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临床经验 CLINICAL PRACTICE

# 腹腔镜联合胆道镜治疗胆管结石160例

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■背景资料
胆管结石的微创治疗是近几年讨论的热点问题, 其微创治疗方法已有多种, 本文旨在探讨应用简便、治疗效果确切、治疗周期短、并发症少的治疗方法.

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## Laparoscopy combined with choledochoscopy for the treatment of bile duct calculi: 160 cases analysis

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## Abstract

**AIM:** To discuss techniques and effects of laparosocopy combined with choledochosopy in choledocholithotomy.

**METHODS:** A retrospective analysis was performed of clinical data on 160 patients with choledochlithiasis that were treated with laparoscopic common bile duct exploration and stone removal with choledochosopy from January 1998 to December 2006 at our hospital.

**RESULTS:** The laparosocopic operation was successfully completed in 159 patients, and a conversion to open surgery was needed in only 1 patient. The primary suture of the bile duct was performed in 68 patients, while T-tube drainage was conducted in 92 patients. The stones were completely removed during the operation in 156 patients; stone removal under choledochosopy was required in 4 patients after the operation. The operation duration was 70–120 minutes (mean, 115 minute). The postoperative hospital stay was 4–11 days (mean, 6 days). No bile duct hemorrhage or abdominal infection was seen. No fatalities were noted. Postoperative biliary leakage occurred in 2 patients, and both were cured with a second suture and drainage with laparoscopy. Follow-up observations in 120 patients for 6–36 months (mean, 18 months) found no recurrence of bile duct stones or long-term complications.

**CONCLUSION:** Laparoscopy combined with choledochoscopy for choledocholithotomy has the advantage of less invasion, rapid recovery and shorter hospitalization. It is a safe and effective method for bile duct stones.

Key Words: Laparoscopy; Choledochoscopy; Common bile duct stone

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## 摘要

**目的**: 探讨腹腔镜联合胆道镜在胆总管切开取石中的应用方法及疗效.

**方法**: 回顾性分析1998-01/2006-12我院160例胆总管结石行胆总管探查、胆道镜取石的临床资料.

**结果**: 159例在腹腔镜下顺利完成手术, 1例中转开腹. 胆总管一期缝合68例, 置T管92例, 术中取尽结石156例, 术后胆道镜取石4例. 手术时间70-120(平均115) min, 术后住院时间4-11(平均6) d. 无胆道出血及腹腔感染, 无手术死亡. 术后胆漏2例, 经再次腹腔镜下缝合与引流治愈. 120例随访6-36(平均18 ) mo, 无结石复发和远期并发症.

**结论**: 腹腔镜联合胆道镜胆总管探查取石术具有创伤小、恢复快、住院时间短的优点, 治疗胆总管结石安全有效.

**关键词: 腹腔镜; 胆道镜; 胆总管结石**

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## 0 引言

在腹腔镜胆囊切除术(LC)广泛普及以后, 胆管结石的微创治疗已成为近几年讨论的热点, 临床报道不断增加. 自1998-01/2006-12, 我们应用腹腔镜联合纤维胆道镜行胆总管探查取石术(LCBDE)160例, 临床效果满意, 现报道如下.

## 1 材料和方法

1.1 材料 本组160例中, 男63例, 女97例, 年龄25-81(平均52)岁. 胆总管结石合并胆囊结石138例, 合并肝内胆管结石8例. 患者均有右上腹疼痛病史, 其中132例有黄疸或黄疸史, 3例有胰腺炎发作史, 3例在入院前曾行EST取石失败. 术前诊断根据B超、CT、磁共振胆胰管成像. 160例中胆总管单发结石74例, 多发结石86例, 肝内胆管单发结石3例, 多发结石5例, 胆总管直径7-24 mm.

1.2 方法 均行气管插管全麻, Trocar穿刺部位同LC, 剑突下穿刺点稍偏下以利于缝合胆管. 术中先切除胆囊, 用电凝钩电切解剖肝十二指肠韧带浆膜层, 辨认清胆总管, 用细针穿刺予以证实, 电钩或电针纵行切开胆总管, 长约1.5-2 cm. 先用拨棒自下而上挤压胆管, 看到结石直接取出, 然后将纤维胆道镜经剑下10 cm套针转换器孔插入腹腔和胆管切口内观察, 见到结石用取石网篮取出, 取出困难者置入常规取石器械试取或用钬激光碎石, 取出的结石放入收集袋. 导尿管冲洗胆管, 再行胆道镜检查有无残石, 并观察胆管末端通畅情况, 决定是置T管还是一期缝合. 本组92例放置T管, 68例一期缝合. 缝合采用雪橇针, 3或4-0薇乔线, 间断、连续缝合均可, 温氏孔处常规放置引流管. 置T管者T管从右锁骨中线套管孔引出腹腔, 术后2 wk造影, 如无残石, 夹闭T管, 术后3-4 wk拔除T管.

## 2 结果

本组160例中, 159例镜下顺利完成手术, 1例因有开腹胆道手术史, 腹腔粘连严重中转开腹. 手术时间70-210(平均115) min. 分别取出结石1-30枚. 术后8-20 h下床活动, 仅7例患者术后应用了止疼药物, 术后住院4-11(平均6) d. 本组无死亡病例, 无切口感染. 发生并发症2例, 1例为一期缝合胆总管患者, 腹腔引流管拔除后第2天出现少量胆漏, 再次行腹腔镜检查, 见胆管切口有1针缝线松脱, 镜下加缝1针治愈. 另1例为置T管患者, 术后21 d拔除T管后出现胆漏腹痛, 再次腹腔镜探查见窦道形成不全, 经窦道重新安放引流管, 1 mo后拔管治愈. 4例术后残留结石, 其中2例为肝内多发结石术中未能取净, 2例为胆总管残石, 6 wk后门诊行胆道镜经T管窦道取石成功. 本组120例术后随访6-36 mo, 未见有结石复发和术后肠粘连梗阻.

## 3 讨论

LCBDE由于具有创伤小、恢复快、并发症少、保留了Oddi括约肌功能等优点, 被认为是目前治疗胆总管结石较好的选择方案[1-4], 尤其适用于胆囊结石合并胆总管结石[5]. 根据我们的体会, LCBDE在技术上是安全可行的, 但要求术者具有熟练的腹腔镜、胆道镜操作经验和镜下缝合打结技术, 在手术操作中还应注意以下环节: (1)切开胆总管的位置要选择在胆总管与肝总管交界处前壁, 尽量避免在十二指肠上缘切开, 该处血管较多, 切开时易出血; (2)取石后用胆道镜全面、仔细、按顺序检查胆道至少2次, 确认结石取净, 并仔细观察胆管末端通畅情况; (3)助手要随时吸引出胆管切口溢出的冲洗液和胆汁, 避免流到腹腔其他部位以引起术后感染; (4)缝合时选用可吸收无损伤缝线, 掌握好1.5-2 mm的针距和边距, 要打外科结, 缝合完毕用小块干纱布检查有无渗漏.

纤维胆道镜是LCBDE术中不可缺少的工具, 他的意义在于探查和取石两方面, 还可以在镜下对胆道狭窄处进行扩张. 取石主要用网篮, 对下端嵌顿结石, 将网篮越过结石轻轻拉动, 使结石逐渐向近侧滑动, 如不能成功, 可用活检钳将结石夹碎. 如结石较多较大, 可拔出剑突下Trocar, 从套管孔置入常规器械取石, 可明显缩短操作时间. 胆管末端或乳头部嵌顿紧密的结石和肝内结石有时取出非常困难, 也是LCBDE的难点, 当上述方法不能奏效时, 我们采用钬激光碎石(美国科医人公司激光机), 将光导纤维经胆道镜通道置入, 对准结石, 将其击成碎块后用网篮取出或冲洗出. 钬激光对周围组织热损伤很小, 使用安全性高[6-7]. 本组应用钬激光碎石18例, 均使结石全部清除, 效果良好. 钬激光碎石技术使胆道镜的功能更加完善, 大大降低了胆道镜取石的难度, 提高了胆道探查术取净结石的比例[8].

■应用要点
腹腔镜下胆管取石在临床上尚未广泛开展, 尤其是基层医院. 本文的操作方法及经验有一定的指导意义.

■同行评价
本文采用腹腔镜联合胆道镜治疗160例胆管结石患者, 结果发现临床效果较好, 得出的结论有一定的参考价值和应用前景.

腹腔镜下胆总管切开取石后是放置T管引流还是一期缝合胆管, 是该术式目前讨论和争议的热点[9-10], 主要问题是担心一期缝合后出现胆漏和胆管狭窄. 根据国内外多篇报导[11-13]和我们的体会, 一期缝合更具有微创的优越性, 患者康复更快, 胆汁也未丢失, 也避免了长时间带管的不便. 由于腹腔镜有5倍左右的放大作用, 且视野良好, 使胆道的缝合非常清楚可靠, 缝合质量可接近显微手术水平[14], 一般不易引起胆漏和胆管狭窄. 本组仅在开展初期出现1例缝线松脱引起胆漏, 第2次镜下加缝1针治愈. 虽然一期缝合有明显的优点, 但要严格掌握其适应证, 只有同时具备下列条件才可一期缝合: (1)术中确认结石已取净, 包括肝内结石; (2)胆管末端及开口通畅; (3)胆管壁炎症较轻; (4)全面胆道探查未发现胆道其他病变. 否则应置T管引流以策安全, 我们体会安放T管后应先缝合T管下端, 由于镜下进针角度原因, 后缝合上端更易缝合严密. 魏琪 *et al*[15]在腹腔镜胆总管切开取石后采用经胆囊管放置输尿管导管引流(用Lapro-Clip固定), 术后5 d拔管, 认为该临时性胆道减压引流方法有利于防止胆漏发生, 并可避免T管相关并发症, 其应用前提是确认术中结石已取净. 由于腹腔镜手术对腹腔干扰小, 腹腔内粘连轻, 窦道形成时间晚, 放置T管后拔管时间一般要延至4 wk以上, 本组1例术后3 wk拔管时出现胆漏, 应引以为训.

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