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# 内痔套扎术联合外痔切除术对 II-IV 期混合痔患者围术期指标、疼痛症状及肛肠动力学指标的影响 \*

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**摘要 目的:**探讨内痔套扎术联合外痔切除术对 II-IV 期混合痔患者围术期指标、疼痛症状及肛肠动力学指标的影响。**方法:**选取 2017 年 1 月~2019 年 6 月期间我院收治的 95 例 II-IV 期混合痔患者,根据手术方式的不同分为对照组(n=44)和研究组(n=51),对照组给予外剥内扎术,研究组则给予内痔套扎术联合外痔切除术,比较两组患者围术期指标、疼痛症状评分、肛肠动力学指标及并发症发生情况。**结果:**研究组术中出血量少于对照组( $P<0.05$ );手术时间、创面愈合时间、肛门疼痛消退时间短于对照组( $P<0.05$ )。与术前比较,两组患者术后 1、7、14 d 视觉模拟评分量表(VAS)评分呈先升高后降低趋势( $P<0.05$ ),且研究组 VAS 评分低于对照组( $P<0.05$ )。两组患者术后 3 个月肛管静息压、直肠最大耐受量、直肠感觉阈值、肛管最大收缩压均下降,且研究组低于对照组( $P<0.05$ )。研究组术后并发症发生率低于对照组( $P<0.05$ )。**结论:**内痔套扎术联合外痔切除术治疗 II-IV 期混合痔患者,可有效改善患者围术期相关指标,改善患者疼痛症状及肛肠动力学指标,同时还可减少并发症发生率,临床应用价值较高。

**关键词:**内痔套扎术;外痔切除术;II-IV 期混合痔;围术期指标;疼痛症状;肛肠动力学

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## The Effect of Internal Hemorrhoidectomy Combined with External Hemorrhoidectomy on Perioperative Indexes, Pain Symptoms and Anorectal Dynamic Indexes in Patients with Stage II-IV Mixed Hemorrhoids\*

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**ABSTRACT Objective:** To investigate the effect of internal hemorrhoidectomy combined with external hemorrhoidectomy on perioperative indexes, pain symptoms and anorectal motility indexes of patients with stage II - IV mixed hemorrhoids. **Methods:** 95 patients with stage II - IV mixed hemorrhoids who were admitted to our hospital from January 2017 to June 2019 were selected, they were divided into control group (n=44) and study group (n=51) according to the different operation methods. The control group was treated with exfoliation and internal ligation, while the study group was treated with internal hemorrhoidectomy combined with external hemorrhoidectomy. The perioperative indexes, pain symptoms, anorectal motility indexes and complications of the two groups were compared. **Results:** The amount of bleeding in the operation was less than that in the control group ( $P<0.05$ ). The operation time, wound healing time, anal pain relief time in the study group were shorter than those in the control group ( $P<0.05$ ). Compared with preoperative, the visual simulation score (VAS) of the two groups increased first and then decreased on the 1, 7, 14 d after operation( $P<0.05$ ), and the VAS score of the study group was lower than that of the control group ( $P<0.05$ ). The anorectal resting pressure, rectal maximum tolerance, rectal sensory threshold and anal maximum systolic pressure in the two groups decreased at 3 months after operation, and those in the study group were lower than those in the control group ( $P<0.05$ ). The incidence of postoperative complications in the study group was lower than that in the control group ( $P<0.05$ ). **Conclusion:** Internal hemorrhoidectomy combined with external hemorrhoidectomy can effectively improve the perioperative related indexes, improve the pain symptoms and anorectal dynamic indexes of patients, and reduce the incidence of complications, which has a higher clinical value.

**Key words:** Internal hemorrhoidectomy; External hemorrhoidectomy; Stage II - IV mixed hemorrhoids; Perioperative indicators; Pain symptoms; Anorectal dynamics

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## 前言

痔疮是临床上常见的外科疾病,主要表现为大便秘结或便血等症状。痔疮的种类包括内痔、外痔以及混合痔,其中以混合痔最为难治<sup>[1,2]</sup>。混合痔是指齿状线上直肠粘膜下的血管性衬垫病理性扩张或增生,内痔、外痔相连形成一整体的隆起性组织<sup>[3,4]</sup>。临床根据混合痔的病情严重程度,将其分为 I-IV 期,其中 II-IV 期混合痔患者通常需要给予手术治疗<sup>[5,6]</sup>。外剥内扎术是治疗 II-IV 期混合痔的常用术式,但该种治疗方法仅可处理已产生病变的坏死组织,无法解决病根<sup>[7,8]</sup>。近年来,内痔套扎术联合外痔切除术治疗 II-IV 期混合痔取得了较大进展,但其疗效仍需更多的临床实践证实<sup>[9,10]</sup>。鉴于此,本研究通过探讨内痔套扎术联合外痔切除术对 II-IV 期混合痔患者围术期指标、疼痛症状及肛肠动力学指标的影响,以期对 II-IV 期混合痔患者的治疗术式选择提供参考,整理如下。

## 1 资料与方法

### 1.1 临床资料

选取我院于 2017 年 1 月~2019 年 6 月间接收的 95 例 II-IV 期混合痔患者,纳入标准:(1)诊断标准参考《痔诊治暂行标准》<sup>[11]</sup>;临床表现为便血、疼痛,排便时有痔脱出症状;(2)均为 II-IV 期;(3)均具备手术指征;(4)患者及其家属知情本研究且签署了同意书。排除标准:(1)伴有痔嵌顿、环状混合痔者;(2)合并心脑血管肝肾等重要脏器功能障碍者;(3)合并造血功能异常者;(4)合并其他肛肠疾病者;(5)合并传染性疾病者;(6)合并精神障碍无法配合治疗者;(7)妊娠及哺乳期妇女。根据手术方法的不同将患者分为对照组( $n=44$ )和研究组( $n=51$ ),其中对照组男 24 例,女 20 例,年龄 25~62 岁,平均( $43.56\pm 4.28$ )岁;病程 1~9 年,平均( $5.06\pm 0.95$ )年;疾病分期:II 期 15 例,III 期 18 例,IV 期 11 例。研究组男 29 例,女 22 例,年龄 26~63 岁,平均( $43.82\pm 5.19$ )岁;病程 2~11 年,平均( $5.17\pm 1.06$ )年;疾病分期:II 期 19 例,III 期 20 例,IV 期 12 例。两组一般资料对比无差异( $P>0.05$ )。

### 1.2 方法

1.2.1 术前处理 入院后行常规检查,择期给予手术处理。术

前常规清洁肠道,采用鞍麻,麻醉满意后转为截石位,将肛周皮肤及肛管直肠处消毒,开始进行手术。

1.2.2 对照组 给予外剥内扎术,具体操作如下:用组织钳夹住痔组织外缘,并往外拉,再用第二把组织钳夹住痔组织,采用电刀呈 V 形剥离外痔至齿线上约 0.3 cm,电凝止血,在内痔底部用丝线结扎 "8" 字,剪去结扎后的大部分痔组织,处理患处后,常规消毒。

1.2.3 研究组 给予内痔套扎术联合外痔切除术,具体操作如下:插入肛门镜,充分暴露齿状线及痔核,选取好需要套扎痔核后,采用套扎器套扎痔核上方的黏膜与黏膜下层的组织,于直肠黏膜 $\geq 1$  cm 处,轻轻来回抽动枪管,至枪管负压到达 0.08~0.10 MPa 为止,转动阀门,击发胶圈,打开负压释放开关,用同样方法处理其他痔核。随后将外痔外缘钳起,用电刀向下剥离切除外痔,7 号丝线结扎其根部,切除多余组织,不一定要超过齿状线,切除掉外痔或皮赘则可。

### 1.3 观察指标

(1)记录两组术中出血量、手术时间、创面愈合时间、肛门疼痛消退时间。(2)于术前、术后 1d、术后 7d、术后 14d 采用视觉模拟评分量表(Visual Analogue Scale, VAS)<sup>[12]</sup>评价两组患者疼痛状况,其中 VAS 评分 0~10 分,0 分表示无痛,10 分表示难以忍受的疼痛,分数越高,疼痛感越强。(3)两组患者以门诊复查的方式随访 3 个月,采用 CTD-SYNECTICS 公司生产的高分辨多通道胃肠功能监测仪检测两组患者术前、术后 3 个月的肛肠动力学指标,包括肛管静息压、直肠最大耐受量、直肠感觉阈值、肛管最大收缩压。(4)记录并发症情况。

### 1.4 统计学方法

研究数据录入 SPSS24.0 软件处理。计数资料以率表示,行  $\chi^2$  检验。计量资料用均数 $\pm$ 标准差( $\bar{x}\pm s$ )表示,行  $t$  检验。 $\alpha=0.05$  为检验水准。

## 2 结果

### 2.1 围术期指标比较

研究组术中出血量少于对照组( $P<0.05$ );肛门疼痛消退时间、手术时间、创面愈合时间短于对照组( $P<0.05$ );详见表 1。

表 1 围术期指标比较( $\bar{x}\pm s$ )

Table 1 Comparison of perioperative indexes( $\bar{x}\pm s$ )

| Groups                  | Operative time(min) | Intraoperative hemorrhage (mL) | Time for anal pain to subside (d) | Wound healing time(d) |
|-------------------------|---------------------|--------------------------------|-----------------------------------|-----------------------|
| Control group( $n=44$ ) | 34.38 $\pm$ 2.71    | 14.86 $\pm$ 1.15               | 5.38 $\pm$ 0.87                   | 11.78 $\pm$ 1.25      |
| Study group( $n=51$ )   | 25.09 $\pm$ 2.96    | 7.05 $\pm$ 1.21                | 3.12 $\pm$ 0.93                   | 7.69 $\pm$ 1.27       |
| $t$                     | 15.585              | 32.096                         | 12.167                            | 15.766                |
| $P$                     | 0.000               | 0.000                          | 0.000                             | 0.000                 |

### 2.2 疼痛症状比较

两组患者术前 VAS 评分比较差异无统计学意义( $P>0.05$ );两组患者术后 1d、术后 7d、术后 14d VAS 评分呈先升高后降低趋势,且研究组 VAS 评分低于对照组( $P<0.05$ );详见表 2。

### 2.3 肛肠动力学指标的比较

两组患者术前肛管静息压、直肠最大耐受量、直肠感觉阈值、肛管最大收缩压比较差异无统计学意义( $P>0.05$ );两组患者术后 3 个月直肠最大耐受量、肛管静息压、肛管最大收缩压、直肠感觉阈值均下降,且研究组低于对照组( $P<0.05$ );详见表 3。

表 2 两组患者手术前后 VAS 评分的比较( $\bar{x} \pm s$ , 分)Table 2 Comparison of pain symptoms( $\bar{x} \pm s$ , scores)

| Groups              | Preoperative | 1d after operation     | 7d after operation      | 14d after operation      |
|---------------------|--------------|------------------------|-------------------------|--------------------------|
| Control group(n=44) | 5.28±1.14    | 7.42±1.39 <sup>a</sup> | 4.11±0.77 <sup>ab</sup> | 2.42±0.31 <sup>abc</sup> |
| Study group(n=51)   | 5.33±1.72    | 6.59±1.51 <sup>a</sup> | 3.49±0.87 <sup>ab</sup> | 1.15±0.24 <sup>abc</sup> |
| t                   | 0.164        | 2.771                  | 3.651                   | 22.478                   |
| P                   | 0.870        | 0.007                  | 0.000                   | 0.000                    |

Note: Compared with preoperative, <sup>a</sup> $P < 0.05$ ; compared with 1d after operation, <sup>b</sup> $P < 0.05$ ; compared with 7d after operation, <sup>c</sup> $P < 0.05$ .

表 3 肛肠动力学指标的比较( $\bar{x} \pm s$ )Table 3 Comparison of anorectal dynamic indexes( $\bar{x} \pm s$ )

| Groups               | Nal resting pressure(mmHg) |                          | Maximum rectal tolerance(ml) |                           | Rectal sensory threshold(ml) |                          | Anal maximum systolic pressure(mmHg) |                           |
|----------------------|----------------------------|--------------------------|------------------------------|---------------------------|------------------------------|--------------------------|--------------------------------------|---------------------------|
|                      | Preoperative               | 3 months after operation | Preoperative                 | 3 months after operation  | Preoperative                 | 3 months after operation | Preoperative                         | 3 months after operation  |
| Control group (n=44) | 46.71±2.97                 | 39.97±3.32 <sup>a</sup>  | 173.09±28.52                 | 147.56±13.97 <sup>a</sup> | 87.72±7.33                   | 66.08±10.29 <sup>a</sup> | 146.30±21.53                         | 129.75±25.42 <sup>a</sup> |
| Study group (n=51)   | 46.12±3.09                 | 33.88±4.12 <sup>a</sup>  | 175.33±29.46                 | 122.87±14.01 <sup>a</sup> | 87.19±8.69                   | 58.24±9.38 <sup>a</sup>  | 145.45±23.48                         | 117.45±23.45 <sup>a</sup> |
| t                    | 0.945                      | 7.848                    | 0.375                        | 8.576                     | 0.318                        | 3.884                    | 0.183                                | 2.452                     |
| P                    | 0.347                      | 0.000                    | 0.708                        | 0.000                     | 0.751                        | 0.000                    | 0.855                                | 0.016                     |

Note: compared with preoperative, <sup>a</sup> $P < 0.05$ .

## 2.4 并发症发生情况

对照组术后出现切口水肿 5 例、尿潴留 3 例、肛门收缩疼痛 1 例,并发症发生率为 20.45%(9/44);研究组术后出现切口水肿 1 例、尿潴留 1 例、肛门收缩疼痛 1 例,并发症发生率为 5.88%(3/51);研究组术后并发症发生率低于对照组( $\chi^2=4.545$ ,  $P=0.033$ )。

## 3 讨论

痔疮主要是指直肠下段的肛垫出现的病理性肥大,外痔是指齿状线远侧的出现血栓或出现病理性扩张,内痔则是指肛垫的支持结构、血管丛、动静脉网和支体发生位移或病理性改变,混合痔作为外痔、内痔的结合体,一旦发病,不仅会增加患者身体的痛苦,还会对患者坐、卧产生影响<sup>[13-15]</sup>。现临床有关混合痔的发病机制尚不十分明确,不少学者认为混合痔的发病与肛垫下移密切相关<sup>[16,17]</sup>。肛垫的主要作用为闭合肛管及控制排便,当肛垫发生下移时则可无法顺利控制排便,并引起肛门不适、出血、异物感及潮湿瘙痒等症状<sup>[18]</sup>。II-IV期混合痔属于较为严重的痔疮,手术是其目前最佳的治疗手段,可纠正病理性改变,有效改善患者临床症状<sup>[19]</sup>。外剥内扎术是治疗 II-IV期混合痔的经典术式,然而经过长期临床证实,由于外剥内扎术对肛垫组织和表层黏膜破坏较大,术后并发症如切口水肿、肛门收缩疼痛、尿潴留等发生风险增加,降低患者耐受性<sup>[20]</sup>。内痔套扎术联合外痔切除术是近年来新兴的治疗术式,是以肛垫理论为基础发展起来的微创技术<sup>[21,22]</sup>,但关于其确切疗效尚需进一步的研究以证实。

本次研究结果显示,研究组手术时间、肛门疼痛消退时间、创面愈合时间、术中出血量及疼痛症状的改善情况均优于对照

组,可见内痔套扎术联合外痔切除术可有效提高手术治疗效果。该治疗方式分为内部治疗和外部治疗两部分,内部治疗主要是痔上黏膜在套上胶圈后,利用负压原理,可阻断内痔正常供血,引起其坏死并脱落,而外部治疗则可将皮赘及明显外痔进一步切除<sup>[23,24]</sup>。内痔套扎术可选择适宜套扎的病变组织,大大减少了钳夹不当引起的组织损伤,且由于该术式的套扎位置位于齿状线以上组织,对肛垫的正常结构影响轻微,同时对肛门精细控便功能亦影响不大,可有效减轻患者围术期疼痛感<sup>[25,26]</sup>,与外痔切除术联合应用,可促进肛门的正常解剖及功能状态迅速恢复,改善患者预后。肛肠动力学是以静力学、动力学及肌电为主要方法来研究结肠、直肠、肛管的各种运动方式,并对肛肠疾病的诊断、治疗的效能进行有效评估<sup>[27]</sup>,肛管静息压、直肠最大耐受量、直肠感觉阈值、肛管最大收缩压均是临床常见的肛肠动力学指标,混合痔患者由于肛门外括约肌活动异常、肛垫内血管压力升高,导致上述肛肠动力血指标较正常人更高,进而影响机体排便<sup>[28]</sup>。本研究中两组患者术后 3 个月上述肛肠动力学指标均下降,且研究组低于对照组,表明联合治疗在改善患者肛肠动力学方面效果显著,这可能是由于该种治疗方式可最大程度保护肛垫,保护肛管屏障,术后肛门控制性良好,有效改善患者肛肠动力学<sup>[29]</sup>。另研究组术后并发症发生率低于对照组,这主要是因为联合治疗可有效避免肛门狭窄,不破坏直肠与肛管的正常结构,且术后疼痛症状轻,愈合较快,从而减少了并发症发生率<sup>[30]</sup>。

综上所述,II-IV期混合痔患者采用内痔套扎术联合外痔切除术治疗可有效改善患者围术期相关指标,改善患者疼痛症状及肛肠动力学指标,同时还可减少并发症发生率。

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