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小切开 EST 联合 EPBD 与单纯 EST 对 85 岁以上老年胆总管结石患者疗效的比较 *

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摘要 目的:对比内镜下十二指肠乳头括约肌(expressed sequence tags, EST)小切开术联合内镜下十二指肠乳头括约肌扩张术(endoscopic papillary balloon dilation, EPBD)与单纯 EST 对 85 岁以上老年胆总管结石患者的疗效。**方法:**选择我院于 2014 年 1 月~2020 年 2 月收治的 85 岁以上老年胆总管结石患者 150 例,根据入院顺序随机分成两组,每组各 75 例,给予对照组单纯小切开 EST 术治疗,给予研究组小切开 EST+EPBD 术治疗。对比两组的一次取石成功率、机械碎石、结石复发率等指标;术中操作时间、术中出血量、住院天数、术后排便天数等临床指标;术后胆道感染、急性胰腺炎、高淀粉酶血症、术后腹痛等并发症的总发生率。**结果:**研究组一次取石成功率显著高于对照组,机械碎石、结石复发率均显著低于对照组($P<0.05$);研究组的术中操作时间、术中出血量、住院天数、术后排便天数均显著低于对照组($P<0.05$);研究组术后胆道感染、急性胰腺炎、高淀粉酶血症、术后腹痛、术后迟发性出血等并发症的总发生率为 9.33 % (7/75),显著低于对照组 37.33 % (28/75),差异具有统计学意义($P<0.05$)。**结论:**小切开 EST 联合 EPBD 对 85 岁以上老年胆总管结石患者的疗效显著,该方法可有改善患者临床指标,降低术后并发症发生率,值得推荐至临床广泛应用。

关键词:内镜下十二指肠乳头括约肌小切开术;乳头气囊扩张术;老年胆总管结石

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Comparison of the Efficacy of Small Incision EST Combined with EPBD and EST Alone in Elderly Patients with Common Bile Duct Stones Over 85 Years Old*

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ABSTRACT Objective: Compare the efficacy of endoscopic duodenal papillary sphincter incision (small incision EST) with endoscopic duodenal papillary sphincter dilatation (EPBD) and EST alone in elderly patients with common bile duct stones over 85 years old. **Methods:** 150 cases of elderly patients with common bile duct stones over 85 years old who were treated in our hospital from January 2014 to February 2020 were selected as the research object. They were randomly divided into two groups according to the admission order, with 75 cases in each group. Patients in the control group were treated with minimal incision EST, and patients in the study group were treated with minimal incision EST + EPBD. Compare the two groups of patients with the success rate of one stone removal, mechanical lithotripsy, and stone recurrence rate. Compare clinical indicators such as intraoperative time, intraoperative blood loss, length of hospital stay, and postoperative defecation days between the two groups of patients; The total incidence of postoperative biliary tract infection, acute pancreatitis, hyperamylase, and postoperative abdominal pain was compared between the two groups of patients. **Results:** The success rate of one stone removal in the study group was significantly higher than that in the control group, and the recurrence rates of mechanical lithotripsy and stone were significantly lower than those in the control group ($P<0.05$). The operation time, intraoperative blood loss, length of hospital stay, and postoperative defecation days were significantly lower in the study group than in the control group ($P<0.05$). The total incidence of postoperative biliary tract infection, acute pancreatitis, hyperamylase, postoperative abdominal pain, and postoperative delayed bleeding in the study group was 9.33 % (7/75), which was significantly lower than the control group of 37.33 % (28/75, $P<0.05$). **Conclusion:** Small incision EST combined with EPBD has a significant effect on elderly patients with common bile duct stones over 85 years of age. This method can improve clinical indicators and reduce the incidence of postoperative

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complications. It is worth recommending to be widely used in clinical practice.

Key words: Endoscopic duodenal papillary sphincterotomy; Papillary balloon dilation; Common bile duct stones in the elderly

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前言

胆总管结石是指位于胆总管内的结石,分为原发性胆总管结石和继发性胆总管结石^[1],原发性胆囊结石与胆道感染、胆汁淤积、胆道蛔虫密切相关。胆管内结石以胆固醇结石多见^[2]。胆总管结石患者病情程度取决于结石阻塞的程度和胆道感染^[3,4]。传统治疗胆管结石一直采用剖腹开刀手术。随着新设备的出现,治疗手段发生了重大变化,EST 是一种通过十二指肠镜,用切开刀通过高频电发生器将乳头括约肌切开,开口扩大后进行各种内镜下治疗,主要用于治疗不宜接受外科手术的胆管结石^[5,6]。EPBD 是指在不破坏乳头括约肌及保持其完整性的前提下,通过专用扩张球囊扩大十二指肠乳头括约肌以通畅胆总管入口、方便器械进出、缓解狭窄和治疗相关疾病的方法,常用于直径 <1 cm 需要取出的胆管结石的治疗中^[7,8]。本文通过对比小切开 EST 联合 EPBD 与单纯 EST 对 85 岁以上老年胆总管结石患者的疗效,报道如下。

1 资料与方法

1.1 一般资料

选择我院于 2014 年 1 月~2020 年 2 月收治的 85 岁以上老年胆总管结石患者 150 例,根据入院顺序随机分成两组,每组各 75 例,其中,对照组男 40 例,女 35 例,患者平均年龄为 87.34 ± 2.92 岁,平均结石数量为 2.57 ± 0.31 个,平均结石直径 17.31 ± 0.25 mm;研究组男 42 例,女 33 例,患者平均年龄为 86.62 ± 3.15 岁,平均结石数量为 2.61 ± 0.26 个,平均结石直径为 17.33 ± 0.22 mm;两组的基础资料对比无差异($P > 0.05$),具有可比性。本研究患者均自愿签署《知情同意书》。

1.2 治疗方法

术前完善相关检查,禁食至少 6~8 h,进行碘过敏实验,在

手术前 15 min 给予安定 5~10 mg、丁溴东莨菪碱 10~20 mg 及哌替啶 50 mg 肌肉注射。所有患者常规进行内镜逆行胰腺插管术,选择性胆总管插管造影,明确结石具体部位、大小和数目,将预留导丝置入,在此基础上,进行不同的术式操作。给予对照组单纯小切开 EST 术治疗,具体操作为:沿导丝缓慢放入十二指肠乳头切口刀,随后,沿乳头 11 点方向将乳头切口,保持切口长度 < 乳头 1/3,并取出切口刀,随后采用碎石器充分碎石并取石,最后应用气囊清扫胆道,作造影后证实无结石残留,术毕。

给予研究组小切开 EST+EPBD 术治疗,小切开 EST 操作与对照组相同,另外,EPBD 操作为:沿导丝放入扩张球囊,保证球囊的 1/3 在乳头外,再向球囊内注入造影剂,保持压力约 3 min 后抽出造影剂,取出球囊,乳头口扩张后,使用取石网篮套取结石取出,最后应用气囊清扫胆道,作造影后证实无结石残留,术毕。

1.3 观察指标

(1)对比两组的一次取石成功率、机械碎石、结石复发率等指标^[7];(2)对比两组术中操作时间、术中出血量、住院天数、术后排便天数等临床指标;(3)对比两组术后胆道感染、急性胰腺炎、高淀粉酶血症、术后腹痛、术后迟发性出血等并发症的总发生率^[9]。

1.4 统计学分析

采用 SPSS 20.0,其中,计数资料以%表示,对比经卡方分析;计量资料以($\bar{x} \pm s$)表示,对比经 t 检验; $P < 0.05$ 有统计学意义。

2 结果

2.1 取石情况对比

研究组的一次取石成功率显著高于对照组,机械碎石、结石复发率均显著低于对照组($P < 0.05$),见表 1。

表 1 取石情况对比[例(%)]

Table 1 Comparison of stone removal [n (%)]

Groups	n	Successful stone extraction	Mechanical lithotripsy	Recurrence of stones
Research group	75	73(97.33)*	5(6.67)*	1(1.33)*
Control group	75	66(88.00)	11(14.67)	11(14.67)

Note: * $P < 0.05$, compared with the control group.

2.2 两组临床指标对比

研究组患者的术中操作时间、术中出血量、住院天数、术后

排便天数均显著低于对照组($P < 0.05$),见表 2。

表 2 两组临床指标对比($\bar{x} \pm s$)

Table 2 Comparison of clinical indicators between two groups ($\bar{x} \pm s$)

Groups	n	Intraoperative time (min)	Intraoperative blood loss (mL)	The number of days in hospital (d)	Postoperative defecation days (d)
Research group	75	$39.94 \pm 4.21^*$	$11.21 \pm 2.15^*$	$8.24 \pm 1.84^*$	$1.32 \pm 0.35^*$
Control group	75	44.85 ± 5.08	17.65 ± 2.88	9.80 ± 2.02	1.96 ± 0.41

Note: * $P < 0.05$, compared with the control group.

2.3 两组术后并发症发生情况对比

研究组术后胆道感染、急性胰腺炎、高淀粉酶血症、术后腹痛、术后迟发性出血等并发症的总发生率为 9.33 % (7/75), 显

著低于对照组 37.33 % (28/75), 差异有统计学意义 ($P < 0.05$), 见表 3。

表 3 两组术后并发症发生情况对比[例(%)]

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

Groups	n	Biliary infection	Acute pancreatitis	Hyperamylaseemia	Postoperative abdominal pain	Postoperative delayed bleeding	Total occurrence
Research group	75	1 (1.33)	0 (0.00)	1 (1.33)	1 (1.33)	4 (5.33)	7 (9.33)*
Control group	75	7 (9.33)	5 (6.67)	7 (9.33)	6 (8.00)	3 (8.00)	28 (37.33)

Note: * $P < 0.05$, compared with the control group.

3 讨论

胆总管结石是肝胆外科的常见病和多发病, 临床上有 15%~18 % 的胆囊结石患者常合并为胆总管结石^[9,10]。一般来说, 对于胆总管结石治疗首选是腹腔镜胆囊切除加胆总管切开取石加 T 型管引流^[11]。但是对于高龄患者, 心肺功能严重障碍, 无法耐受全麻, 那么胆总管下段结石如果不及取出, 容易继发急性梗阻性化脓性胆管炎, 甚至会引起中毒性休克和精神症状而危及到病人的生命^[12-14], 故积极寻找安全、高效的治疗方式是广大医务人员关注的重中之重。

EST 是在 ERCP 基础上发展起来的一种治疗的手术方式, 也是胆道微创外科中的一个重要组成部分^[15,16], 具有痛苦少、恢复快、不受年老体弱等因素限制^[17-19]。EST 手术有其优点, 也有其缺点, 如果十二指肠乳头切开过深, 容易引起医源性的胰腺炎反复发作, 严重时甚至需要行胆肠内引流手术治疗, 故本文采用小切开 EST 对患者进行治疗^[20-22]。EPBD 是在 EST 的基础上发展而来, 对乳头肌具有保护作用的手术方法^[23]。目前, 国内外对单纯应用 EST 或采用 EST 联合 EPBD 治疗胆总管结石的报道相对较多, 但对于小切开 EST 联合 EPBD 治疗胆总管结石的效果研究较少, 另外, 近年来我国日益明显的老龄化趋势, 高龄胆总管结石的发病率不断升高, 加之, 高龄患者的基础疾病较多, 传统手术的风险性常较大, 病死率亦较高。故本研究通过探究小切开 EST 联合 EPBD 对 85 岁以上老年胆总管结石患者的疗效, 研究结果显示, 研究组的一次取石成功率显著高于对照组, 机械碎石、结石复发率均显著低于对照组; 研究组的术中操作时间、术中出血量、住院天数、术后排便天数均显著低于对照组; 表明, 小切开 EST 联合 EPBD 对 85 岁以上老年胆总管结石患者的疗效显著, 该方法有改善患者临床指标。分析其原因为: 相比于常规 EST 治疗, 小切开 EST 将切开范围控制在正常范围的三分之一, 使得切口长度小于 5 mm, 对胆管括约肌及血管的损伤较小, 使得结石复发率显著降低, 同时, 联合 EPBD 为扩张提供了方向引导, 提高了一次性取石的成功率, 从而改善患者临床指标。

EST 作为一种侵入性微创治疗, 但许多患者术后会出现并发症^[24]。早期并发症常包括出血、穿孔、急性胆管炎、急性胰腺炎等^[25,26], 其原因主要与术者的操作水平相关^[27,28]。EST 术后并发症有: 逆行性胆管炎、胆总管结石复发、术后胆道末端狭窄、胆道恶变等^[29,30]。EPBD 常见并发症为感染、胰腺炎、术后迟发

性出血、穿孔等, 其发生可能与术中插管时间过长、插管过程中导丝反复进入胰管、反复插管引起乳头水肿、胰管内注入造影剂及胰管反复显影等因素有关。本文研究结果显示, 研究组患者术后胆道感染、急性胰腺炎、高淀粉酶血症、术后腹痛、术后迟发性出血等并发症的总发生率显著低于对照组; 表明, 小切开 EST 联合 EPBD 对 85 岁以上老年胆总管结石患者的安全性较高。分析其原因为: EST 作为治疗胆总管结石的常见方法, 其操作过程中会对乳头括约肌造成不同程度的损伤, 进而导致患者出现并发症的几率较大, 年龄越大者, 危险性越高。而联合 EPBD 治疗后, 其可在有限的切开范围内使操作空间增大, 更加方便结石的取出, 即在尽量不破坏乳头括约肌功能的前提下, 可高效完成对胆总管结石的治疗, 从而减少患者术后并发症的发生率, 有利于术后恢复。同时, 本研究尽管在一定程度上验证了联合术式在 85 岁以上老年患者胆总管结石治疗中的优势, 但也存在一定不足, 如样本量较少等, 今后拟增加样本量进行更为全面的研究。

综上所述, 小切开 EST 联合 EPBD 对 85 岁以上老年胆总管结石患者的疗效显著, 该方法可有效改善患者临床指标, 降低术后并发症发生率, 值得推荐至临床广泛应用。

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