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腹腔镜联合十二指肠镜治疗胆结石合并胆总管结石的临床疗效

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摘要 目的:探讨腹腔镜联合十二指肠镜治疗胆结石合并胆总管结石的临床疗效。**方法:**收集我院肝胆科 2012 年 6 月到 2014 年 3 月住院的胆结石合并胆总管结石 60 例,按照随机数字表法分为试验组和对照组,各 30 例,试验组给予腹腔镜联合十二指肠镜治疗,对照组给予传统的开腹胆囊切除以及胆总管探查取石,观察对比两组的临床疗效。**结果:**试验组手术时间、住院时间、术后恢复时间及术中出血量明显的短于或少于对照组,差异均具有统计学意义(均 $P < 0.05$),试验组治愈率为 96.7%明显的高于对照组的 66.7%,差异有统计学意义($P < 0.05$)。两组主要不良反应有:结石残留、感染、十二指肠穿孔、恶性呕吐及伤口疼痛等,试验组不良反应发生率为 16.67%明显的低于对照组总的 73.33%,差异有统计学意义($P < 0.05$)。**结论:**腹腔镜联合十二指肠镜治疗胆结石合并胆总管结石较传统的开腹手术治疗的效果好、恢复时间短、手术创伤小,且具有一定的安全性,不良反应发生少,值得临床推广使用。

关键词:腹腔镜;十二指肠镜;胆结石;胆总管结石;临床疗效

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Clinical Efficacy of Laparoscopic Combined with Duodenoscopy in Treatment of Gallstones and Bile Duct Stones

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ABSTRACT Objective: To evaluate clinical efficacy of laparoscopic combined with duodenoscopy in treatment of gallstones and bile duct stones. **Methods:** 60 cases of patients with gallstones and bile duct stones from June 2012 to March 2014 in department of Hepatobiliary Hospital were randomly divided into the experimental group(30 cases) and the control group(30 cases). The experimental group received laparoscopic joint duodenoscopy treatment. The control group were given conventional open cholecystectomy and common bile duct exploration, clinical efficacy of the two groups was observed and compared. **Results:** The operative time, length of hospital stay, postoperative recovery time and blood loss were significantly shorter or less than those in the control group, the differences were statistically significant ($P < 0.05$), the cure rate of the experimental group was 96.7%, higher than the that of the control group(66.7%), the difference was statistically significant ($P < 0.05$). The main adverse events that occurred in the two groups were residual stones, infection, duodenal perforation, wound pain, vomiting, and vicious. The total incidence of adverse events of experimental group was 16.67%, significantly lower than that of the control group (73.33%), the difference between the two groups was statistically significant ($P < 0.05$). **Conclusion:** Laparoscopic combined with duodenoscopy in the treatment of gallstones and bile duct stones presents better clinical efficacy than traditional open surgery, the recovery time is shorter, surgical trauma is less and shows certain safety, less adverse reactions, and is worthy of clinical application.

Key words: Laparoscopy; Duodenoscopy; Gallstones; Bile duct stones; Clinical efficacy

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前言

胆结石是指发生在胆囊内的结石所引起的疾病,是一种常见病。随年龄增长,发病率也逐渐升高,女性明显多于男性^[1]。随

着生活水平的提高,饮食习惯的改变,卫生条件的改善,我国的胆石症已由以胆管的胆色素结石为主逐渐转变为以胆囊胆固醇结石为主,大多数还并发有胆总管结石^[2]。临床上对于胆结石合并胆总管结石的常规方法主要是胆囊切除合并胆总管切开取石加 T 管引流术,随着腹腔镜以及十二指肠镜技术的发展,临床上逐渐的也采用腹腔镜联合十二指肠镜治疗胆结石合并胆总管结石^[3,4]。本文对我院肝胆科 2012 年 6 月到 2014 年 3 月

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住院的胆结石合并胆总管结石患者 60 例旨在探讨腹腔镜联合十二指肠镜治疗胆结石合并胆总管结石的临床疗效,现报道如下。

1 资料与方法

1.1 一般资料

收集我院肝胆科 2012 年 6 月到 2014 年 3 月住院的胆结石合并胆总管结石 60 例,纳入标准^[6]:①所有患者均经 B 超、CT 或 MRI 检查为胆结石合并胆总管结石,手术前均有恶性呕吐以及黄疸腹痛等症状。②不患有其他重要的合并症、并发症或内分泌性疾病,未服用可能对研究的指标有影响的药物。③所有患者都适合腹腔镜及十二指肠镜治疗。④符合伦理道德,

家属或者患者签署了知情同意书等。排除标准:①患有其他重要的器官衰竭性疾病或内分泌性疾病,如:肝肾衰竭、糖尿病等。②正在服用可能影响研究效果和结局的药物的患者。③腹腔镜以及十二指肠镜禁忌症的患者。④不依从、不配合、容易产生失访及拒绝参加患者。⑤试验过程不按照规定检查或调查过程中采用可能影响试验的结果的其他的治疗的措施。⑥治疗过程中病情突然加重患者。其中男 27 例,女 33 例,年龄 30-75 岁,平均(50.32±11.79)岁,病程 30-170 天,平均为(90.22±23.34)天,其中有 23 例为单发结石,37 例为多发结石。按照随机数字表法分为试验组和对照组,各 30 例,两组的一般资料性别、年龄、病程以及体重在两组之间的差别无统计学意义($P>0.05$),两组之间具有可比性,见表 1。

表 1 两组基本资料的比较($\bar{x} \pm s$)
Table 1 Comparison of basic data of two groups ($\bar{x} \pm s$)

组别 Groups	例数 Cases	性别(男/女) Gender (M/F)	年龄(岁) Age(years)	病程(d) Course of disease(d)	体重(kg) Weight(kg)
试验组 Experimental group	30	13/17	50.21± 6.21	90.21± 23.35	41.35± 3.08
对照组 Control group	30	14/16	51.00± 7.65	92.34± 22.55	46.35± 2.55
T/x ²		0.067	0.195	1.277	0.445
P		0.795	0.502	0.076	0.540

1.2 研究方法

试验组给予腹腔镜联合十二指肠镜治疗,患者在手术前均禁食 8 h,手术采用在全身麻醉后行气管插管,首先行腹腔镜胆囊切除术,完成后改变体位(俯卧位),在十二指肠镜下先应用十二指肠胰导管逆行造影来重新确定胆总管结石,再行十二指肠乳头肌切开术,再取石头(取石网篮辅助),对于结石较大的一般直径大于 10 mm 的需碎石后再取。术后再次造影检查是否已经取干净,患者均使用抗生素 24 h,以防感染,术后大概 3 d 复查常规,复查肝功能。

对照组同样手术采用在全身麻醉后行气管插管。常规行开腹胆囊切除、胆总管切开取石、T 管引流术,术后 3 d 复查常规,复查肝功能,术后患者均使用抗生素 24 h,以防感染。

1.3 研究指标

两组患者手术时间、住院时间以及恢复时间、术中出血量。不良事件的发生情况:主要是在术后住院期间是否有感染、伤

口疼痛、胆漏、十二指肠穿孔、肝脏损害,恶性呕吐以及术后复查是否有结石残存等;治愈率(等于治愈人数/总例数):治愈是指患者结石完全取出没有任何的残留,没有任何的并发症和合并症,术后复查一切情况良好。

1.4 统计学方法

用 SPSS13.0 统计分析软件进行,计量资料以均值±标准差($\bar{x} \pm s$)来表示,两组之间行 t 检验;计数资料用百分比表示,采用卡方检验(χ^2),取 $P<0.05$ 时差异具有统计学意义。

2 结果

2.1 两组临床指标及治愈率比较

试验组手术时间、住院时间、术后恢复时间及术中出血量明显的短于或少于对照组,两组差异均具有统计学意义(均 $P<0.05$),试验组治愈率为 96.7%明显的高于对照组的 66.7%,差异有统计学意义($P<0.05$)。

表 2 两组临床指标及治愈率比较($\bar{x} \pm s$)
Table 2 Comparison of the clinical indexes and cure rate of two groups ($\bar{x} \pm s$)

组别 Groups	例数 Cases	手术时间(min) Operative time (min)	住院时间(d) Length of hospital stay(d)	恢复时间(d) Postoperative recovery time(d)	术中出血量(mL) Blood loss(mL)	治愈[n(%)] Cure rate[n(%)]
试验组 Experimental group	30	105.21± 9.97	4.46± 1.27	12.38± 3.32	210.67± 23.29	29(96.7)
对照组 Control group	30	145.25± 10.11	9.17± 1.25	19.22± 2.89	352.31± 20.32	20(66.7)
T/x ²	-	4.457	5.570	5.778	6.975	9.071
P	-	0.022	0.018	0.016	0.004	0.003

2.2 两组不良反应发生率比较

两组发生的主要不良事件有:结石残留、感染、十二指肠穿孔、恶性呕吐以及伤口疼痛等,试验组总的不良事件发生率为

16.67%明显的低于对照组总的不良事件发生率 73.33%,两组之间的差异具有统计学意义($P<0.05$),见表 3,所有的不良反应均经过相应的措施均得到了缓解或者治愈。

表 3 两组不良事件发生情况比较
Table 3 Comparison of adverse events between two groups

组别 Groups	例数 Cases	结石残存 Residual stones	感染 Infection	胆漏 Bile leakage	十二指肠穿 孔 Duodenal perforation	恶性呕吐 Vomiting and viciou	伤口疼痛 Wound pain	总例数 Total cases	总发生率 (%) Total incidence rate(%)
试验组 Experimental group	30	1	0	1	1	1	1	5	16.67
对照组 Control group	30	3	0	1	3	10	5	22	73.33
χ^2	-								19.461
P	-								0.000

3 讨论

胆总管结石是指位于胆总管内的结石,根据其来源可分为原发性胆总管结石和来自胆囊的继发性胆总管结石,20 世纪前半叶,人们了解到胆总管结石由于胆囊结石经胆总管下降形成,这与欧美各国情况相类似^[7,8]。其中继发性胆总管结石的发生率,国内报道胆囊及胆总管同时存在结石者占胆石病例的 5%~29%^[9,10],国外报告胆囊结石病人的胆总管含石率为 10%~15%,并随胆囊结石病程延长,继发性胆总管结石相对增多^[11,12]。原发性胆总管结石,西方国家很少见,东方各国多发。传统的治疗方法主要是开腹胆囊切除术以及胆总管切开取石加上 T 导管引流术^[13,14],由于操作简单,技术要求较低所以是临床上的首选,但是此种治疗方法,创伤大,住院时间长,并发症较多^[15,16]。随着腹腔镜和十二指肠镜技术的逐渐的成熟^[17,18],临床开始应用二者联合来治疗胆结石合并胆总管结石,但是临床上对两镜联合治疗和传统的开腹手术治疗的效果以及安全性还存在一定的争议,这些都是临床上现在迫切要解决的问题^[19,20]。

本文通过收集我院肝胆科 2012 年 6 月到 2014 年 3 月住院的胆结石合并胆总管结石 60 例,来研究腹腔镜联合十二指肠镜治疗胆结石合并胆总管结石的临床疗效,按照随机数字表法分为试验组和对照组,试验组给予腹腔镜联合十二指肠镜治疗,对照组给予传统的开腹胆囊切除以及胆总管探查取石,观察对比两组的临床疗效,结果显示,试验组手术时间、住院时间、术后恢复时间及术中出血量明显的短于或少于对照组,两组差异均具有统计学意义(均 $P<0.05$),试验组治愈率为 96.7%明显的高于对照组的 66.7%,差异有统计学意义($P<0.05$),说明两镜的联合治疗效果优于传统的开腹手术治疗。两组发生的主要不良事件有:结石残留、感染、十二指肠穿孔、恶性呕吐以及伤口疼痛等,试验组总的不良事件发生率为 16.67%明显的低于对照组总的不良事件发生率 73.33%,两组之间的差异具有统计学意义($P<0.05$),两镜联合治疗更加的安全可信,这些研究结果均和临床上其他相同的研究得出的结论是一致的^[12-14]。

综上所述,腹腔镜联合十二指肠镜治疗胆结石合并胆总管

结石的效果好,恢复时间短,并且手术创伤小,并且具有一定的安全性,不良事件发生情况少,值得临床上采纳使用。

参考文献(References)

- [1] 沈春林,汪溶宇,刘月军,等.32 例急性胰腺炎的螺旋 CT 诊断[J].广西医学,2011,33(12):1603-1605
Shen Chun-lin, Wang Yu-yu, Liu Yue-jun, et al. Diagnosis of 32 cases of acute pancreatitis by spiral CT [J]. Guangxi Medical Journal, 2011,33(12):1603-1605
- [2] Jiong Lu, Yao Cheng, Xian-Ze Xiong, et al. Two-stage vs single-stage management for concomitant gallstones and common bile duct stones [J]. World J Gastroenterol, 2012,18(24):3156-3166
- [3] Gerasimos Stefanidis, Christos Christodoulou, Spiliou Manolakopoulos, et al. Endoscopic extraction of large common bile duct stones: A review article[J]. World J Gastrointest Endosc, 2012,4(5):167-179
- [4] Abolfazl Shojaieard, Majid Esmailzadeh, Ali Ghafouri, et al. Various Techniques for the Surgical Treatment of Common Bile Duct Stones: A Meta Review [J]. Gastroenterol Res Pract, 2009,10(14):1155-1157
- [5] Minh B, Luu, Daniel J, et al. Unusual Complications of Gallstones[J]. Surgical Clinics of North America, 2014,32 (2):3467-3469
- [6] Yoshihiro Shioi, Shuji Kawamura, Kiminori Kanno, et al. A case of gallstone ileus displaying spontaneous closure of cholecystoduodenal fistula after enterolithotomy[J]. Int J Surg Case Rep, 2012,3(1):12-15
- [7] 杜鹏,李旭照,黄允宁,等.三镜联合在高龄急性胆管炎并胆总管结石和胆囊结石治疗中的应用 [J]. 宁夏医科大学学报,2011,33(11):1100-1101
Du Peng, Li Xu-zhao, Huang Yong-ning, et al. Application of combined three endoscopes in the treatment of senile acute cholangitis and common bile duct stones and gallbladder stones [J]. Journal of Ningxia Medical University, 2011,33(11):1100-1101
- [8] Ding Yan-bing, Bin Deng, Liu Xin-nong, et al. Synchronous vs sequential laparoscopic cholecystectomy for cholecystocholedocholithiasis [J]. World J Gastroenterol, 2013,19(13):2080-2086
- [9] Zang Jin-feng, Chi Zhang, Gao Jun-ye. Endoscopic retrograde cholangiopancreatography and laparoscopic cholecystectomy during the same session: Feasibility and safety [J]. World J Gastroenterol, 2013,19(36): 6093-6097

(下转第 925 页)

- [10] Biscardi F H, Rubio E R. Transtracheal oxygen and positive airway pressure: A salvage technique in overlap syndrome [J]. Lung India, 2014,31(1):67-69
- [11] Nural S, Gunay E, Halici B, et al. Inflammatory processes and effects of continuous positive airway pressure (CPAP) in overlap syndrome. Inflammation, 2013,36:66-74
- [12] Xia J, Zhang H, Sun B, et al. Spontaneous Breathing with Biphasic Positive Airway Pressure Attenuates Lung Injury in Hydrochloric Acid-induced Acute Respiratory Distress Syndrome[J]. Anesthesiology, 2014
- [13] Saddy F, Moraes L, Santos C L, et al. Biphasic positive airway pressure minimizes biological impact on lung tissue in mild acute lung injury independent of etiology[J]. Crit Care, 2013,17(5):R228
- [14] Jaoude P, Kufel T, El-Solh A A. Survival benefit of CPAP favors hypercapnic patients with the overlap syndrome [J]. Lung, 2014,192(2): 251-258
- [15] Miedema M, Van der Burg P S, Beuger S, et al. Effect of nasal continuous and biphasic positive airway pressure on lung volume in preterm infants[J]. J Pediatr, 2013,162(4):691-697
- [16] O'Brien K, Campbell C, Brown L, et al. Infant flow biphasic nasal continuous positive airway pressure (BP-NCPAP) vs. infant flow NC-PAP for the facilitation of extubation in infants' $\leq$ 1,250 grams: a randomized controlled trial[J]. BMC Pediatr, 2012,12:43
- [17] Isgro S, Zanella A, Sala C, et al. Continuous flow biphasic positive airway pressure by helmet in patients with acute hypoxic respiratory failure: effect on oxygenation [J]. Intensive Care Med, 2010,36(10): 1688-1694
- [18] Victor S. EXTUBATE: a randomised controlled trial of nasal biphasic positive airway pressure vs. nasal continuous positive airway pressure following extubation in infants less than 30 weeks' gestation: study protocol for a randomised controlled trial[J]. Trials, 2011,12:257
- [19] Gama D A M, Cuevas M, Spieth P M, et al. Regional lung aeration and ventilation during pressure support and biphasic positive airway pressure ventilation in experimental lung injury[J]. Crit Care, 2010,14 (2):R34
- [20] Rezaeitalab F, Rezaeitalab F, Dehestani V. Inhaled steroids reduce apnea-hypopnea index in overlap syndrome[J]. Pneumologia, 2013,62 (4):212-214
- [21] Theerakittikul T, Hatipoglu U, Aboussouan L S. Hyperinflation on Chest Radiograph as a Marker of Low Adherence to Positive Airway Pressure Therapy in the Overlap Syndrome [J]. Respir Care, 2014, 59 (8): 1267-1274
- [22] Papaiwannou A, Zarogoulidis P, Porpodis K, et al. Asthma-chronic obstructive pulmonary disease overlap syndrome (ACOS): current literature review[J]. J Thorac Dis, 2014,6(Suppl 1):S146-S151

(上接第 911 页)

- [10] Lin JH, Zhou J. Management of cholecystocholecholelithiasis with duoendoscope and laparoscope [J]. China Journal of Endoscopy, 2007,13(4):405-406
- [11] Majid A, Almadi, Jeffrey S, et al. Management of suspected stones in the common bile duct[J]. CMAJ, 2012,184(8):884-892
- [12] Ann W.Hsing, Yan Bai, Gabriella Andreotti, et al. Family History of Gallstones and the Risk of Biliary Tract Cancer and Gallstones: A Population-based Study[J]. Int J Cancer, 2007,121(4):832-838
- [13] Guru Trikudanathan, Udayakumar Navaneethan, Mansour A Parsi. Endoscopic management of difficult common bile duct stones [J]. World J Gastroenterol, 2013,19(2):165-173
- [14] Huang Shu-wei, Lin Cheng-hui, Lee Mu-shen, et al. Residual common bile duct stones on direct peroral cholangioscopy using ultraslim endoscope[J]. World J Gastroenterol, 2013,19(30):4966-4972
- [15] Per Videhult, Gabriel Sandblom, Claes Rudberg, et al. Are liver function tests, pancreatitis and cholecystitis predictors of common bile duct stones? Results of a prospective, population-based, cohort study of 1171 patients undergoing [J]. CholecystectomyHPB (Oxford), 2011,13(8):519-527
- [16] Maddalena Zippi, Isabella De Felici, Roberta Pica, et al. Endoscopic papillary balloon dilation for difficult common bile duct stones: Our experience[J]. World J Clin Cases, 2013, 1(1):19-24
- [17] Kook Hyun Kim, Jung Hyun Rhu, Tae Nyeun Kim, et al. Recurrence of Bile Duct Stones after Endoscopic Papillary Large Balloon Dilation Combined with Limited Sphincterotomy: Long-Term Follow-Up Study[J]. Gut Liver, 2012,6(1):107-112
- [18] Jae Chul Hwang, Jin Hong Kim, Sun Gyo Lim, et al. Endoscopic large-balloon dilation alone versus endoscopic sphincterotomy plus large-balloon dilation for the treatment of large bile duct stones[J]. BMC Gastroenterol, 2013,13(15):1471-1477
- [19] Nicholas Alexakis, Saxon Connor. Meta-analysis of one-vs.two-stage laparoscopic/endoscopic management of common bile duct stones[J]. HPB (Oxford), 2012,14(4):254-259
- [20] A Sharma, P Dahiya, R Khullar, et al. Management of Common Bile Duct Stones in the Laparoscopic Era [J]. Indian J Surg, 2012,74(3): 264-269