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垂体后叶素联合催产素对腹腔镜下子宫肌瘤剔除术患者循环系统的影响及止血效果

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摘要 目的:研究垂体后叶素联合催产素对腹腔镜下子宫肌瘤剔除术患者循环系统的影响及止血效果。**方法:**收集本院 2011 年 10 月至 2013 年 10 月进行腹腔镜下子宫肌瘤剔除术的 75 例子宫肌瘤患者,采用简单随机分组的方法将研究样本序贯分为 A 组(垂体后叶素组)、B 组(催产素组)、C 组(垂体后叶素联合催产素组)三组,各 25 例。比较各组循环系统和止血效果指标是否有变化及差异。**结果:**三组之间收缩压、舒张压、心率差异有统计学意义($P<0.05$),不同时间的收缩压、舒张压、心率差异有统计学意义($P<0.05$),收缩压、舒张压、心率分组与时间之间有交互作用($P<0.05$)。A 组较 B 组低血压、心动过速及出血量更少,B 组较 A 组高血压、心动过缓更少,差异均有统计学意义($P<0.05$);C 组较 A 组高血压、心动过缓更少,差异有统计学意义($P<0.05$);C 组较 B 组低血压、心动过速及出血量更少,差异有统计学意义($P<0.05$)。**结论:**腹腔镜下子宫肌瘤剔除术患者联合应用垂体后叶素与催产素后循环波动小,止血效果好,值得在临床上推广应用。

关键词:垂体后叶素;催产素;子宫肌瘤

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The Effect of Posterior Pituitary Hormone Combined Oxytocin on Circulatory System and Hemostasis of Patients Undergoing Laparoscopic Myomectomy

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ABSTRACT Objective: To study the effect of posterior pituitary hormone combined oxytocin on laparoscopic myomectomy patients' circulatory system and hemostasis. **Methods:** 75 uterine fibroids patients undergoing laparoscopic myomectomy surgery from October 2011 to October 2013 were selected in our hospital, a simple random sample method was used to randomly divide cases sequentially into group A (posterior pituitary Su group), group B (oxytocin group), group c (vasopressin combined oxytocin group), with 25 cases in each group. Changes and differences in effect indicators were compared to evaluate the circulatory system and hemostatic. **Results:** The systolic blood pressure, diastolic blood pressure and heart rate within the three groups have statistically significant difference ($P<0.05$), systolic blood pressure, diastolic blood pressure and heart rate at different times are statistically significant different ($P<0.05$), there is a statistically significant interaction among systolic blood pressure, diastolic blood pressure and heart rate had ($P<0.05$). Hypertension, hypotension, tachycardia, bradycardia and bleeding volume between group A and group B are statistically significant different ($P<0.05$); Hypertension, bradycardia are statistically significant difference ($P<0.05$) between group A and group C; Hypotension, tachycardia and bleeding between group B and group C are statistically significant different ($P<0.05$). **Conclusions:** The combination of posterior pituitary hormone and oxytocin on patients of laparoscopic myomectomy can lead to small blood pressure fluctuations and good hemostatic effect and is worthy of clinical application.

Key words: Posterior pituitary hormone; Oxytocin; Uterine fibroids

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前言

子宫肌瘤是女性生殖器官中最常见的一种良性肿瘤,也是人体中最常见的肿瘤之一,主要是由子宫平滑肌细胞增生而成,又称为纤维肌瘤、子宫纤维瘤^[1-3]。腹腔镜下子宫肌瘤剔除术剔除肌瘤时容易发生残腔出血,腔镜下止血内凝器电凝止血无

论单极或者双极都较难达到理想效果,因此术中常因出血多影响视野暴露而使手术操作变得更加困难^[4]。垂体后叶素是从猪、牛、羊等动物脑垂体后叶提取制成的水溶性制剂,近来多有应用于子宫肌瘤的报道。有研究报道表明,子宫肌瘤剔除术中子宫肌层注射垂体后叶素可减少术中出血量,缩短手术时间,且安全易操作;而大剂量催产素可使子宫产生节律性收缩或产生强直性收缩,从而压迫肌内血管起到子宫出血止血的作用。但两种药物单独使用均会导致明显的血压波动,给患者带来不利影响^[5,6]。为研究联合用药是否可以减少不利影响,本研究收集

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2011年10月至2013年10月我院75例进行腹腔镜下子宫肌瘤剔除术的患者,研究垂体后叶素联合催产素对腹腔镜下子宫肌瘤剔除术患者循环系统的影响及止血效果,为临床用药提供理论依据。现将结果报告如下。

1 资料和方法

1.1 一般资料

研究样本来自于本院2011年10月至2013年10月进行腹腔镜下子宫肌瘤剔除术的75例子宫肌瘤患者,采用简单随机分组的方法将研究样本序贯分为A组(垂体后叶素组)、B组(催产素组)、C组(垂体后叶素联合催产素组)三组,每组患者25例。入选标准:①子宫肌瘤最大直径4~10 cm;②子宫肌瘤数目≤6个;③肌壁间肌瘤或浆膜下肌瘤,排除宫颈肌瘤、黏膜下肌瘤及阔韧带肌瘤;④有性生活史者手术前行宫颈细胞学检查,排除宫颈癌可能;⑤有月经改变或B超下子宫内膜厚度≥14 mm者手术前行诊断性刮宫排除子宫内膜恶性病变。排除标准:①有心血管、免疫系统和内分泌疾病史;②近半年内有激素和性激素使用史;③有恶性肿瘤及放化疗病史。三组间一般资料(年龄、病程)差异无统计学意义($P>0.05$),组间均衡可比。研究获得伦理委员会批准,研究样本对研究过程已知晓,并签署知情同意书。

1.2 治疗方法

手术前进行检查排除手术禁忌证,三组患者均采用气管插管静脉复合全麻,持续心电监护。入室后常规监测BP、HR、ECG、SpO₂,开放上肢静脉通路。瑞芬太尼5 ng/ml,丙泊酚3 ng/ml,维库溴铵剂量按维库溴铵计算调整。常规气腹穿刺,气腹压力为13~14 mmHg,头低15°膀胱截石体位。在行肌瘤剔除手术前,麻醉医师根据患者BP、HR应用血管活性药物,以维

持血流动力学的稳定。术中应用止血药由术者和麻醉医师共同完成。A组经由肌瘤周围子宫肌层注入垂体后叶素6U+0.9% NaCl注射液10 mL;B组经由肌瘤周围子宫肌层注射催产素20U+0.9% NaCl注射液10 mL,400~500 mL大瓶静脉点滴10U催产素;C组经由子宫肌层注射垂体后叶素3U+0.9% NaCl注射液10 mL,400~500 mL大瓶静脉点滴10U催产素。

1.3 检测方法和指标

于患者注药前(T_0)、注药后2 min(T_1)、注药后5 min(T_2)、注药后15 min(T_3)、注药后30 min(T_4)的收缩压、舒张压、心率,并记录患者高血压、低血压、心动过速、心动过缓发生情况及出血量。

1.4 数据整理和统计

本次研究所得数据采用Excel建立数据库,由录入员双人双录入且进行数据校对,用SPSS 17.0统计软件进行统计分析,计数资料比较采用 χ^2 检验;计量资料用均数±标准差($\bar{x} \pm s$)表示,三组间比较采用方差分析,两两比较采用LSD-t检验,重复测量数据比较采用重复测量设计资料的方差分析。检验水准 $\alpha=0.05$ 。

2 结果

2.1 三组患者收缩压、舒张压及心率比较

三组之间收缩压差异有统计学意义(F 组间=78.667, $P=0.000$),不同时间的收缩压差异有统计学意义(F 时间=3.746, $P=0.008$),分组与时间之间有交互作用(F 交互=11.931, $P=0.000$);三组之间舒张压差异有统计学意义(F 组间=257.642, $P=0.000$),不同时间的舒张压差异有统计学意义(F 时间=3.843, $P=0.008$),分组与时间之间有交互作用(F 交互=142.031, $P=0.000$);三组之间心率差异有统计学意义(F 组间=78.667, $P=0.000$),不同时间的心率差异有统计学意义(F 时间=9.480, $P=0.000$),分组与

表1 三组不同时间收缩压、舒张压及心率比较($\bar{x} \pm s$)

Table 1 Comparison of systolic pressure, diastolic pressure and heart rate between three groups at different time($\bar{x} \pm s$)

指标 Indexes	时间 Time	A组(n=25) Group A(n=25)	B组(n=25) Group B(n=25)	C组(n=25) Group C(n=25)
收缩压(mm Hg) Systolic pressure(mm Hg)	T0	115.31± 12.27	118.27± 12.79	115.49± 13.33
	T1	133.47± 15.28	90.62± 11.12 ^a	105.43± 12.90 ^{ab}
	T2	131.67± 14.29	91.23± 12.14 ^a	120.59± 15.21 ^{ab}
	T3	128.49± 15.49	101.77± 14.38 ^a	119.12± 14.09 ^{ab}
	T4	121.74± 13.54	98.72± 12.18 ^a	116.98± 13.98 ^b
舒张压(mm Hg) Diastolic pressure(mm Hg)	T0	80.19± 11.48	81.29± 12.54	80.04± 12.39
	T1	104.72± 14.33	49.62± 12.38 ^a	66.37± 11.24 ^{ab}
	T2	103.56± 15.36	58.49± 10.45 ^a	75.23± 12.42 ^{ab}
	T3	94.12± 11.15	61.43± 11.32 ^a	71.32± 10.23 ^{ab}
	T4	87.42± 9.42	69.41± 11.12 ^a	73.21± 11.23 ^a
心率(次/min) Heart rate(Time/min)	T0	80.42± 11.62	79.23± 11.69	81.03± 12.01
	T1	61.42± 12.26	117.09± 13.38 ^a	79.38± 11.41 ^{ab}
	T2	62.29± 13.08	108.26± 12.19 ^a	73.48± 12.37 ^{ab}
	T3	62.29± 11.39	92.84± 13.38 ^a	73.31± 13.18 ^{ab}
	T4	70.35± 10.29	81.42± 11.36 ^a	75.52± 12.43

注:a和A组比较, $P<0.05$;b和B组比较, $P<0.05$

Note:a in comparison with group A, $P<0.05$;b in comparison with group B, $P<0.05$

时间之间有交互作用(F 交互=27.104, $P=0.000$)。见表1。

2.2 三组患者并发症及出血量比较

A组较B组低血压、心动过速及出血量更少, B组较A组

高血压、心动过缓更少, 差异均有统计学意义($P<0.05$); C组较A

组高血压、心动过缓更少, 差异有统计学意义($P<0.05$); C组较

B组低血压、心动过速及出血量更少, 差异有统计学意义($P<0.05$)。

表2 三组患者并发症及出血量比较[n(%), $\bar{x} \pm s$]

Table 2 Comparison of complications and the amount of bleeding between three groups [n(%), $\bar{x} \pm s$]

组别 Groups	高血压 Hypertension	低血压 Hypopiesis	心动过速 Tachycardia	心动过缓 Bradycardia	出血量(ml) Amount of bleeding(ml)
A组(n=25) Group A(n=25)	14(56.0)	0(0.0)	0(0.0)	7(28.0)	68.3± 31.2
B组(n=25) Group B(n=25)	0(0.0) ^a	13(52.0) ^a	12(48.0) ^a	0(0.0) ^a	123.4± 48.1 ^a
C组(n=25) Group C(n=25)	2(8.0) ^a	1(4.0) ^b	0(0.0) ^b	0(0.0) ^a	70.3± 29.4 ^b

注: a和A组比较, $P<0.05$; b和B组比较, $P<0.05$

Note: a in comparison with group A, $P<0.05$; b in comparison with group B, $P<0.05$

05)。见表2。

3 讨论

子宫肌瘤(Hysteromyoma)多无症状, 少数表现为阴道出血, 腹部触及肿物以及压迫症状等, 如果没有及时治疗可造成女性不孕、流产、尿频、排尿障碍等影响^[7-9]。子宫肌瘤可单独发生也可多处发生, 根据肌瘤的部位不同可分为以下四种常见类型: 肌壁间肌瘤, 黏膜下肌瘤, 浆膜下肌瘤, 子宫颈肌瘤。肌瘤剔除术是一种仅仅将患者子宫肌瘤剔除但仍然保留子宫的手术, 适用于月经过多, 肌瘤较大, 因肌瘤造成不孕者, 黏膜下肌瘤, 有压迫症状, 肌瘤生长较快但无恶变者^[5, 6]。随着内镜技术的日益发展, 腹腔镜下子宫肌瘤剔除术得到了临床上越来越多的肯定, 比如创伤小、恢复快等优点。但是, 腹腔镜下子宫肌瘤剔除术剔除肌瘤时容易出现残腔出血, 腔镜下的止血内凝器无论使用单极或者双极电凝止血都较难达到理想效果, 因此术中常因出血多导致视野暴露困难而使手术操作变得更加困难^[7]。因此对腹腔镜下子宫肌瘤剔除术患者进行术中止血尤为重要。

垂体后叶素半衰期为10~20min, 人体最大使用剂量为20U, 本研究垂体后叶素的剂量为6U, 故安全有效^[8]。但是垂体后叶素会导致血压显著波动。本研究中三组之间收缩压、舒张压、心率有差异, 不同时间的收缩压、舒张压、心率有差异, 可能是由于交感活性增加造成末梢血管收缩引起外周血管阻力增加所致; 由于气腹压力的持续存在, 舒张压持续升高的时间也较长^[9, 10]。本研究中C组T1时收缩压、舒张压降低, 其它时点与术前比较无明显差异, 可能是由于早期滴注催产素过快的原因, 应根据适量调整催产素给药剂量。而B组各时点收缩压、舒张压下降, 出血量更多, 应及时给予升压药加以控制。A组较B组低血压、心动过速及出血量更少, B组较A组高血压、心动过缓更少。这可能是因为注射垂体后叶素可以减少术中出血量, 缩短手术时间^[11]。同时腹腔镜CO₂气腹时, 随着腹内分压增加

和随着手术时间的延长, CO₂经内脏器官吸收而增多而引起高碳酸, 高碳酸血症则易激发交感神经系统, 血压、心率发生改变从而导致心肌抑制^[12]。垂体后叶素和催产素两者协同使血压升高, 动脉压升高反射性引起心率减慢。注射垂体后叶素后会出现面色苍白、头痛及头晕、腹痛、过敏、心悸胸闷、血压升高等不良反应, 甚至致抽搐昏迷和精神失常^[13]。对心功能较差或合并其他心脑血管疾病的患者极为不利, 这种瞬间剧烈的循环波动, 容易造成心脑血管意外^[14]。注射大剂量催产素能直接扩张血管, 引起血压下降, 心率反射性增快^[15]。C组较A组高血压、心动过缓更少; C组较B组低血压、心动过速及出血量更少。该结果提示联合应用垂体后叶素与催产素可抵消两种药物单独应用对外周血管的应用, 避免剧烈的循环波动, 达到良好的止血效果。

综上所述, 联合应用垂体后叶素与催产素有效减少了子宫肌瘤剔除术中的出血量, 并缩短了手术时间, 使循环功能稳定, 避免了血压的剧烈波动, 值得在临床上进一步推广。

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