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两种不同手术方式治疗恶性梗阻性黄疸患者的临床疗效比较研究*

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摘要 目的:探讨经皮肝穿刺胆管引流术(PTCD)与经内镜逆行胰胆管造影术(ERCP)治疗恶性梗阻性黄疸的治疗效果,并进行比较分析。**方法:**选取2016年1月~2018年5月期间我院收治的127例恶性梗阻性黄疸患者。根据治疗术式的不同将患者分为ERCP组($n=63$,采用ERCP联合金属支架置入术进行治疗)和PTCD组($n=64$,采用PTCD进行治疗),比较两组患者术后5d黄疸缓解率,比较两组患者术前、术后2周肝功能指标[血清总胆红素(TBIL)、丙氨酸转氨酶(ALT)、直接胆红素(DBIL)],比较两组患者术后舒适度量表评分情况及并发症发生情况。**结果:**两组患者术后黄疸总缓解率比较差异无统计学意义($P>0.05$);PTCD组低位梗阻患者黄疸缓解率低于ERCP组,而高位梗阻患者黄疸缓解率高于ERCP组($P<0.05$)。两组患者术前、术后2周TBIL、ALT、DBIL比较差异无统计学意义($P>0.05$);两组患者术后2周TBIL、ALT、DBIL水平较术前比较均下降($P<0.05$)。ERCP组患者术后舒适度量表评分总分低于PTCD组,差异有统计学意义($P<0.05$)。PTCD组术后并发症总发生率14.06%(9/64),低于ERCP组的41.27%(26/63)($P<0.05$)。**结论:**ERCP与PTCD治疗恶性梗阻性黄疸均可改善患者肝功能、疗效满意,但ERCP对低位梗阻患者治疗效果优于PTCD,且术后舒适度优于PTCD,但术后并发症较多,临床应根据患者情况选择具体术式。

关键词:经皮肝穿刺胆管引流术;经内镜逆行胰胆管造影术;恶性;梗阻性黄疸;比较研究

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Comparative Study of Clinical Efficacy of two Different Surgical Methods in the Treatment of Malignant Obstructive Jaundice*

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ABSTRACT Objective: To evaluate the curative effect of percutaneous transhepatic cholangial drainage (PTCD) and endoscopic retrograde cholangiopancreatography (ERCP) in the treatment of malignant obstructive jaundice, and to make a comparative analysis. **Methods:** A total of 127 cases of malignant obstructive jaundice, who were admitted to Affiliated Hanzhong 3201 Hospital of Xi'an Jiaotong University School of Medicine from January 2016 to May 2018, were selected and were divided into ERCP group ($n=63$, treated with ERCP combined with metal stenting) and PTCD group ($n=64$, treated with PTCD) according to the different therapeutic methods. The jaundice remission rates was compared between the two groups 5 days after operation; the liver function indexes (serum total bilirubin (TBIL), alanine aminotransferase (ALT) and direct bilirubin (DBIL)) were compared between the two groups before operation and 2 weeks after operation. The postoperative comfort scale scores and complications were compared between the two groups. **Results:** There was no significant difference in the total jaundice remission rates between the two groups ($P>0.05$). The jaundice remission rates with the low obstruction patients in the PTCD group was lower than that in ERCP group, while the jaundice remission rates with the high obstruction patients was higher than that in ERCP group ($P<0.05$). There was no significant difference in TBIL, ALT and DBIL between the two groups before operation and 2 weeks after operation ($P>0.05$). The levels of TBIL, ALT and DBIL in the two groups was decreased 2 weeks after operation ($P<0.05$). The total score of postoperative comfort scale in the ERCP group was lower than that in the PTCD group, and the difference was statistically significant ($P<0.05$). The total incidence of postoperative complications in the PTCD group was 14.06% (9/64), which was lower than that in the ERCP group (41.27% (26/63)) ($P<0.05$). **Conclusion:** Both ERCP and PTCD can improve the liver function and curative effect in the treatment of malignant obstructive jaundice. ERCP is superior to PTCD in the treatment of low obstruction patients, and postoperative comfort is better than PTCD, but there are more postoperative complications. So the specific operation should be chosen according to the clinical patient's situation.

Key words: Percutaneous transhepatic cholangial drainage; Endoscopic retrograde cholangiopancreatography; Malignant; Obstructive jaundice; Comparative study

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前言

梗阻性黄疸是指由于肝外胆道系统梗阻致使胆汁排泄障碍,或者肝内胆汁淤积所致的黄疸现象,临床多表现为皮肤瘙痒、皮肤黄染以及大便秘结改变等,若未得到及时有效的治疗,可继发凝血功能障碍、肝肾功能衰竭等并发症,给患者生命带来严重威胁^[1-3]。由于该病早期症状不明显,且黄疸症状出现较晚,绝大多数患者一经确诊便已至恶性梗阻性黄疸,错过根治性治疗时机,此时只能通过胆道支架置入术以解除或减轻胆道梗阻^[4-6]。经皮肝穿刺胆管引流术(Percutaneous transhepatic cholangial drainage,PTCD)、经内镜逆行胰胆管造影术(Endoscopic retrograde cholangiopancreatography,ERCP)均是治疗恶性梗阻性黄疸的常用置入术式,二者在治疗方面均有各自的优势及不足^[7,8]。本研究以我院收治的恶性梗阻性黄疸患者为研究对象,分析上述两种术式的治疗效果以及安全性,以期为临床术式选择提供帮助。

1 资料与方法

1.1 一般资料

选取我院于2016年1月~2018年5月间收治的127例恶性梗阻性黄疸患者。纳入标准^[9]:(1)所有患者均经CT或MRI证实为梗阻性黄疸;(2)具有以下临床表现之一:皮肤瘙痒、皮肤黄染、大便秘结改变、尿胆红素升高等;(3)无法耐受外科手术治疗者;(4)患者及其家属知情本研究,已签署同意书。排除标准:(1)无法耐受ERCP或PTCD者;(2)由于胆管炎症、胆管周围良性病变等引发的梗阻性黄疸者;(3)合并多脏器功能衰竭者;(4)入院前接受过其他治疗者;(5)妊娠及哺乳期妇女。根据治疗术式的不同将患者分为ERCP组($n=63$)和PTCD组($n=64$),其中ERCP组男29例,女34例,年龄44~71岁,平均 (61.28 ± 3.91) 岁;低位梗阻34例,高位梗阻29例;合并糖尿病12例,合并高血压9例。PTCD组男30例,女34例,年龄45~73岁,平均 (62.49 ± 4.06) 岁;低位梗阻31例,高位梗阻33例;合并糖尿病14例,合并高血压11例。两组患者基线资料比较无差异($P>0.05$)。研究经我院伦理学委员会批准。

1.2 治疗方法

患者入院后行相关检查,同时纠正电解质紊乱、制定合理膳食加强患者营养,手术前12h内禁食。ERCP组采用ERCP联合金属支架置入术进行治疗,手术操作如下:术前肌注10mg地西泮(黑龙江福和制药有限公司,国药准字:H23020404,规格:2.5 mg)、50 mg盐酸哌替啶(青海制药厂有限公司,国药准字:H63020022,规格:1 mL:50 mg)、10 mg盐酸消旋山莨菪碱

注射液(河北美图制药有限责任公司,国药准字:H13021256,规格:1 mL:10 mg),随后将十二指肠镜插入十二指肠降段,胆管经由造影导管选插,插管成功后回抽胆汁,随后注入对比剂,以观察病变狭窄、程度、位置以及周围胆管情况。乳头小切开后,将导丝置入,视患者具体情况放置适宜的金属胆道支架。高位梗阻者若累及二级胆管,可将导丝分别插入左右肝内胆管内;低位梗阻者以支架露出乳头0.5 cm为宜。支架引流部位以及金属支架的扩张情况经由造影检查再次确认。PTCD组采用PTCD进行治疗,手术操作如下:穿刺部位取患者右侧第8、9或第9、10肋间隙,局部浸润麻醉,采用中心静脉导管套件,进针角度根据超声测量定位,当穿刺针到达扩张胆管内将胆汁抽出。胆汁抽出后将0.89 mm导丝置入胆管,导丝外固定,穿刺针撤出,将2.95 mm的扩张管沿导丝送入扩张胆管内,导丝外固定,扩张管撤出,将引流导管沿导丝送入胆管内,导丝撤出,固定引流管后将引流袋接上。两组患者术后采用胰酶抑制物、生长抑素、保肝退黄等对症支持治疗,常规检测血常规及肝功能。

1.3 观察指标

(1)黄疸缓解率以术后5 d胆红素水平判定,黄疸缓解标准为胆红素降低 $>33\%$ 以上且临床症状改善。(2)肝功能指标于术前、术后2周采集所有患者空腹静脉血3 mL,3000 r/min离心8 min,取上清液待测。采用日本Olympus公司生产的Au-1000型全自动生化分析仪检测血清总胆红素(total bilirubin, TBIL)、丙氨酸转氨酶(alanine aminotransferase, ALT)、直接胆红素(direct bilirubin, DBIL)水平。(3)术后舒适度^[10]根据外科术后舒适度评分设计评估调查表,内容包括恶心呕吐、腹痛腹胀、食欲不振、身体不适4项,每一项评分0~10分,0分为舒适状态,10分为难以忍受,术后24h内完成调查表评分。(4)并发症观察患者术后并发症发生情况,包括出血、急性胰腺炎、胆道感染、胆漏等。

1.4 统计学方法

研究数据录入SPSS26.0软件处理,计量资料用 $(\bar{x} \pm s)$ 表示,采用t检验,计数资料以率(%)表示,采用 χ^2 检验, $\alpha=0.05$ 设置成检验标准。

2 结果

2.1 两组患者术后黄疸缓解率比较

两组患者术后黄疸总缓解率比较差异无统计学意义($P>0.05$);PTCD组低位梗阻患者黄疸缓解率低于ERCP组,而高位梗阻患者黄疸缓解率高于ERCP组($P<0.05$);详见表1。

表1 两组患者术后黄疸缓解率比较(%)

Table 1 Comparison of postoperative jaundice remission rate between two groups of patients(%)

Groups	Total remission rate	Low obstructive remission rate	High obstructive remission rate
ERCP group($n=63$)	77.78(49/63)	97.06(33/34)	55.17(16/29)
PTCD group($n=64$)	78.13(50/64)	58.06(18/31)	96.97(32/33)
χ^2	0.002	14.590	15.425
P	0.962	0.000	0.000

2.2 两组患者手术前后肝功能指标比较 ($P>0.05$);两组患者术后 2 周 TBIL、ALT、DBIL 水平较术前均两组患者术前、术后 2 周 TBIL、ALT、DBIL 比较无差异 下降($P<0.05$);详见表 2。

表 2 两组患者手术前后肝功能指标比较($\bar{x}\pm s$)

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

Groups	TBIL($\mu\text{mol/L}$)		ALT(U/L)		DBIL($\mu\text{mol/L}$)	
	Before operation	2 weeks after operation	Before operation	2 weeks after operation	Before operation	2 weeks after operation
ERCP group (n=63)	323.16 $\pm$ 24.23	157.17 $\pm$ 20.15*	147.85 $\pm$ 26.31	64.09 $\pm$ 10.94*	198.03 $\pm$ 19.16	89.47 $\pm$ 11.62*
PTCD group (n=64)	321.56 $\pm$ 26.65	152.23 $\pm$ 23.04*	148.24 $\pm$ 23.57	63.98 $\pm$ 9.87*	197.69 $\pm$ 23.67	91.28 $\pm$ 9.51*
t	0.354	1.285	0.088	0.060	0.089	0.961
P	0.724	0.201	0.930	0.953	0.929	0.338

Note: compared with before operation,* $P<0.05$.

2.3 两组患者术后舒适度量表比较 评分总分低于 PTCD 组,恶心呕吐、腹痛腹胀评分高于 PTCD ERCP 组患者术后食欲不佳、身体不适评分及舒适度量表 组($P<0.05$);详见表 3。

表 3 两组患者术后舒适度量表比较($\bar{x}\pm s$,分)

Table 3 Comparison of postoperative comfort scale between two groups of patients($\bar{x}\pm s$, scores)

Groups	Nausea and vomiting	Abdominal pain and abdominal distention	Poor appetite	Physical discomfort	Total score
ERCP group (n=63)	5.79 $\pm$ 1.65	5.67 $\pm$ 0.95	3.13 $\pm$ 0.25	1.53 $\pm$ 0.87	16.12 $\pm$ 3.72
PTCD group (n=64)	4.26 $\pm$ 1.02	4.14 $\pm$ 0.79	4.63 $\pm$ 1.36	4.98 $\pm$ 1.25	18.01 $\pm$ 4.42
t	6.296	9.875	8.612	18.026	2.605
P	0.000	0.000	0.000	0.000	0.010

2.4 两组患者术后并发症发生情况比较 组的 41.27%(26/63)($P<0.05$);详见表 4。
PTCD 组术后并发症总发生率 14.06%(9/64), 低于 ERCP

表 4 两组患者术后并发症发生情况比较[n(%)]

Table 4 Comparison of postoperative complications between two groups of patients[n(%)]

Groups	Hemorrhage	Biliary tract infection	Acute pancreatitis	Bile leakage	Total incidence
ERCP group (n=63)	5(7.94)	13(20.63)	8(12.70)	0(0.00)	26(41.27)
PTCD group (n=64)	4(6.25)	2(3.13)	1(1.56)	2(3.13)	9(14.06)
χ^2					11.772
P					0.001

3 讨论

恶性梗阻性黄疸为原发性胆管腺癌导致的肠道梗阻,可使肝脏功能迅速恶化,诱发肝肾衰竭、感染以及胃肠道出血等症状,给患者生命带来严重威胁^[11-13]。目前的主要介入治疗方式仍是以胆管外引流以及胆道内支架置入为主,随着介入器材的开发与深入,金属支架得到了较好的应用^[14,15]。对于恶性梗阻性黄疸患者,金属支架组织相容性较好,膨胀支撑力大,可灵活放置,且发生脱落、阻塞的可能性较小^[16-18]。由于支架置入不准确或不合适,易再次发生胆管阻塞,因此选择合适支架置入手术具有积极的临床意义。ERCP、PTCD 均是恶性梗阻性黄疸患者常用的置入术式,其中 ERCP 的手术优势在于:无需穿刺肝组织,减少了对肝脏的损伤,且术后无需放置引流管^[19-20]。然而 ERCP 对手术适应指征有一定的要求,而 PTCD 手术适应证范

围较广,对于上消化道改道手术史、心肺功能较差、高位梗阻等不适用于 ERCP 术式治疗的患者,PTCD 的治疗效果会更佳^[21,22]。目前临床有关 ERCP、PTCD 的治疗效果报道不一,尚未有系统的相关比较研究,本研究就此展开探讨。

本次研究结果表明,两组患者术后黄疸总缓解率比较差异无统计学意义,提示 ERCP、PTCD 治疗恶性梗阻性黄疸均可获得满意的治疗效果,ERCP 在置入支架后迅速解除梗阻现象,且不会破坏胆汁正常代谢途径^[23];PTCD 则可减轻胆管内压力,恢复干细胞功能,同时将含有毒素的胆汁引流至体外,改善患者临床症状^[24]。另 PTCD 组低位梗阻患者黄疸缓解率低于 ERCP 组,而高位梗阻患者黄疸缓解率高于 ERCP 组。提示低位梗阻患者可首选 ERCP 术式,而高位梗阻患者可首选 PTCD 术式。这主要是由于 ERCP 术式在内镜直视下进行支架定位释放,放置准确,其精确程度优于 PTCD 术式,且患者支架未出乳

头,利于缩短支架开通时间,因此,低位梗阻患者手术成功率更高,提高黄疸缓解率^[25]。本研究结果还表明,两组患者术后2周TBIL、ALT、DBIL水平较术前均下降,且两组术后2周上述指标比较无差异,提示ERCP、PTCD均可有效改善患者肝功能指标情况,分析原因,这可能是由于ERCP、PTCD胆管支架置入可全面改善恶性梗阻性黄疸所导致的肝功能损害,有效缓解患者胆道压力,改善机体肝脏血流,提升肝脏代谢能力,最终促使TBIL、ALT、DBIL水平降低,达到改善肝脏功能的目的^[26,27]。同时ERCP组患者术后舒适度量表评分总分低于PTCD组,这主要是由于ERCP置入术后胆汁可通过胆道顺利进入十二指肠,减少对患者消化功能的影响,提高患者舒适度^[28,29]。另PTCD组术后并发症显著低于ERCP组。提示经PTCD术式治疗后并发症相对较少,但王昱良等人的研究报道显示^[30],PTCD的并发症发生率稍高。这与本研究的研究结果不一致,这可能是由于研究样本量不一样,且存在个体差异性有关,后续报道将增大样本量以获取更为准确的数据。

综上所述,ERCP与PTCD治疗恶性梗阻性黄疸疗效相当,均可改善肝脏功能,ERCP术后舒适度优于PTCD组,但术后并发症发生率也较高,对于高位梗阻患者可首选PTCD术式,而低位梗阻患者可首选ERCP术式。

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