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腹腔镜子宫肌瘤剔除术与开腹手术对子宫肌瘤患者内分泌状态、免疫功能 and 预后的影响*

王 锐 邬 玮 徐福霞 李 杰 高和平

(安徽省第二人民医院妇产科 安徽 合肥 230041)

摘要 目的:探讨腹腔镜子宫肌瘤剔除术与开腹手术对子宫肌瘤患者内分泌状态、免疫功能和预后的影响。**方法:**选取 2014 年 1 月~2019 年 1 月期间我院收治的子宫肌瘤患者 90 例,根据手术方式的不同将患者分为 A 组($n=44$)和 B 组($n=46$),A 组予以开腹手术,B 组予以腹腔镜子宫肌瘤剔除术,比较两组患者临床指标、内分泌状态、免疫功能、并发症及预后。**结果:**两组手术时间对比未见统计学差异($P>0.05$);B 组术中出血量少于 A 组,住院时间、术后肛门排气恢复时间短于 A 组($P<0.05$)。两组术后 1 个月卵泡刺激素(FSH)、促黄体生成激素(LH)均较术前升高,雌二醇(E2)较术前降低($P<0.05$);B 组术后 1 个月 FSH、LH 低于 A 组, E2 则高于 A 组($P<0.05$)。两组术后 1 d $CD3^+$ 、 $CD4^+$ 、 $CD4^+/CD8^+$ 均较术前降低,但 B 组高于 A 组($P<0.05$); $CD8^+$ 较术前升高,但 B 组低于 A 组($P<0.05$)。B 组的并发症发生率低于 A 组($P<0.05$)。两组子宫形态正常率、复发率、月经转归正常率对比无差异($P>0.05$)。**结论:**与开腹手术相比,腹腔镜子宫肌瘤剔除术可明显减轻对子宫肌瘤患者机体内分泌状态、免疫功能的损害,促进患者术后恢复,减少并发症发生情况,同时还可获得与开腹手术相当的近期预后。

关键词:腹腔镜;子宫肌瘤剔除术;开腹手术;子宫肌瘤;内分泌状态

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Effects of Laparoscopic Myomectomy and Laparotomy on Endocrine Status, Immune Function and Prognosis of Patients with Uterine Myoma*

WANG Rui, WU Wei, XU Fu-xia, LI Jie, GAO He-ping

(Department of Obstetrics and Gynecology, Anhui Second People's Hospital, Hefei, Anhui, 230041, China)

ABSTRACT Objective: To investigate the effects of laparoscopic myomectomy and laparotomy on endocrine status, immune function and prognosis of patients with uterine fibroids. **Methods:** From January 2014 to January 2019, 90 patients with hysteromyoma in our hospital were selected, they were divided into group A ($n=44$) and group B ($n=46$) according to the different operation methods. Group A received laparotomy, and group B received laparoscopic hysteromyomectomy. The clinical indexes, endocrine status, immune function, complications and prognosis of the two groups were compared. **Results:** There was no statistical difference in the operation time between the two groups ($P>0.05$). The intraoperative hemorrhage in group B was less than that in group A, and the hospitalization time and recovery time of anal exhaust after operation were shorter than those in group A ($P<0.05$). Follicular stimulating hormone (FSH) and luteinizing hormone (LH) in both groups at 1 month after operation were increased than before operation, and estradiol (E2) was decreased than before operation ($P<0.05$). FSH and LH in group B at 1 month after operation were lower than in group A, and E2 was higher than that in group A ($P<0.05$). $CD3^+$, $CD4^+$, $CD4^+/CD8^+$ in both groups at 1d after operation were lower than before operation, but the group B were higher than group A ($P<0.05$). $CD8^+$ was higher than before operation, but the group B were lower than group A ($P<0.05$). The incidence of complications in group B was lower than that in group A ($P<0.05$). There were no significant differences between the two groups in the normal rate of uterine morphology, the recurrence rate and the normal rate of menstrual transition ($P>0.05$). **Conclusion:** Compared with laparotomy, laparoscopic myomectomy can significantly reduce the damage to the endocrine state and immune function of patients with hysteromyoma, promote the postoperative recovery of patients, reduce the incidence of complications, and at the same time, it can obtain the same short-term prognosis as laparotomy.

Key words: Laparoscopic; Myomectomy; Laparotomy; Hysteromyoma; Endocrine status

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前言

子宫肌瘤是常见的女性良性生殖器官肿瘤,多发于育龄期妇女^[1]。据统计^[2],我国子宫肌瘤的发病率约为 2.5%,虽然其癌

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作者简介:王锐(1983-),女,本科,主治医师,研究方向:妇产科学,E-mail: ruiwang83@126.com

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变率较低,约为 0.4%~0.8%,但仍需引起重视。子宫肌瘤的治疗方法有保守治疗、药物治疗和手术治疗,其中子宫肌瘤剔除术效果最为显著,既往临床多采用开腹手术进行治疗,然而近年来不少临床实践证实,开腹手术后创伤大、并发症多,不利于患者术后恢复,影响患者预后^[3-5]。腹腔镜子宫肌瘤剔除术近年来因其创伤小、术后恢复快的优势为较多患者所接受^[6-8]。本研究分析腹腔镜子宫肌瘤剔除术与开腹手术对子宫肌瘤患者内分泌状态、免疫功能和预后的影响,整理报道如下。

1 资料与方法

1.1 一般资料

选取 2014 年 1 月~2019 年 1 月期间我院收治的 90 例子宫肌瘤患者,纳入标准:(1)手术均由同一组医师完成操作;(2)临床症状、影像学检查提示子宫肌瘤;(3)均符合手术指征,择期给予相关手术治疗者;(4)肌瘤数量 <4 个,肌瘤直径 <8 cm。排除标准:(1)合并心肝肾等重要脏器功能不全者;(2)妊娠或哺乳期妇女;(3)合并卵巢囊肿、子宫内膜异位症或恶性肿瘤疾病者;(4)特殊位置肌瘤、巨大子宫肌瘤、腹腔粘连及过度肥胖者。根据手术方式的不同将患者分为 A 组(n=44,开腹手术)和 B 组(n=46,腹腔镜子宫肌瘤剔除术),其中 A 组年龄 27~43 岁,平均(32.89±2.61)岁;平均肌瘤数量(3.19±0.74)个;平均肌瘤直径(3.92±0.41)cm;肌瘤位置:肌壁间 24 例,浆膜下 20 例;肌瘤多发患者 23 例,单发患者 21 例。B 组年龄 25~44 岁,平均(33.06±3.47)岁;平均肌瘤数量(3.11±0.82)个;平均肌瘤直径(4.15±0.59)cm;肌瘤位置:肌壁间 25 例,浆膜下 21 例;单发患者 20 例,肌瘤多发患者 26 例。两组一般资料对比无差异($P>0.05$)。

1.2 方法

A 组:予以开腹手术,体位呈仰卧位,行硬膜外麻醉,手术入路口取下腹部正中位置,一次切开皮肤、皮下组织,暴露盆腔。观察肌瘤的具体情况,对存在粘连者先行分离,随后将子宫

托出腹腔,切开肌瘤最肿胀处,钝性剥离肌瘤,电凝止血,术后给予常规抗感染治疗。B 组:予以腹腔镜子宫肌瘤剔除术,体位呈膀胱截石位,行气管插管静脉复合全麻,取脐上端作一切口,长约 1 cm,建立人工气腹,置入 Tro-car(规格:10 mm)为主操作孔,另于脐两端左右下腹部分别穿刺,分别置入 Trocar(规格:5 mm)作为副操作孔,采用单极电凝钩切开肌瘤表面包膜,使用抓钳将肌瘤夹持,钝性分离。视患者具体情况选择单层缝合或双层缝合,缝合后关闭瘤腔,术后给予常规抗感染治疗。

1.3 观察指标

(1)记录两组住院时间、手术时间、术中出血量、术后肛门排气恢复时间。(2)记录并发症发生情况,包括切口感染、盆腔粘连、切口疼痛等。(3)术后采用门诊复查的形式随访 1 年,记录两组子宫形态正常率、复发情况及月经转归正常率。(4)于术前、术后 1 d 抽取患者清晨空腹静脉血 3 mL,采用美国 BD 公司生产的 Fascalibur 流式细胞仪检测患者免疫功能指标:CD3⁺、CD4⁺、CD8⁺,并计算 CD4⁺/CD8⁺。(5)于术前、术后 1 个月抽取患者清晨空腹静脉血 3 mL,经常规离心处理分离上清液待测。采用美国贝克曼 DX8001 全自动分析仪和相关试剂检测卵泡刺激素(Follicle stimulating hormone,FSH)、促黄体生成激素(Luteinizing hormone,LH)、雌二醇(Estradiol,E2)水平。

1.4 统计学方法

采用 SPSS20.0 进行数据分析。计数资料以率的形式表示,组间比较行卡方检验。计量资料均符合正态分布以均值±标准差的形式表示,组间比较行成组 t 检验,组内治疗前后比较为配对 t 检验。检验标准设置为 $\alpha=0.05$ 。

2 结果

2.1 两组患者临床指标比较

两组手术时间对比未见统计学差异($P>0.05$);B 组术中出血量少于 A 组,住院时间、术后肛门排气恢复时间短于 A 组($P<0.05$);详见表 1。

表 1 两组患者临床指标比较($\bar{x}\pm s$)

Table 1 Comparison of clinical indexes between the two groups($\bar{x}\pm s$)

Groups	Operation time(min)	Intraoperative hemorrhage (mL)	Hospitalization time(d)	Recovery time of anal exhaust after operation(h)
Group A(n=44)	61.91±8.28	147.91±12.57	9.92±0.67	25.92±3.63
Group B(n=46)	61.03±7.36	62.18±10.66	7.15±0.62	16.39±2.21
t	0.533	34.950	20.369	15.118
P	0.595	0.000	0.000	0.000

2.2 两组内分泌指标比较

两组术前 FSH、E2、LH 对比未见统计学差异($P>0.05$);两组术后 1 个月 FSH、LH 均较术前升高,E2 较术前降低($P<0.05$);B 组术后 1 个月 FSH、LH 低于 A 组,E2 则高于 A 组($P<0.05$);详见表 2。

2.3 两组免疫功能指标比较

两组术前 CD3⁺、CD4⁺、CD4⁺/CD8⁺、CD8⁺ 对比未见统计学差异($P>0.05$);两组术后 1 d CD3⁺、CD4⁺、CD4⁺/CD8⁺ 均较术前

降低,但 B 组高于 A 组($P<0.05$);CD8⁺ 较术前升高,但 B 组低于 A 组($P<0.05$);详见表 3。

2.4 并发症发生率比较

B 组的并发症发生率为 6.52%(3/46) 低于 A 组 27.27%(12/44)($P<0.05$);详见表 4。

2.5 两组患者预后比较

两组患者子宫形态正常率、月经转归正常率以及复发率对比未见统计学差异($P>0.05$);详见表 5。

表 2 两组内分泌指标比较($\bar{x} \pm s$)

Table 2 Comparison of endocrine indexes between the two groups($\bar{x} \pm s$)

Groups	FSH(mIU/mL)		E2(pg/mL)		LH(mIU/mL)	
	Before operation	1 month after operation	Before operation	1 month after operation	Before operation	1 month after operation
Group A(n=44)	17.22± 2.19	25.67± 3.36*	284.22± 15.73	195.32± 19.41*	18.96± 3.93	29.28± 3.86*
Group B(n=46)	17.29± 3.26	21.13± 2.39*	283.87± 17.64	251.58± 23.53*	19.24± 4.87	24.67± 4.72*
t	0.119	7.412	0.099	12.3434	0.299	5.059
P	0.906	0.000	0.921	0.000	0.765	0.000

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

表 3 两组免疫功能指标比较($\bar{x} \pm s$)

Table 3 Comparison of immune function indexes between the two groups($\bar{x} \pm s$)

Groups	CD3 ⁺ (%)		CD4 ⁺ (%)		CD8 ⁺ (%)		CD4 ⁺ / CD8 ⁺	
	Before operation	1 d after operation	Before operation	1 d after operation	Before operation	1 d after operation	Before operation	1 d after operation
Group A (n=44)	49.02± 5.78	39.34± 6.54*	44.18± 4.55	35.95± 5.86*	27.16± 3.74	34.78± 5.78*	1.63± 0.28	1.03± 0.26*
Group B (n=46)	48.74± 5.65	44.38± 5.23*	43.95± 5.26	39.86± 4.61*	26.93± 4.52	29.06± 4.39*	1.63± 0.37	1.37± 0.31*
t	0.232	4.047	0.221	3.526	0.262	5.301	0.000	6.287
P	0.817	0.000	0.825	0.001	0.794	0.000	1.000	0.000

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

表 4 两组患者并发症发生率比较 例(%)

Table 4 Comparison of the incidence of complications between the two groups n(%)

Groups	Incision infection	Pelvic adhesions	Intestinal obstruction	Sexual dysfunction	Incision pain	Total incidence rate
Group A(n=44)	3(6.82)	1(2.27)	2(4.55)	1(2.27)	5(11.36)	12(27.27)
Group B(n=46)	1(2.17)	0(0.00)	0(0.00)	1(2.17)	1(2.17)	3(6.52)
χ^2						6.972
P						0.008

表 5 两组患者预后比较 例(%)

Table 5 Comparison of prognosis between the two groups n(%)

Groups	Normal rate of uterine morphology	Normal rate of menstrual transition	Recurrence rate
Group A(n=44)	40(90.91)	41(93.18)	7(15.91)
Group B(n=46)	43(93.48)	44(95.65)	2(4.35)
χ^2	0.207	0.262	3.340
P	0.649	0.609	0.068

3 讨论

子宫肌瘤临床主要表现为经量增多、尿频、腰酸背痛等症状,随着病情进展可加重临床症状,威胁其生命^[9,10]。研究表明^[11],子宫肌瘤在生育年龄多发,绝经后肌瘤萎缩^[12]。故有学者认为子宫肌瘤的发生与雌、孕激素有关^[13,14]。子宫肌瘤剔除术是治疗子宫肌瘤的常见方案,该手术可保留患者正常生育功能,同时对患者损害较小,是一种较为理想的术式^[15,16]。以往常用开腹行子宫肌瘤剔除术,开腹手术操作简便、视野开阔,适用于位置特殊、肌瘤数目较多、体积较大的患者。但开腹手术一直存在着出血多、切口长、创伤大、并发症多等缺陷^[17,18]。腹腔镜子宫肌瘤剔

除术具有术后恢复快且术后并发症少等优点。但是腹腔镜下手术也有其自身的缺点,如术中止血困难、操作相对繁琐、学习曲线常^[19,20]。故开腹手术、腹腔镜子宫肌瘤剔除术的疗效优劣仍需进一步的样本量以证实。

本次研究结果显示,与开腹手术相比,腹腔镜子宫肌瘤剔除术可有效改善术中出血量、住院时间、术后肛门排气恢复时间等临床指标,腹腔镜子宫肌瘤剔除术属于微创术式,手术创伤小,同时术中不需对组织采取广泛剥离,进而降低术中出血量,利于患者术后恢复^[21,22]。而两组手术时间对比未见统计学差异,可能是因为腹腔镜下操作相对复杂,术者学习曲线长,故而手术时间未见明显缩短。有研究指出^[23],子宫肌瘤剔除会损伤

子宫,减弱反馈调节内分泌激素作用。本研究中两组患者的内分泌激素分泌均受到不同程度的影响,但腹腔镜子宫肌瘤剔除术者的影响更轻。这可能是开腹手术会使子宫卵巢动脉吻合支血供减少,致使卵巢对内分泌激素的反馈调节作用减弱^[24,25]。而腹腔镜子宫肌瘤剔除术手术过程中腹腔密闭性好,可防止手术操作对其他组织的损害^[26,27]。此外,手术创伤造成的免疫功能抑制是影响术后恢复的关键因素,其中以T淋巴细胞损害为主要表现。本研究结果显示腹腔镜子宫肌瘤剔除术可明显减轻机体免疫抑制,主要是因腹腔镜下子宫肌瘤剔除术创伤小,可使开腹手术对神经及组织造成的损伤减少,维持免疫功能。另B组的并发症发生率低于A组,这主要是因为腹腔镜下能够放大大局部手术区域,减少肌瘤残留,同时腹腔镜下可有效处理腹腔与盆腔粘连,减少术后并发症发生情况^[28-30]。对患者随访1年发现,两组患者近期预后效果相当,表明腹腔镜子宫肌瘤剔除术可靠有效,可获得与开腹手术相当的预后效果。本研究样本量少,研究结果可能缺乏广泛效力,仍需扩大样本量进一步探讨。

综上所述,与开腹手术相比,腹腔镜子宫肌瘤剔除术可明显减轻对机体内分泌状态、免疫功能的损害,促进子宫肌瘤患者术后恢复,减少并发症发生情况,同时还可获得与开腹手术相当的近期预后。

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