

DOI: 10.12235/E20210731

文章编号: 1007-1989 (2022) 06-0053-06

论著

不同年龄及部位消化系统疾病内镜黏膜下剥离术后 并发症的发生风险比较

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摘要: 目的 比较不同年龄及病变部位消化系统疾病内镜黏膜下剥离术(ESD)后并发症发生风险。**方法** 对该院2019年6月—2021年6月120例ESD患者进行研究,根据患者手术时年龄分为老年组(≥ 60 岁,52例)和非老年组(< 60 岁,68例)。对比两组患者性别和病变部位(包括食管、胃、十二指肠、结肠和直肠)等信息。统计两组患者术后并发症发生情况(发热、术后穿孔、狭窄和出血),以及两组患者不同病变部位并发症发生情况。比较不同病变部位总的并发症发生情况。将有差异的因素纳入Logistic模型,行量化赋值,明确ESD术后发生并发症的危险因素。**结果** 两组患者性别和病变部位比较,差异无统计学意义($P > 0.05$)。老年组术后发热和狭窄发生率明显高于非老年组($P < 0.05$),术后穿孔和出血发生率比较,差异无统计学意义($P > 0.05$)。两组患者食管、胃、十二指肠、结肠和直肠的并发症发生情况比较,差异均无统计意义($P > 0.05$)。不同病变部位并发症总发生率比较,差异有统计学意义($P < 0.05$)。经多因素Logistic回归分析证实,老年和食管病变是ESD术后发生并发症的危险因素($P < 0.05$)。**结论** 老年和病变部位在食管的消化系统疾病ESD术后并发症发生风险较高。在对老年和有食管病变的消化系统疾病患者进行治疗时,需密切观察患者情况,并及时进行干预,以降低术后并发症的发生率。

关键词: 年龄;消化系统疾病;内镜黏膜下剥离术;并发症

中图分类号: R57

Comparison of postoperative complications in patients with ESD at different ages and sites

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Abstract: Objective To compare the risk of postoperative complications in patients with endoscopic submucosal dissection (ESD) at different ages and lesion sites. **Methods** 120 patients with ESD from June 2019 to June 2021 were studied. According to their age at the time of operation, they were divided into elderly group (≥ 60 years old, 52 cases) and non elderly group (< 60 years old, 68 cases). The information of gender and lesion location (including esophagus, stomach, duodenum, colon and rectum) were compared between the two groups. The incidence of postoperative complications (fever, postoperative perforation, stenosis and bleeding) in the two groups were counted, the complications of different lesion sites in the two groups were counted. The total complications of different lesion sites were counted. The different single factor information was included in the Logistic model, and the quantitative evaluation was performed to clarify the risk factors of complications after ESD. **Results** There was no significant difference in gender and lesion location between the two groups ($P > 0.05$). The incidence of

收稿日期: 2021-12-03

postoperative fever and stenosis in the elderly group was significantly higher than that in the non elderly group ($P < 0.05$), there was no significant difference in the incidence of perforation and bleeding between the two groups ($P > 0.05$). There was no significant difference in the incidence of complications of esophagus, stomach, duodenum, colon and rectum between the two groups ($P > 0.05$). There was a significant difference in the total incidence of complications at different lesion sites ($P < 0.05$). Multivariate Logistic regression analysis confirmed that old age and esophageal lesions were risk factors for postoperative complications in ESD, both with $P < 0.05$. **Conclusion** The risk of ESD complications of digestive diseases in the esophagus is high. Therefore, when treating elderly patients with digestive diseases, patients need to be closely observed and conduct timely intervention to reduce the incidence of postoperative complications.

Keywords: age; digestive system diseases; endoscopic submucosal dissection; complication

内镜黏膜下剥离术 (endoscopic submucosal dissection, ESD) 由内镜下黏膜切除术 (endoscopic mucosal resection, EMR) 发展而来, 近年来, 在消化道黏膜及黏膜下层的早癌及癌前病变治疗中应用广泛, 因其创口小、术后恢复快、整块切除率高和复发率低等优点而备受认可, 但 ESD 手术时间长, 操作难度大, 术后并发症的发生风险较高^[1-3]。ESD 常见并发症有发热、术后穿孔、狭窄和出血等, 并发症的发生会明显延长术后恢复时间, 进而影响 ESD 预后。而与身体各项素质较好的青年人相比, 老年人的身体机体衰退, 合并有较多基础疾病, 对外科手术耐受程度低。因此, 内镜微创技术已成为老年患者的首选治疗术式。但临床上关于不同年龄消化系统疾病患者行 ESD 安全性的研究较少^[4-5]。基于此, 本研究对 120 例接受 ESD 治疗的消化系统疾病患者进行研究, 探讨年龄及病变部位对患者并发症发生率的影响, 为此类患

者的治疗提供参考依据。现报道如下:

1 资料与方法

1.1 一般资料

对我院 2019 年 6 月—2021 年 6 月 120 例 ESD 患者进行研究, 根据患者手术时年龄分为老年组 (≥ 60 岁, 52 例) 和非老年组 (< 60 岁, 68 例)。本研究获我院医学伦理委员会批准。纳入标准: ①均为消化系统疾病 (包括食管、胃、十二指肠、结肠和直肠); ②首次行 ESD 且获得成功者; ③患者知情同意。排除标准: ①合并重要脏器功能障碍; ②合并其他系统恶性肿瘤; ③合并淋巴结或远处脏器转移者; ④免疫缺陷者; ⑤凝血功能障碍者; ⑥有交流障碍无法配合研究者。两组患者性别和病变部位比较, 差异无统计学意义 ($P > 0.05$), 具有可比性。见表 1。

表 1 两组患者基础资料比较 例 (%)

Table 1 Comparison of basic data between the two groups $n(\%)$

组别	性别		病变部位				
	男	女	食管	胃	十二指肠	结肠	直肠
老年组 ($n = 52$)	29(55.77)	23(44.23)	6(11.54)	34(65.38)	2(3.85)	4(7.69)	6(11.54)
非老年组 ($n = 68$)	37(54.41)	31(45.59)	9(13.24)	42(61.76)	1(1.47)	7(10.29)	9(13.24)
χ^2 值	0.02		0.27				
P 值	0.882		0.913				

1.2 方法

1.2.1 仪器 电子胃镜 (日本 Olympus GIF-Q260J), 透明帽 (MH-596), 黏膜切开刀 (KD-650U、KD-612U), CO₂ 气泵, 注射针 (江苏安特尔

ATE-ZSZ-23 × 1600 × 23 × 5), 微创组织夹 (南京微创 ROCC-D-26-195-C), 常州乐奥医疗荷包环结扎装置, 高频电切装置 (德国 ERBE VIO 200D), 氩离子凝固器 (德国 ERBE APC300-ICC 200)。黏膜下注

射液体为甘油果糖、亚甲蓝及肾上腺素混合液。

1.2.2 手术步骤 于术前行全身麻醉, 确定病灶浸润深度, 给病灶表面染色, 确定病变范围。电凝标记病灶, 采用混合液注射病灶边缘标记点, 沿标记点外侧切开黏膜, 从切开边缘剥离病变黏膜, 黏膜下间断性注射, 剥离时黏膜始终抬举, 直至完全剥离病变, 以热活检钳处理创面。

1.3 观察指标

对比两组患者性别、年龄、病变部位和合并基础疾病等各项信息。统计两组患者术后并发症的发生情况, 并发症包括: 发热、术后穿孔、狭窄和出血。其中, 狭窄定义为: 标准内镜(直径11 mm)难以通过食管管腔^[6]; 出血定义为具备以下两项及以上^[6]: ①存在头晕、黑便和呕血等症状; ②术后血压下降20 mmHg; ③术后血红蛋白下降>20 g/L; ④经内镜检查为溃疡出血。统计两组患者不同病变部位并发症发生情况。还统计不同病变部位总的并发症的发生情况。

1.4 统计学方法

选用SPSS 22.0软件进行统计学分析, 计量资料以均数±标准差($\bar{x} \pm s$)表示, 两两比较行 t 检验, 计数资料以例(%)表示, 组间比较行 χ^2 检验, 多因素分析采用多因素Logistic回归分析, $P < 0.05$ 为差异

有统计学意义。

2 结果

2.1 两组患者并发症发生情况比较

老年组术后发热和狭窄发生率明显高于非老年组($P < 0.05$), 术后穿孔和出血发生率两组患者比较, 差异无统计学意义($P > 0.05$)。见表2。

2.2 两组患者不同病变部位并发症发生情况比较

两组患者食管、胃、十二指肠、结肠和直肠的并发症发生情况比较, 差异均无统计学意义($P > 0.05$)。见表3。

2.3 不同病变部位总的并发症发生情况比较

不同病变部位并发症总发生率比较, 差异有统计学意义($P < 0.05$)。见表4。

2.4 ESD术后并发症发生风险的多因素Logistic分析

将有差异的因素纳入Logistic模型, 行量化赋值, 因变量为ESD术后是否发生并发症(是=1, 否=0), 自变量为年龄(老年=1, 非老年=0)和病变部位(食管=1, 胃、十二指肠、结肠和直肠=0), 经多因素Logistic回归分析证实, 老年和食管病变是ESD术后发生并发症的危险因素($P < 0.05$)。见表5。

表2 两组患者并发症发生情况比较 例(%)

Table 2 Comparison of complications between the two groups n (%)

组别	发热	术后穿孔	出血	狭窄
老年组($n=52$)	8(15.38)	11(21.15)	10(19.23)	5(9.62)
非老年组($n=68$)	3(4.41)	7(10.29)	8(11.76)	1(1.47)
χ^2 值	4.26	2.73	0.86	4.12
P 值	0.039	0.099	0.354	0.042

表3 两组患者不同病变部位并发症发生情况比较 例(%)

Table 3 Comparison of complications at different lesion sites between the two groups n (%)

组别	发热	术后穿孔	出血	狭窄
食管				
老年组($n=52$)	1(1.92)	3(5.77)	2(3.85)	2(3.85)
非老年组($n=68$)	0(0.00)	1(1.47)	2(2.94)	1(1.47)
χ^2 值		1.12		
P 值		0.771		

续表 3
Table 3

组别	发热	术后穿孔	出血	狭窄
胃				
老年组(n = 52)	3(5.77)	6(11.54)	5(9.62)	0(0.00)
非老年组(n = 68)	2(2.94)	3(4.41)	4(5.88)	0(0.00)
χ^2 值			0.56	
P值			0.132	
十二指肠				
老年组(n = 52)	1(1.92)	0(0.00)	1(1.92)	0(0.00)
非老年组(n = 68)	0(0.00)	0(0.00)	0(0.00)	0(0.00)
χ^2 值			3.00	
P值			0.233	
结肠				
老年组(n = 52)	1(1.92)	1(1.92)	0(0.00)	2(3.85)
非老年组(n = 68)	1(1.47)	1(1.47)	1(1.47)	0(0.00)
χ^2 值			2.92	
P值			0.405	
直肠				
老年组(n = 52)	2(3.85)	1(1.92)	2(3.85)	1(1.92)
非老年组(n = 68)	0(0.00)	2(2.94)	1(1.47)	0(0.00)
χ^2 值			3.00	
P值			0.392	

表 4 不同病变部位总的并发症发生情况比较 例(%)
Table 4 Comparison of total complications in different lesions n (%)

部位	发热	术后穿孔	出血	狭窄	总计
食管(n = 15)	1(6.67)	4(26.67)	4(26.67)	3(20.00)	12(80.00)
胃(n = 76)	5(6.58)	9(11.84)	9(11.84)	0(0.00)	23(30.26)
十二指肠(n = 3)	1(33.33)	0(0.00)	1(33.33)	0(0.00)	2(66.67)
结肠(n = 11)	2(18.18)	2(18.18)	1(9.09)	2(18.18)	7(63.64)
直肠(n = 15)	2(13.33)	3(20.00)	3(20.00)	1(6.67)	9(60.00)
χ^2 值					18.56
P值					0.000

表 5 ESD 术后并发症发生风险的多因素 Logistic 分析
Table 5 Multivariate Logistic analysis of the risk of complications after ESD

因素	B	SE	Wald χ^2	P值	OR	95%CI
老年	0.199	0.076	6.920	0.009	1.220	1.052 ~ 1.184
食管病变	0.545	0.160	11.651	0.001	1.724	1.261 ~ 2.357

3 讨论

近年来,随着临床检查技术的发展和广泛应用,在癌前病变和早癌时期就被检出消化道肿瘤的患者越来越多,其治疗方式也受到广大医师和患者关注^[7]。既往临床多采用外科切除的方法对患者进行治疗,但外科手术创伤大,患者术后恢复时间长,并发症发生风险大,而老年患者各项机能逐渐衰退,对手术切除治疗的耐受力相对较差^[8]。ESD具有微创性,对消化道刺激小,可较好地保留胃肠道各项功能,患者恢复快,痛苦相对较小,安全性高,且ESD可彻底切除病灶,完整地保留病灶组织,为临床病理组织诊断提供了便利,也有利于患者术后护理^[9-11]。

本研究中,两组患者术后穿孔和出血发生率比较,差异无统计学意义。术后穿孔会引起纵膈气肿、弥漫性腹膜炎等并发症,持续黏膜下注射可有效避免术后穿孔。向腔外生长或病灶直径较大的黏膜下肿瘤,发生穿孔的风险较高,需要提前进行“预荷包缝合”,甚至主动穿孔,可避免出现严重并发症^[12-14]。出血为ESD常见并发症,电凝止血和止血钳的使用可降低出血风险,术前内镜检查可使施术者明确病灶情况,在手术操作过程中有效避开血流量较大的血管,并在术中边治疗边止血,降低了出血发生率^[15-16]。

本研究中,两组患者食管、胃、十二指肠、结肠和直肠的并发症发生情况比较,差异均无统计意义,但不同病变部位并发症总发生率比较,差异有统计学意义。其中,食管并发症相对较多。陈伟琴等^[17]也提出,食管和结肠部位ESD术后并发症较多,与本研究相符。考虑原因为:病变部位的解剖结构会在一定程度上对ESD难易程度和手术创伤造成影响,进而引发并发症^[18]。

经多因素 Logistic 回归分析证实,老年和食管病变是ESD术后发生并发症的危险因素。因此,采用ESD术对老年或食管病变患者进行治疗时,需要密切关注患者术中状态,仔细操作,从而降低术后并发症发生率。

综上所述,老年和食管病变患者ESD术后发生发热和狭窄的风险较高,临床需要密切监测。本研究尚存在不足之处:纳入样本量较少,结果可能存在一定偏倚,下一步将扩充样本量进行研究。

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(吴静 编辑)

本文引用格式:

叶洁桐, 季雪良, 武群燕, 等. 不同年龄及部位消化系统疾病内镜黏膜下剥离术后并发症的发生风险比较[J]. 中国内镜杂志, 2022, 28(6): 53-58.

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