

胆囊结石合并胆总管结石的微创治疗进展

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【关键词】胆石症·微创治疗

【中图分类号】R657.4+2

【文献标识码】B doi:10.3969/j.issn.1009-9905.2018.06.026

【文章编号】1009-9905(2018)06-0491-03

研究显示,10%~20%的胆囊结石患者同时合并胆总管结石^[1-2],可诱发急性胆源性胰腺炎、黄疸、急性化脓性胆管炎等并发症,严重者危及生命。胆囊结石合并胆总管结石的微创治疗方式主要包括两大类:腹腔镜胆囊切除术(laparoscopic cholecystectomy,LC)+术前、术中或术后行经内镜逆行胆胰管造影(endoscopic retrograde cholangiopancreatography,ERCP)胆总管取石术,LC+胆总管探查取石术(laparoscopic common bile duct stones exploration,LCBDE)等^[3]。本文对胆囊结石合并胆总管结石的常见微创治疗方式进行阐述。

1 LC+ERCP 胆总管取石术

1968年McCune首先报到了ERCP的应用^[4]。随着ERCP/EST(endoscopic sphincterotomy)技术的发展,ERCP胆总管取石联合LC已经被广泛应用于胆囊结石合并胆总管结石的治疗。联合方式分为术前ERCP/EST+LC,术中ERCP/EST+LC,LC+术后ERCP/EST。目前最常用的是术前ERCP/EST+LC。患者先行ERCP/EST胆总管取石,术后若无ERCP/EST相关并发症,则于72h内行LC^[5]。然而,ERCP/EST可导致出血、穿孔、急性胰腺炎等严重术后并发症^[6-7],而且破坏了Oddi括约肌的功能,可能引起反流性胆管炎、壶腹部狭窄、结石复发、胆管恶性肿瘤等远期并发症^[8-10]。尽管也可采用内镜乳头括约肌球囊扩张术取出胆总管结石,但是手术指征相对较

窄,仅对结石直径<10mm的年轻患者较合适^[11]。

目前认为,ERCP/EST+LC主要应用于高风险患者的治疗,如急性胆源性胰腺炎合并急性胆管炎、进行性加重黄疸等^[12-14]。低风险患者应首选LC+LCBDE^[15],特别是年轻患者,可以保护Oddi括约肌。

2 LC+LCBDE

越来越多的随机对照研究表明,LC+LCBDE比ERCP/EST+LC更安全有效,而且花费少,术后结石复发率较低^[15-18]。常见的手术方式包括以下4种。

2.1 LC+胆总管切开取石+T型管引流术 胆总管切开取石的操作过程可能会导致胆管壁损伤、十二指肠乳头水肿,残留的胆泥和炎性渗出物质可能会导致胆管内压力增高^[19],因此胆总管切开取石后常放置T型管引流,既可以降低胆道压力,避免胆漏的发生^[20],也可以作为术后经皮胆道造影和取出残留结石的通道^[21]。尽管有这些优点,放置T型管会引起水电解质紊乱、胆漏、局部疼痛,拔出T型管致胆汁性腹膜炎等并发症^[10]。此外,长时间放置T型管带来的不适感会降低患者的生活质量。研究发现术中应用电子胆道镜进行胆总管探查取石,结石清除率可达100%^[22-23]。随着胆道镜引导下钦激光或液电碎石技术的广泛应用和胆道镜设备的不断发展,胆道镜下处理困难胆总管结石及肝内胆管结石的成功率和安全性将越来越高^[24-25],T型管的放置及术后经T型管窦道取石的应用将逐步减少。

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2.2 LC+胆总管切开取石+胆总管一期缝合术 为了避免T型管相关并发症,许多随机对照研究表明不放置任何引流的胆总管一期缝合,疗效与放置T型管相当,术后胆漏发生率为1.6%~5.0%,而且患者术后恢复快,住院时间短^[26-28]。Cai^[29]和Zhang等^[30]研究发现,胆总管一期缝合的手术适应证为:(1)胆总管直径>8 mm;(2)胆管壁或Oddi括约肌轻度炎症或水肿。因为胆总管细、胆管壁炎症较重以及壶腹部狭窄的患者术后易并发胆漏,这部分患者需要胆总管减压和引流。

放置胆管内支架是腹腔镜胆总管切开取石后的一种有效引流方式^[31-32]。Vivek等^[33]的一项随机对照研究发现,胆总管结石取净后放置内支架可以有效缩短住院时间,促进患者恢复正常活动,而且没有增加并发症发生率。然而内支架需要术后内镜下取出,而且有发生内支架移位、阻塞和十二指肠穿孔等的风险^[33-35]。

2.3 三镜联合胆囊切除+胆总管探查取石+鼻胆管引流+胆总管一期缝合术 先行LC,再行胆总管切开取石,胆道镜直视下取尽结石后,胃镜辅助下逆行放置鼻胆引流管+胆总管一期缝合治疗胆囊结石合并胆总管结石^[36]。该方案具有以下优点:(1)鼻胆管的引流作用能有效降低胆道压力,避免胆漏发生;(2)避免分期手术,缩短住院时间,降低医疗费用;(3)保留Oddi括约肌的功能,避免了Oddi括约肌损伤引起的并发症;(4)鼻胆管可提供术后胆道造影途径,且易于拔出。不足之处为要求外科医师熟悉胃镜操作,或需要内镜医生合作。

3 LC+经胆总管胆道探查取石术

胆道镜经胆总管途径行LCBDE,保护了胆道的完整性,避免了术后胆漏及胆管狭窄等并发症的发生。但该术式受胆总管解剖结构、结石大小和数目的限制较大。目前广泛接受的手术适应证为:(1)胆总管直径>5 mm,经扩张后胆道镜可通过;(2)胆总管结石为块状,排除泥沙样结石,直径<10 mm,数目1~3枚;(3)胆总管下端通常无狭窄,无肿瘤阻塞管道;(4)2周内无急性胆囊炎和胆管炎发作^[37]。

4 结语

随着腹腔镜和内镜技术的发展,胆囊结石合并胆总管结石的微创治疗方式越来越多,但是每一种手术方式都有利弊,没有一种手术方式能够适用于所有患者。临床医生应根据医疗条件和患者身体状况合理选择手术方式。

参 考 文 献

- [1] Ko CW, Lee SP. Epidemiology and natural history of common bile duct stones and prediction of disease[J]. *Gastrointest Endosc*, 2002, 56, (6 Suppl):S165-169.
- [2] Tazuma S. Gallstone disease: Epidemiology, pathogenesis, and classification of biliary stones (common bile duct and intrahepatic)[J]. *Best Pract Res Clin Ga*, 2006, 20, (6):1075-1083.
- [3] Bencini L, Tommasi C, Manetti R, et al. Modern approach to cholecysto-choledocholithiasis [J]. *World J Gastrointest Endosc*, 2014, 6, (2):32-40.
- [4] McCune WS, Shorb PE, Moscovitz H. Endoscopic cannulation of the ampulla of Vater: a preliminary report [J]. *Ann Surg*, 1968, 167, (5): 752-756.
- [5] Qin M, Zou F, Zhao H, et al. Minimally invasive phasic treatment protocol for the treatment of extrahepatic bile duct stones [J]. *J Laparoendosc Adv S*, 2012, 22, (8): 797-801.
- [6] Freeman ML. Complications of endoscopic biliary sphincterotomy: a review[J]. *Endoscopy*, 1997, 29, (4): 288-297.
- [7] Andriulli A, Loperfido S, Napolitano G, et al. Incidence rates of post-ERCP complications: a systematic survey of prospective studies[J]. *Am J Gastroenterol*, 2007, 102, (8): 1781-1788.
- [8] Lauter DM, Froines EJ. Laparoscopic common duct exploration in the management of choledocholithiasis [J]. *Am J Surg*, 2000, 179, (5): 372-374.
- [9] Elmi F, Silverman WB. Long-term biliary endoscopic sphincterotomy restenosis: incidence, endoscopic management, and complications of retreatment[J]. *Digest Dis Sci*, 2010, 55, (7): 2102-2107.
- [10] Kim KY, Han J, Kim HG, et al. Late Complications and stone recurrence rates after bile duct stone removal by endoscopic sphincterotomy and large balloon dilation are similar to those after endoscopic sphincterotomy alone[J]. *Clin Endosc*, 2013, 46(6): 637-642.
- [11] Yoo KS, Lehman GA. Endoscopic management of biliary ductal stones[J]. *Gastroenterol Clin N*, 2010, 39, (2): 209-227, viii.
- [12] Tse F, Yuan Y. Early routine endoscopic retrograde cholangiopancreatography strategy versus early conservative management strategy in acute gallstone pancreatitis [J]. *Cochrane Da Syst Rev*, 2012, (5): Cd009779.
- [13] Fogel EL, Sherman S. ERCP for gallstone pancreatitis[J]. *New Engl J Med*, 2014, 370, (2):150-157.
- [14] Burstow MJ, Yunus RM, Hossain MB, et al. Meta-analysis of early endoscopic retrograde cholangiopancreatography(ERCP) +/- endoscopic sphincterotomy(ES) versus conservative management for gallstone pancreatitis(GSP) [J]. *Surg Laparo Endo Per*, 2015, 25, (3): 185-203.
- [15] 吴颜军,洪涛,郑小龙,等.不同微创方法治疗胆囊合并胆总管结石的对比分析[J]. *中国现代普通外科进展*, 2017, 20((10)):796-798.
- [16] Rogers SJ, Cello JP, Horn JK, et al. Prospective randomized trial of LC+LCBDE vs ERCP/S+LC for common bile duct stone disease [J]. *Arch Surg(Chicago, Ill : 1960)*, 2010, 145, (1): 28-33.

- [17] Lee HM, Min SK, Lee HK. Long-term results of laparoscopic common bile duct exploration by choledochotomy for choledocholithiasis: 15-year experience from a single center [J]. *Ann Surg Treat Res*, 2014, 86(1): 1-6.
- [18] Ding G, Cai W, Qin M. Single-stage vs. two-stage management for concomitant gallstones and common bile duct stones: a prospective randomized trial with long-term follow-up [J]. *J Gastrointest Surg*, 2014, 18 (5): 947-951.
- [19] Holdsworth RJ, Sadek SA, Ambikar S, et al. Dynamics of bile flow through the human choledochal sphincter following exploration of the common bile duct [J]. *World J Surg*, 1989, 13 (3): 300-304; discussion 305-306.
- [20] Williams JA, Treacy PJ, Sidey P, et al. Primary duct closure versus T-tube drainage following exploration of the common bile duct [J]. *Aus NZ J Surg*, 1994, 64(12): 823-826.
- [21] Isla AM, Griniatsos J, Karvounis E, et al. Advantages of laparoscopic stented choledochorrhaphy over T-tube placement [J]. *Brit J Surg*, 2004, 91(7): 862-866.
- [22] Shah RJ, Adler DG, Conway JD, et al. Cholangiopancreatography [J]. *Gastrointestinal endoscopy*, 2008, 68(3): 411-421.
- [23] Ross AS, Kozarek RA. Cholangioscopy: where are we now? [J]. *Curr Opin Gastroen*, 2009, 25(3): 245-251.
- [24] Trikudanathan G, Navaneethan U, Parsi MA. Endoscopic management of difficult common bile duct stones [J]. *World J Gastroenterol*, 2013, 19(2): 165-173.
- [25] Moura EG, Franzini T, Moura RN, et al. Cholangioscopy in bile duct disease: a case series [J]. *Arq Gastroenterol*, 2014, 51 (3): 250-254.
- [26] Leida Z, Ping B, Shuguang W, et al. A randomized comparison of primary closure and T-tube drainage of the common bile duct after laparoscopic choledochotomy [J]. *Surg Endosc*, 2008, 22(7): 1595-1600.
- [27] Zhang WJ, Xu GF, Wu GZ, et al. Laparoscopic exploration of common bile duct with primary closure versus T-tube drainage: a randomized clinical trial [J]. *J Surg Res*, 2009, 157(1): e1-5.
- [28] El-Geidie AA. Is the use of T-tube necessary after laparoscopic choledochotomy? [J]. *J Gastrointest Surg*, 2010, 14(5): 844-848.
- [29] Cai H, Sun D, Sun Y, et al. Primary closure following laparoscopic common bile duct exploration combined with intraoperative cholangiography and choledochoscopy [J]. *World J Surg*, 2012, 36 (1): 164-170.
- [30] Zhang HW, Chen YJ, Wu CH, et al. Laparoscopic common bile duct exploration with primary closure for management of choledocholithiasis: a retrospective analysis and comparison with conventional T-tube drainage [J]. *Am Surgeon*, 2014, 80(2): 178-181.
- [31] Gersin KS, Fanelli RD. Laparoscopic endobiliary stenting as an adjunct to common bile duct exploration [J]. *Surg Endosc*, 1998, 12(4): 301-304.
- [32] Isla AM, Griniatsos J, Wan A. A technique for safe placement of a biliary endoprosthesis after laparoscopic choledochotomy [J]. *J Laparoendosc Adv S*, 2002, 12(3): 207-211.
- [33] Mangla V, Chander J, Vindal A, et al. A randomized trial comparing the use of endobiliary stent and T-tube for biliary decompression after laparoscopic common bile duct exploration [J]. *Surg Laparo Endo Per*, 2012, 22(4): 345-348.
- [34] Tang CN, Tai CK, Ha JP, et al. Antegrade biliary stenting versus T-tube drainage after laparoscopic choledochotomy—a comparative cohort study [J]. *Hepato-Gastroenterol*, 2006, 53(69): 330-334.
- [35] Kim EK, Lee SK. Laparoscopic treatment of choledocholithiasis using modified biliary stents [J]. *Surg Endosc*, 2004, 18(2): 303-306.
- [36] 李英俊.腹腔镜、胆道镜、胃镜三镜联合治疗胆囊结石合并胆总管结石的临床应用 (附30例报告) [J]. *腹腔镜外科杂志*, 2014, (6): 451-453.
- [37] 潘步建,徐迈宇,陈锋,等.腹腔镜下经胆囊管纤维胆道镜取石术治疗胆总管结石的临床研究 [J]. *中华普通外科杂志*. 2015, (6): 485-486.

(收稿日期:2018-03-12)

(本文编辑:毕轶;技术编辑:张珂)