-03

Effect of Endoscopic Perforation Repair on Patients with Liver Cirrhosis Complicated with Gastrointestinal Perforation

GUO Rui¹, DAI Jian-feng², LUO Yu-ming¹, XU Li¹, SHEN Hong¹

(1 Department of gastroenterology, the East ward of Sichuan Academy of Medical Sciences & Sichuan Provincial People's Hospital, Chengdu, Sichuan, 610101, China; 2 Department of Agroforestry and Health College, Sichuan Radio and TV University, Chengdu, Sichuan, 610073, China)

ABSTRACT Objective: To study the effect of endoscopic perforation repair on patients with liver cirrhosis complicated with gastrointestinal perforation. **Methods:** 82 cases of patients with liver cirrhosis complicated with gastrointestinal perforation who were treated in our hospital from January 2012 to December 2015 were selected and divided into two groups randomly, 41 cases each group. The observation group was treated with endoscopic perforation repair, and the control group was treated with traditional surgical resection. The intraoperative blood loss volume, operative time, postoperative hospital stay and postoperative ambulation time, AST, ALT, γ-GT, complications and survival of the two groups were compared. **Results:** The postoperative blood loss volume of observation group was significantly less than that of control group ($P<0.05$), and the postoperative hospital stay and postoperative ambulation time was significantly shorter than that of control group ($P<0.05$); after treatment, the level of AST, ALT, γ-GT of the two groups were significantly lower than before treatment ($P<0.05$), and these indexes in the observation group were decreased significantly than those of control group ($P<0.05$); the incidence of complications of observation group was 4.88% (2/41), significantly lower than 26.83% of the control group (11/41) ($P<0.05$); and the average survival time and 1 year survival rate of observation group was significantly higher than that of control group ($P<0.05$). **Conclusions:** Endoscopic perforation repair has small surgical trauma for patients with liver cirrhosis complicated with gastrointestinal perforation, and can promote the recovery of liver function with less postoperative complications, which can improve the long-term survival situation.

Key words: Endoscopic perforation repair; Liver cirrhosis; Gastrointestinal perforation

Chinese Library Classification(CLC): R575.2 **Document code:** A

Article ID: 1673-6273(2017)07-1274-03

前言

作者简介:郭睿(1981-),女,硕士研究生,主治医师,从事胃肠道疾病研究,E-mail: guorui_198110@medicine360.net,

电话:13688359248

(收稿日期:2016-05-16 接受日期:2016-06-10)

肝硬化是临床常见的慢性进行性肝病,患者的正常肝脏结构受到破坏,肝内微循环受到阻碍,造成肝功能减退及门脉高压,极易引发多脏器损害和多种并发症^[1]。消化道穿孔是肝硬化较为严重的并发症之一,主要表现为腹胀、腹痛和呕吐,全腹有反跳痛、压痛、腹肌紧张等症状^[2]。如果未进行及时有效的治疗,

可能会继发胸腹膜感染,甚至危及生命。以往治疗肝硬化合并消化道穿孔患者的多采用外科手术,但存在一定的手术风险和较多的并发症^[3]。近年来,消化内镜技术不断创新,日趋成熟,虽然内镜下穿孔修补术临床已有报道,但目前关于治疗肝硬化合并消化道穿孔的文献报道较少见。本研究主要探讨了内镜下穿孔修补术对肝硬化合并消化道穿孔的临床疗效。

1 资料和方法

1.1 一般资料

选择2012年1月~2015年12月我院诊治的肝硬化合并消化道穿孔患者82例,均符合肝硬化的诊断标准^[4],病理学检查发现有消化道穿孔出现,排除原发性肝癌、消化道肿瘤患者、合并慢性阻塞性肺气肿、支气管哮喘、心力衰竭、糖尿病患者。观察组41例,男23例,女18例;年龄39~61岁,平均(46.12±3.25)岁;肝功能A级27例,B级9例,C级5例;穿孔部位:19例位于结肠,12例位于胃,10例位于十二指肠。对照组41例,男24例,女17例;年龄38~62岁,平均(45.62±4.03)岁;肝功能A级27例,B级8例,C级6例;穿孔部位:20例位于结肠,13例位于胃,8例位于十二指肠。本研究获得我院伦理委员会的批准,所有患者均签署知情同意书。两组的基线资料具有可比性。

1.2 研究方法

观察组:在美国史赛克(中国)有限公司生产的209XI型内镜下进行穿孔修补术,将腔内的液体和空气抽吸完全,把H345型金属钛夹放入内镜前端的释放套管,使用抓持钳把穿孔病变

组织拉进套帽内,牵拉后迅速释放金属夹系统,立即恢复原状对合,以封闭穿孔并止血。对照组:对穿孔部位进行传统的手术切除,全身麻醉后进行开腹,切除穿孔部位。

1.3 观察指标

观察两组的术中出血量、手术时间、术后住院时间和术后下床活动时间等围手术期指标;采用日本日立公司7600-20全自动生化检测仪检测两组手术前和手术后的谷草转氨酶、谷丙转氨酶和γ-谷氨酰转移酶等肝功能指标;观察两组的并发症发生情况;通过电话和门诊随访两组的生存时间和1年生存率。

1.4 统计学分析

采用SPSS15.0软件进行统计学分析,计量资料以 $\bar{x}\pm s$ 表示,两组间对比用t检验,组间率的比较用 χ^2 检验,,以P<0.05为差异有统计学意义。

2 结果

2.1 两组围手术期指标的比较

观察组的术后出血量明显少于对照组(P<0.05),术后住院时间和术后下床活动时间明显短于对照组(P<0.05),见表1。

2.2 两组手术前后肝功能的比较

两组治疗后的肝功能指标AST、ALT、γ-GT水平均比治疗前明显降低(P<0.05),且观察组治疗后肝功能水平的下降幅度明显比对照组大(P<0.05),见表2。

表1 两组围手术期指标的比较($\bar{x}\pm s$)

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

Groups	n	Operation time (min)	Intraoperative bleeding volume (mL)	Postoperative bed activity time (d)	Postoperative hospital stay (d)
Observation group	41	126.37±15.42	286.53±103.52*	2.01±2.13*	6.13±2.58*
Control group	41	125.42±15.18	451.37±115.26	4.52±3.12	9.87±4.59

Note: Compared with control group, *P<0.05.

表2 两组手术前后肝功能的比较($\bar{x}\pm s$)

Table 2 Comparison of the liver function before and after operation between two groups ($\bar{x}\pm s$)

Groups	n	Time	AST	ALT	γ-GT
Observation group	41	Before operation	63.51±1.26	76.51±1.28	88.36±5.33
		After operation	35.72±5.69*#	41.26±8.53*#	45.26±7.21*#
Control group	41	Before operation	62.26±0.32	76.23±2.58	88.25±4.28
		After operation	50.12±5.85#	53.38±6.52#	58.25±1.96#

Note: Compared with control group, *P<0.05; compared with before operation, #P<0.05.

2.3 两组并发症发生情况的比较

观察组出现1例肺部感染,1例肠梗阻,对照组出现2例肺部感染,4例切口感染,3例腹腔感染,2例肠梗阻,观察组的

并发症发生率为4.88%(2/41),明显低于对照组的26.83%(11/41)(P<0.05),见表3。

表3 两组并发症发生情况的比较[例(%)]

Table 3 Comparison of the complications between two groups [n(%)]

Groups	n	Lung infection	Incision infection	Abdominal cavity infection	Intestinal obstruction	Incidence of complications
Observation group	41	1(2.44)	0(0.00)	0(0.00)	1(2.44)	2(4.88)*
Control group	41	2(4.88)	4(9.76)	3(7.32)	2(4.88)	11(26.83)

Note: Compared with control group, *P<0.05.

2.4 两组生存情况的比较

观察组的平均生存时间为(48.52 ± 7.13)个月,1年生存率为97.56%,而对照组的平均生存时间为(35.26 ± 6.32)个月,1

年生存率为80.48%,观察组的平均生存时间和1年生存率均明显高于对照组(P<0.05),见表4。

表4 两组生存情况的比较

Table 4 Comparison of the survival situation between two groups

Groups	n	Average survival time(± s, m)	Survival rates(%)
Observation group	41	48.52 ± 7.13	97.56
Control group	41	35.26 ± 6.32	80.48

Note:Compared with control group,*P<0.05.

3 讨论

二肝硬化是临幊上常见的消化道内幊疾病,具有长期性、反复性的特点,易合并消化道出血、肝性脑病和癌变等并发症。消化道穿孔属于临幊较为常见的一种急腹病症,具有起病急、进展快、病情严重、死亡率高的特点,如果不进行及时有效的治疗,会造成胃肠道内容物流入到腹腔,引发细菌性或化学性腹膜炎,甚至导致死亡等严重不良后果^[5-7]。肝硬化患者发生消化道穿孔的原因可能为:肝硬化患者对激素等活性物质的灭活能力大大降低,造成胃泌素、组胺、5-羟色胺水平升高,使胃壁毛细血管通透性增加,从而加速胃酸的分泌;肝硬化患者会出现门静脉压力升高,血管活性肠肽含量增加,胃肠黏膜淤血和低蛋白血症,造成黏膜水肿、充血,甚至糜烂,且对黏膜的修复能力及对损伤因素的抵御能力均降低,易引发消化道穿孔^[8-11]。

外科手术闭合消化道穿孔和缺损是临幊上的传统治疗方法,但肝硬化患者均存在不同程度的肝功能损害,并有不同程度的凝血功能障碍与低蛋白血症,对较大手术耐受性较低,如果只片面追求彻底性手术,会因手术创伤大、时间长、出血量大,引发多器官功能衰竭而死亡^[12-14]。近年来,随着消化道内幊技术的不断完善,内镜下穿孔修补术在临幊上广泛应用,该手术不仅治疗效果好,还能通过在内镜下置入金属钛夹来辅助闭合,防止不完全闭合的出现^[15-17]。我们以“内镜下穿孔修补术”和“消化道穿孔”为关键词在知网进行搜索,仅发现一篇相关的中文研究报道,说明国内相关研究较为缺乏,为此,本研究对内镜下穿孔修补术对肝硬化工合幊消化道穿孔的临床应用价值进行了探讨,结果发现,观察组的术后出血量明显少于对照组(P<0.05),术后住院时间和术后下床活动时间明显短于对照组(P<0.05);两组治疗后的肝功能指标AST、ALT、γ-GT水平均比治疗前明显降低(P<0.05),且观察组治疗后肝功能水平的下降幅度明显比对照组大(P<0.05);提示内镜下穿孔修补术对肝硬化工合幊消化道穿孔患者手术创伤小,可促进肝功能的恢复。

对肝硬化工合幊消化道穿孔患者进行手术治疗时,并发症的发生是极为常见的,尤其是肺部感染、伤口化脓感染和肠梗阻的发生率较高,且标准的金属钛夹由于翼展过小,只能闭合消化道的近黏膜层,在手术过程中极易发生钛夹脱落^[18-20]。本研究中观察组仅出现1例肺部感染,1例肠梗阻,而对照组出现2例肺部感染,4例切口感染,3例腹腔感染,2例肠梗阻,观察组的并发症发生率为4.88%(2/41),明显低于对照组的26.83%(11/41)(P<0.05),提示使用耙状金属夹修补系统可以有效封闭消化道创面,降低并发症发生率。相比传统的外科封闭手术,内

镜下穿孔或缺损的闭合不仅能缩短治疗时间,方便快捷,并且创伤小,无痛性好,减少手术过程中不必要的意外和各种并发症的发生。观察组的平均生存时间和1年生存率均明显高于对照组(P<0.05),提示内镜下穿孔修补术具有较好的远期预后。

综上所述,内镜下穿孔修补术对肝硬化工合幊消化道穿孔患者手术创伤小,可促进肝功能的恢复,且术后并发症少,从而可改善患者的远期生存情况。

参 考 文 献(References)

- Irfan A, Ahmed I. Could Stem Cell Therapy be the Cure in Liver Cirrhosis? [J]. Journal of Clinical & Experimental Hepatology, 2014, 5(2): 142-146
- Acevedo J. Multiresistant bacterial infections in liver cirrhosis: Clinical impact and new empirical antibiotic treatment policies [J]. World Journal of Hepatology, 2015, 7(7): 916-921
- Yagmur Y, Akbulut S, Can M A. Gastrointestinal perforation due to incarcerated Meckel's diverticulum in right femoral canal [J]. World Journal of Clinical Cases, 2014, 2(6): 232-234
- Tsochatzis E A, Bosch J, Burroughs A K. Liver cirrhosis [J]. Lancet, 2014, 383(9930): 1749-1761
- Yokohata T, Takeshima T, Iida T, et al. Significance of Endoscopic Examination in Diagnosis of Upper Gastrointestinal Perforation [J]. Digestion, 2016, 93(1): 109-112
- Wang Y S, Huang I F, Feng W B, et al. Recurrent lupus mesenteric vasculitis leading to gastrointestinal perforation and sepsis[J]. Kaohsiung Journal of Medical Sciences, 2015, 31(8): 1988-1993
- Awolaran O T. Radiographic signs of gastrointestinal perforation in children: A pictorial review[J]. African Journal of Paediatric Surgery, 2015, 12(3): 161-166
- Kamikado C, Taguchi S, Wakiyama T, et al. Psoas abscess and bacterial peritonitis caused by urinary tract infection in a patient of liver cirrhosis and diabetes mellitus [J]. Clinical Journal of Gastroenterology, 2009, 2(3): 242-245
- Teshima J. A Case of Liver Cirrhosis with Iatrogenic Esophageal Rupture[J]. Progress in Acute Abdominal Medicine, 2013, 33(5): 607-610
- Repici A, Pagano N, Hassan C, et al. Endoscopic submucosal dissection of gastric neoplastic lesions in patients with liver cirrhosis: a systematic review [J]. Journal of Gastrointestinal & Liver Diseases Jgld, 2012, 21(3): 303-307
- Rickes S, Neye H, Ortner M, et al. Bile peritonitis in an alcoholic man after traumatic gallbladder perforation-differential ascitic compensated liver cirrhosis diagnosis [J]. Zeitschrift Für Gastroenterologie, 2001, 39(3): 213-218

(下转第 1280 页)

- through the Akt/FOXM1 signaling cascade [J]. Oncology reports, 2015, 33(4): 2031-2036
- [6] Wei Lu-Min, Cao Shan, Yu Wei-Dong, et al. Over-expression of CX3CR1 is associated with cellular metastasis, proliferation and survival in gastric cancer[J]. Oncology reports, 2015, 33(2): 615-624
- [7] Miao Zhi-Feng, Wang Zhen-Ning, Zhao Ting-Ting, et al. TRIM24 is up-regulated in human gastric cancer and promotes gastric cancer cell growth and chemoresistance [J]. Virchows Archiv: an international journal of pathology, 2015, 466(5): 525-532
- [8] Lee SJ, Lee WW, Yoon H.-J, et al. Regional PET/CT after water gastric inflation for evaluating loco-regional disease of gastric cancer[J]. European Journal of Radiology, 2013, 82(6): 935-942
- [9] Gao Xiang Y, Li Lin, Wang Xiao H, et al. Inhibition of sphingosine-1-phosphate phosphatase 1 promotes cancer cells migration in gastric cancer: Clinical implications [J]. Oncology reports, 2015, 34 (4): 1977-1987
- [10] Park HS, Kim YJ, Ko SY , et al. Benign regional lymph nodes in gastric cancer on multidetector row CT [J]. Acta Radiologica, 2012, 53 (5): 501-507
- [11] Cho Soo-Jeong, Kook Myeong-Cherl, Lee Jun Ho, et al. Peroxisome proliferator-activated receptor gamma upregulates galectin-9 and predicts prognosis in intestinal-type gastric cancer[J]. International Journal of Cancer, 2015, 136(4): 810-820
- [12] Choi, Jun Young, Jeon, Seong Woo, Cho, Kwang Bum, et al. Non-curative endoscopic resection does not always lead to grave outcomes in submucosal invasive early gastric cancer [J]. Surgical Endoscopy, 2015, 29(7): 1842-1849
- [13] Sanikini, Harinakshi, Dik, Vincent K., Siersema, Peter D, et al. Total, caffeinated and decaffeinated coffee and tea intake and gastric cancer risk: Results from the EPIC cohort study [J]. International Journal of Cancer, 2015, 136(6): E720-E730
- [14] Haertl PM, Pohl F, Weidner K, et al. Treatment of left sided breast cancer for a patient with funnel chest: Volumetric-modulated arc therapy vs. 3D-CRT and intensity-modulated radiotherapy [J]. Medical dosimetry, 2013, 38(1): 1-4
- [15] Haertl PM, Pohl F, Weidner K, et al. Treatment of left sided breast cancer for a patient with funnel chest: Volumetric-modulated arc therapy vs. 3D-CRT and intensity-modulated radiotherapy [J]. Medical dosimetry, 2013, 38(1): 1-4
- [16] Zhang Wei-guo, An Wei-de, Chen Geng, et al. More superior mesenteric vein group of 14 v lymph node cleaning the clinical significance of lymph node metastasis for gastric cancer [J]. Journal of Chongqing medicine, 2013, (30): 3619-3621
- [17] Zhang F, Sun D, Yang B, et al. Cooperative techniques for surgical assistants in laparoscopy-assisted radical distal gastrectomy for gastric cancer [J]. Surgical laparoscopy, endoscopy and percutaneous techniques, 2013, 23(3): 345-348
- [18] Song KY, Park YG, Jeon HM, et al. A nomogram for predicting individual survival of patients with gastric cancer who underwent radical surgery with extended lymph node dissection[J]. Gastric cancer, 2014, 17(2): 287-293
- [19] Chen S, Feng XY, Li YF, et al. The prognosis of gastric cancer patients with marginally elevated carcinoembryonic antigen (CEA) values after D2 radical gastrectomy[J]. Journal of Surgical Oncology, 2013, 107(6): 641-645

(上接第 1276 页)

- [12] Elizabeth H, WmTod D, Alexis M M. What is your diagnosis? Gastrointestinal perforation[J]. Journal of the American Veterinary Medical Association, 2015, 246(10): 1063-1065
- [13] Uchino T, Mishima H, Kimura K, et al. Four cases of bevacizumab-related gastrointestinal perforation [J]. Gan to Kagaku Ryoho Cancer & Chemotherapy, 2014, 41(12): 2506-2508
- [14] Qi W X, Shen F, Zhang Q, et al. Risk of gastrointestinal perforation in cancer patients treated with afibbercept: a systematic review and meta-analysis[J]. Tumour Biology the Journal of the International Society for Oncodevelopmental Biology & Medicine, 2014, 35 (11): 10715-10722
- [15] Yokohata T, Takeshima T, Iida T, et al. Significance of Endoscopic Examination in Diagnosis of Upper Gastrointestinal Perforation [J]. Digestion, 2016, 93(1): 109-112
- [16] Sato K, Ito S, Kitagawa T, et al. Education and imaging. Gastrointestinal: endoscopic management for a delayed perforation after endoscopic submucosal dissection for early gastric cancer [J]. Journal of

Gastroenterology & Hepatology, 2014, 29(29): 417-418

- [17] Hancı D, Altun H. Repair of nasal septal perforation using middle turbinate flap (monopedicled superiority based bone included conchal flap): a new unilateral middle turbinate mucosal flap technique [J]. Archiv für Klinische und Experimentelle Ohren-Nasen-und Kehlkopfheilkunde, 2014, 272(7): 1-6
- [18] Sato S, Nakano A, Honjo Y, et al. Efficacy of NPWT with Acute Diffuse Peritonitis due to Lower Gastrointestinal Perforation [J]. Wound Repair & Regeneration, 2014, 22(1): 96-101
- [19] Matrella F, Lhuaira M, Piardi T, et al. Liver hilar abscesses secondary to gastrointestinal perforation by ingested fish bones: surgical management of two cases [J]. Hepatobiliary Surgery & Nutrition, 2014, 3(3): 156-162
- [20] Weaver T L, Goldberg R F, Stauffer J A, et al. Needle before the knife: nonoperative management of pneumoperitoneum with image-guided aspiration after gastrointestinal perforation [J]. Surgical Laparoscopy Endoscopy & Percutaneous Techniques, 2014, 24(2):74-76