

doi: 10.13241/j.cnki.pmb.2017.29.034

七氟醚 - 瑞芬太尼静吸复合麻醉对妇科腹腔镜子宫肌瘤摘除术患者术后认知功能的影响 *

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摘要 目的:分析七氟醚 - 瑞芬太尼静吸复合麻醉对妇科腹腔镜子宫肌瘤摘除术患者术后认知功能的影响。**方法:**选取我院妇科收治行腹腔镜子宫肌瘤摘除术患者 148 例,采取数字随机法分成观察组和对照组,观察组采取七氟醚 - 瑞芬太尼静吸复合麻醉,对照组采取丙泊酚 - 瑞芬太尼静脉复合麻醉,比较两组麻醉方式对术后认知功能的影响。**结果:**对照组患者术后 1 天认知功能评分低于术前 1 天,差异有统计学意义($P < 0.05$)。观察组患者术后 1 天认知功能评分高于对照组,差异有统计学意义($P < 0.05$)。对照组患者术后 1 天 TMT 完成时间慢于术前 1 天,差异有统计学意义($P < 0.05$)。观察组患者术后 1 天 TMT 完成时间快于对照组,差异有统计学意义($P < 0.05$)。观察组患者术后呼吸抑制、恶心呕吐、躁动、嗜睡、头晕发生率均低于对照组,差异有统计学意义($P < 0.05$)。**结论:**七氟醚 - 瑞芬太尼静吸复合麻醉对妇科腹腔镜子宫肌瘤摘除术患者术后认知功能的影响较小,并且比较安全,是较为适宜的麻醉方法。

关键词:七氟醚 - 瑞芬太尼静吸复合麻醉;丙泊酚 - 瑞芬太尼静脉复合麻醉;腹腔镜子宫肌瘤摘除术;认知功能

中图分类号:R719;R614 **文献标识码:**A **文章编号:**1673-6273(2017)29-5744-04

Effect of Sevoflurane and Remifentanyl Combined with Anesthesia on Postoperative Cognitive Function in Patients Undergoing Gynecological Laparoscopic Myomectomy*

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ABSTRACT Objective: To analyze the effect of sevoflurane and remifentanyl combined anesthesia on postoperative cognitive function in patients undergoing gynecological laparoscopic myomectomy. **Methods:** 148 patients undergoing laparoscopic removal of uterine fibroids were selected and randomly divided into observation group and control group. The observation group adopted sevoflurane remifentanyl anesthesia, and the control group took propofol remifentanyl intravenous anesthesia. The effect on postoperative cognitive function of the two kinds of anesthesia was compared. **Results:** Among patients in control group, the cognitive function score 1 day after the operation was lower than that 1 day before operation, and the difference was statistically significant ($P < 0.05$). Among patients in observation group, the cognitive function score 1 day after the operation was higher than that 1 day before operation, and the difference was statistically significant ($P < 0.05$). In control group, the TMT completion time 1 day after operation is more than that 1 day before operation, and the difference was statistically significant ($P < 0.05$). In observation group, the TMT completion time 1 day after operation is less than that 1 day before operation, and the difference was statistically significant ($P < 0.05$). The occurrence rate of postoperative respiratory inhibition, nausea and vomiting, restlessness, dizziness, lethargy in observation group was lower than that in control group, the difference was statistically significant ($P < 0.05$). **Conclusion:** Sevoflurane and remifentanyl combined anesthesia has less influence on postoperative cognitive function in patients under laparoscopic myomectomy, and is relatively safe, which is a more suitable anesthesia method.

Key words: Sevoflurane remifentanyl combined with anesthesia; Propofol remifentanyl intravenous anesthesia; Laparoscopic myomectomy; Cognitive function

Chinese Library Classification(CLC): R719; R614 **Document code:** A

Article ID: 1673-6273(2017)29-5744-04

前言

子宫肌瘤是一种常见的妇科良性肿瘤,腹腔镜子宫肌瘤手术是一种较为常用的治疗方式,但仍然需要良好的手术麻醉配

合^[1,2]。好的麻醉方式不仅需要维持患者生命体征平稳,还需要快速见效,并且保证患者术后认知功能不受较大损害,选择适宜的麻醉药物对麻醉效果的影响作用较大。常用的丙泊酚 - 瑞芬太尼对患者认知功能影响较大,并且有着许多的麻醉不良反

* 基金项目:乐山市卫计局重点研究项目(16SZD090, 16SZD091)

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(收稿日期:2017-03-17 接受日期:2017-04-13)

应,如昏迷、嗜睡、头晕呕吐等,因此选择更加适宜的麻醉方式对患者有利^[3-6]。本研究中对七氟醚-瑞芬太尼静吸复合麻醉对妇科腹腔镜子宫肌瘤摘除术患者术后认知功能的影响进行观察,现报道如下。

1 资料与方法

1.1 一般资料

我院自 2014 年 11 月-2016 年 7 月收治行腹腔镜子宫肌瘤摘除术患者 148 例,纳入标准:自愿签署知情同意书者,BMI<30 kg/m²者;排除标准:严重消化道溃疡出血者,肝肾功能不全者,呼吸系统疾病者,术前使用影响凝血功能药物者;采取数字随机法分成观察组和对照组,观察组 74 例,年龄在 37-65 岁,平均年龄(46.8±14.9)岁,身体质量指数(BMI)22.4-27.3 kg/m²,平均 BMI(24.9±1.4)kg/m²,手术时间 63-134 min,平均手术时间(91.3±9.6)min,术中出血量 62-88 mL,平均术中出血量(70.1±2.8)mL;对照组 74 例,年龄在 35-64 岁,平均年龄(46.4±15.0)岁,BMI 22.5-27.2 kg/m²,平均 BMI(24.8±1.6)kg/m²,手术时间 60-133 min,平均手术时间(90.9±9.9)min,术中出血量 60-87 mL,平均术中出血量(69.8±3.3)ml;两组患者一般资料比较,差异无统计学意义(P>0.05)。

1.2 方法

术前禁食 12 小时,禁水 4 小时,进入手术室,给予复方氯化钠进行静脉注射,同时给予咪达唑仑 0.05 mg/kg 进行诱导麻

醉,密切监测患者的生命体征。两组患者均给予瑞芬太尼靶控输注,靶控浓度控制 3 ng/mL,诱导时间 2-3 分钟。

1.2.1 观察组 本组采取七氟醚-瑞芬太尼静吸复合麻醉,每分钟静脉输注瑞芬太尼 0.3-1.0 μg/kg,持续吸入浓度控制 1%-2%七氟醚,保持呼吸末七氟醚的浓度 1.0MAC。

1.2.2 对照组 本组采取丙泊酚-瑞芬太尼静吸复合麻醉,丙泊酚 1.5-2.0 mg/kg,咪达唑仑 0.05 mg/kg,顺式阿曲库铵 0.15 mg/kg,行静脉输注,3 分钟后给予气管插管,连接麻醉机,每分钟呼吸频率控制 12-14 次,每分钟氧流量控制 1.0 L,潮气量控制 8-10 mL/kg。

1.3 观察指标

观察两组患者术前、术后的认知功能采取简易智力状态检查量表(MMSE)对认知功能进行评估,共 30 条项目,回答正确 1 分,回答错误 0 分,分数 0-30 分,分数越高,认知功能越好,≤24 分患者均可判断为认知功能障碍;同时记录 TMT 完成时间,在白纸上放置散乱的 25 个数字,由 1-25,要求患者按照由大到小的顺序摆放,记录消耗时间;记录术后并发症情况。

2 结果

2.1 两组认知功能评分

对照组的患者在手术后 1 天认知功能评分低于术前 1 天,差异有统计学意义(P<0.05)。观察组患者术后 1 天的认知功能评分高于均对照组,实验差异有统计学意义(P<0.05)。表 1。

表 1 两组认知功能评分对比[$\bar{x} \pm s$, 分]

Table 1 Comparison of cognitive function scores of the two groups [$\bar{x} \pm s$, scores]

Groups	n	1 day before operation	1 day after operation	t	P
Observation group	74	29.80±2.11	29.77±0.77	0.118	>0.05
Control group	74	29.76±2.08	28.00±0.85	3.016	<0.05
t		0.104	3.512		
P		>0.05	<0.05		

2.2 两组 TMT 完成时间

对照组患者术后 1 天 TMT 完成时间慢于术前 1 天,差异

有统计学意义(P<0.05)。观察组患者术后 1 天 TMT 完成时间快于对照组,差异有统计学意义(P<0.05),见表 2。

表 2 两组 TMT 完成时间对比[$\bar{x} \pm s$, 秒]

Table 2 Comparison of TMT completion time in two groups [$\bar{x} \pm s$, seconds]

Groups	n	1 day before operation	1 day after operation	t	P
Observation group	74	34.93±4.21	35.24±3.03	0.425	>0.05
Control group	74	35.00±3.25	40.24±3.55	6.315	<0.05
t		0.101	7.112		
P		>0.05	<0.05		

2.3 术后两组并发症情况

观察组患者术后呼吸抑制、恶心呕吐、躁动、嗜睡、头晕发生率均低于对照组,数据的差异具有统计学意义(P<0.05)。见表 3

3 讨论

瑞芬太尼是阿片受体激动剂,常用于各类外科手术的麻醉中,其见效迅速,并且可快速吸收,属于较为优秀的麻醉药物,

丙泊酚复合瑞芬太尼是子宫肌瘤腹腔镜手术常用的麻醉方式,虽然效果尚可,但探寻更好的手术麻醉方法对手术的顺利进行有利,而麻醉效果往往与药物的选择密切相关^[7,8]。

七氟醚是吸入麻醉药物,血液挥发性和溶解度均较低,用于麻醉见效非常快,且不具有呼吸道刺激作用。麻醉效果比较平稳,对机体器官的保护作用较好,因此可与瑞芬太尼复合,用于子宫肌瘤腹腔镜手术中,研究显示^[9,10],采用七氟醚复合瑞芬太尼静吸复合麻醉,用于子宫肌瘤腹腔镜手术,应用观察组患

表 3 两组术后并发症情况对比 [n(%)]

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

Groups	n	Respiratory inhibition	Nausea and vomiting	Restlessness	Lethargy	Dizziness
Observation group	74	0(0.00)	1(1.35)	1(1.35)	1(1.35)	1(1.35)
Control group	74	7(9.46)	11(14.86)	12(16.22)	11(14.86)	10(13.51)
χ^2		2.838	4.053	4.461	4.053	3.648
P		<0.05	<0.05	<0.05	<0.05	<0.05

者各时间段血流指标稳定性显著高于对照组,因此说明七氟醚复合瑞芬太尼对患者血流指标的稳定性更加有利^[11-14]。原因在于七氟醚有效的抑制了应激反应时的儿茶酚氨释放,并且其可促使一氧化氮生成,帮助血流稳定。而本研究从另一方面进行了对照观察,患者麻醉镇静加深,会对患者神经递质生成造成影响,降低患者认知功能,本研究从患者认知功能的角度评价瑞芬太尼复合七氟醚的作用^[15,16]。TMT 和 MMSE 是较为客观的认知功能评价指标,本研究中两组均无认知功能障碍发生,但观察组术后 TMT 完成时间优于对照组,因此说明了七氟醚复合瑞芬太尼对患者认知系统损伤较小。而麻醉的安全性也是需要重视的方面,本研究对患者不良反应的观察中发现,丙泊酚可能会带来较高比例的头晕、恶心呕吐和躁动嗜睡等不良反应,也有部分患者出现了呼吸抑制^[17-20],而七氟醚则显得更加安全,对呼吸道刺激作用小,麻醉更加平稳,因此观察组不良反应发生率明显低于对照组,说明七氟醚复合瑞芬太尼十分安全。

总之,七氟醚-瑞芬太尼静吸复合麻醉是一种子宫肌瘤腹腔镜手术较为适合的麻醉方式,其对患者认知功能影响较小,优于丙泊酚,并且相关并发症发生率也比较低,是一种安全有效的麻醉方式。

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