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静注氟比洛芬酯预防肺叶手术中全麻患者苏醒期躁动的临床研究

栗村瑞 王玉洁 王运灵 王冬婷 杨天德[△]

(第三军医大学新桥医院麻醉科 重庆 400037)

摘要 目的:探讨肺叶手术中超前应用氟比洛芬酯对减轻全身麻醉苏醒期躁动发生率的影响。**方法:**60例肺叶切除术患者随机分为A组和B组,每组30例,两组均常规诱导全麻气管插管,术中瑞芬、丙泊酚、维库溴铵泵注维持麻醉,A组于术前给予氟比洛芬酯1 MG/KG。比较两组躁动得分、苏醒后(10 min、30 min、1 h、2 h、4 h、24 h)六个时间点疼痛评分及不良反应发生率。**结果:**两组出血时间、拔管时间、麻醉时间差异均无统计学意义(均 $P>0.05$);A组患者的躁动得分显著低于B组,差异有统计学意义($P<0.05$);两组的VAS评分差异有统计学意义($P<0.05$),不同时间点的VAS评分差异有统计学意义($P<0.05$),分组与时间之间存在交互作用($P<0.05$);A组患者的不良反应发生率低于B组,差异有统计学意义($P<0.05$)。**结论:**肺叶手术中超前应用氟比洛芬酯具有良好的镇痛效果,可以降低全身麻醉苏醒期躁动的发生率。

关键词:氟比洛芬酯;躁动;疼痛评分;肺叶手术

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The Clinical Research of Intravenous Injection of Flurbiprofen Ester on the Prevention of Emergence Agitation after General Anesthesia in Lung Surgery

LI Cun-rui, WANG Yu-jie, WANG Yun-ling, WANG Dong-ting, YANG Tian-de[△]

(Department of anesthesiology, Xinqiao Hospital of Third Military Medical University, Chongqing, 400037, China)

ABSTRACT Objective: To explore the effect of flurbiprofen ester preemptively used in lung surgery on reducing the incidence of emergence agitation after general anesthesia. **Methods:** 60 lobectomy patients were randomly divided into two groups with 30 cases in each group. General anesthesia and tracheal intubation were induced commonly to all patients in the two groups: remifentanyl, propofol and vecuronium bromide were pumped to make anesthesia maintain. In addition, 1MG/KG flurbiprofen ester was given to group A before the lung surgery. Agitation score, visual analogue scale after revival (10 min, 30 min, 1 h, 2 h, 4 h, 24 h) and incidence of adverse reactions were compared between two groups. **Results:** The bleeding duration, extubation time and anesthesia time between two groups showed no significant statistical differences($P>0.05$), while the agitation score of group A was lower than that of group B($P<0.05$), visual analogue scale between two groups presented significant statistical differences($P<0.05$), visual analogue scale at different time points had significant statistical differences($P<0.05$), there was interaction between groups and time($P<0.05$); The incidence of adverse reactions of group A was lower than that of group B ($P<0.05$). **Conclusions:** Application of flurbiprofen ester before lung surgery has good effect of analgesia, and it can reduce the incidence of emergence agitation after general anesthesia.

Key words: Flurbiprofen ester; Agitation; Visual analogue scale; Lung surgery

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前言

随着目前临床手术的广泛开展,手术后的一系列问题逐渐凸显,最麻烦的问题当属苏醒期躁动,全麻苏醒期躁动(emergence agitation, EA)是麻醉后苏醒时期的一种不恰当的行为,临床上主要表现为躁动、兴奋和定向障碍,出现肢体的无意识动作、挣扎、妄想、呻吟或语无伦次等的不适当行为。其出现可导致患者出现很多并发症,发生意外伤害,甚至还可导致手术

成败^[1-3]。肺叶切除手术切口大、创伤大,术后发生麻醉苏醒期躁动的发生率高。近年来国内外研究显示:全麻苏醒期躁动的发生与患者自身、麻醉及手术因素有关^[4],氟比洛芬酯在胸腔镜、腹腔镜和脊柱手术等手术中减少手术患者麻醉苏醒期躁动的发生^[5,6]。本研究拟通过在肺叶手术中超前应用氟比洛芬酯,观察其在减轻全身麻醉苏醒期躁动发生率。

1 资料和方法

1.1 一般资料

选择本院门诊和住院收治的择期进行开胸手术者60例,其纳入标准为:1)ASA分期Ⅰ~Ⅱ期;2)年龄35~60岁;3)年龄在16岁~65岁;4)手术时间2~4小时;排除标准:1)心血管病变;2)凝血功能异常;3)消化道溃疡史;4)肝肾功能异常;5)阿司匹林过敏史^[7]。采用随机数字法将60例样本随机分为A

作者简介:栗村瑞(1980-),女,本科,住院医师,从事减轻全麻后苏醒期的躁动方面的研究, E-mail: licunrui998@126.com

△通讯作者:杨天德(1962-),男,博士,教授,主任医师,从事神经病理性疼痛方面的研究

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组和B组,每组患者30例。A组男性13例,女性17例,平均年龄(46.34±2.23)岁;B组男性14例,女性16例,平均年龄(44.21±2.47)岁。两组一般资料(性别、年龄等)均无显著性差异($P>0.05$),组间均衡可比。患者或其法定监护人知晓本次研究内容,均签署知情同意书。本次研究经由本院医学伦理道德委员会同意并备案。

1.2 方法

1.2.1 治疗方法 所有患者均于术前半小时使用氢化泼尼松40MG+戊乙奎醚0.5MG静滴,入室开放静脉通路,监测各项生命体征指标,行全麻诱导。诱导:丙泊酚1MG/KG,舒芬太尼0.5UG/KG,咪达唑仑0.01MG/KG,维库溴铵0.12MG/KG。于手术开始时加深麻醉,术中丙泊酚,瑞芬,维库溴铵泵注维持麻醉,于手术结束前10分钟结束丙泊酚泵注,手术结束时结束瑞芬泵注。A组于手术开始时给予氟比洛芬酯1MG/KG进行超前镇痛,B组不给。手术结束后两组患者采取常规支持治疗与观察,若患者有吞咽反射,MAC值 ≤ 0.3 ,且吸空气5分钟后血氧维持在95%以上即可拔出气管导管^[8]。

1.2.2 评价指标 于拔出气管导管至拔管后15min内观察患者的躁动情况并进行躁动评分^[9]:0分为无躁动;1分为轻度躁动,吸痰刺激时有躁动;2分无吸痰时还有挣扎,但程度不剧

烈,不需医护人员制动;3分为重度躁动,剧烈挣扎,需医护人员制动。采用VAS评分对患者苏醒后10min(T_1)、苏醒后30min(T_2)、苏醒后1h(T_3)、苏醒后2h(T_4)、苏醒后4h(T_5)、苏醒后24h(T_6)六个时间点进行疼痛评分:0~4分为镇痛良好,4~7分为镇痛欠佳,7~10分为镇痛无效。在术中及术后记录患者的出血时间、拔管时间和麻醉时间。观察记录患者头晕、恶心、呕吐、嗜睡、畏寒发热等不良反应发生情况。

1.2.3 数据整理和统计 本次研究所得数据采用Excel建立数据库,双人双录入并进行数据校对,用SPSS 20.0进行统计分析,计数资料两组间比较采用独立两组的t检验,计数资料比较采取卡方分析,等级资料比较采用秩和检验。检验水准 $\alpha=0.05$ 。

2 结果

2.1 两组出血时间、拔管时间和麻醉时间比较

A组的出血时间、拔管时间和麻醉时间分别为(23.19±3.41)min、(9.25±1.20)min和(213.38±17.22)min,B组分别为(23.58±3.36)min、(9.07±1.82)min和(210.62±18.30)min,两组出血时间、拔管时间、麻醉时间差异均无统计学意义($P>0.05$)。见表1。

表1 两组出血时间、拔管时间和麻醉时间比较($\bar{x}\pm s$)

Table 1 Comparison of the bleeding duration, and anesthesia time between two groups($\bar{x}\pm s$)

组别 Groups	例数 Cases	出血时间 Bleeding duration	拔管时间 Extubation time	麻醉时间 Anesthesia time
A组 Group A	30	23.19±3.41	9.25±1.20	213.38±17.22
B组 Group B	30	23.58±3.36	9.07±1.82	210.62±18.30
t	-	0.446	0.452	0.602
P	-	0.657	0.635	0.550

2.2 两组躁动情况比较

A组躁动评分0分、1分和2分的例数分别为19例(63.33%)、8例(26.67%)和3例(10.00%),无得3分者;B组躁

动评分0分、1分、2分和3分的例数分别为12例(40.00%)、10例(33.33%)、6例(20.00%)和2例(6.67%),A组患者的躁动得分显著低于B组,差异有统计学意义($Z=2.026, P=0.043$)。见表2。

表2 两组躁动得分分布(n/%)

Table 2 Agitation score distribution in two groups(n/%)

组别 Groups	例 Cases	0分 0 point	1分 1point	2分 2 points	3分 3 points
A组 Group A	30	19(63.33)	8(26.67)	3(10.00)	0(0.00)
B组 Group B	30	12(40.00)	10(33.33)	6(20.00)	2(6.67)

2.3 两组患者VAS评分比较

两组的VAS评分差异有统计学意义($F_{\text{分组}}=108.585, P=0.000$),不同时间点的VAS评分差异有统计学意义($F_{\text{时间}}$

$=40.732, P=0.000$),分组与时间之间存在交互作用($F_{\text{交互}}=7.558, P=0.000$)。见表3。

表3 两组患者VAS评分比较($n=60, \bar{x}\pm s$)

Table 3 Comparison of VAS score between two groups($n=60, \bar{x}\pm s$)

组别 Groups	T_1	T_2	T_3	T_4	T_5	T_6
A组 Group A	0.23±0.10	0.52±0.13	0.83±0.36	0.92±0.41	1.55±0.61	0.75±0.44
B组 Group B	0.78±0.47	1.41±0.73	1.59±0.76	1.87±0.64	1.62±0.78	0.72±0.42

2.4 两组不良反应发生情况比较

A组1例发生恶心现象,2例发生头晕现象;B组4例呼吸

浅慢,5例发生恶心现象,3例发生头晕现象,A组患者的不良反应发生率低于B组,差异有统计学意义($\chi^2=5.963, P=0.015$)。见表4。

表 4 两组不良反应发生情况比较(n/%)

Table 4 Comparison of incidence of adverse reactions between two groups(n/%)

组别 Groups	例 Cases	呼吸浅慢 Hypopnea	恶心 Nausea	呕吐 Vomit	头晕 Dizzy	总例数 Total cases	发生率(%) Total incidence rate
A 组 Group A	30	0	1	0	2	3	10.0
B 组 Group B	30	4	5	0	3	11	36.7

3 讨论

术后躁动是全麻患者苏醒期常见的不良反应,截至2010年,我国全麻苏醒期躁动的报道发生率为22.5%,而国外报道发生率为39.2%,可见全球全麻苏醒期躁动的发生率处于较高水平,且国外发生率高于国内^[10,11]。全麻苏醒期躁动不仅危害患者本身,也可对医护人员配置产生了极大的干扰作用^[12]。目前全麻苏醒期躁动的机制尚不清楚,但发现全麻苏醒期躁动与患者本身、麻醉和手术等因素有关,如患者的年龄、性别、文化水平、术中麻醉方式及麻醉用药、缺氧、高碳酸血症、酸碱及水电解质紊乱、术后疼痛、吸痰或导尿管的刺激等,其中术后疼痛是常见原因^[13,14],部分患者是由于术后镇痛效果欠佳所致。肺叶切除术为常见的开胸手术,手术范围大、手术时间长、创伤大、术后疼痛较明显,另外一般术后将置留导尿管,患者术前缺乏适应过程而易在清醒后因导尿管刺激尿道、膀胱而尿急尿痛,出现躁动情况^[15]。

本次研究发现:给予氟比洛芬酯进行超前镇痛组与未镇痛组的出血时间、拔管时间、麻醉时间差异均无统计学意义,说明氟比洛芬酯无中枢抑制作用,不引起患者血流动力学上的明显改变。这可能是因为中枢性镇痛药和非甾体类抗炎药可在一定程度上通过缓解疼痛来减少躁动的发生,如地佐辛、曲马朵、舒芬太尼等^[16,17]。氟比洛芬酯是一种非甾体类抗炎药,药物机理为抑制花生四烯酸级联瀑布中环氧合酶的活性,脊髓和外周抑制环氧化酶(cox)减少前列腺素^[18]。

另外本研究还发现:氟比洛芬酯超前镇痛组的躁动情况、镇痛效果优于未镇痛组,说明氟比洛芬酯可减低全身麻醉苏醒期躁动发生率,增强患者对导管及其疼痛刺激的耐受性,具有良好的镇痛效果。氟比洛芬酯具有更好的镇痛效果及减少躁动的发生的作用机制可能是:氟比洛芬酯是一种靶向镇痛药,是一种脂微球制剂,外围包裹着脂微球,脂微球可改变药物的体内分布情况,使氟比洛芬酯只分布在手术切口及炎症周围,前列腺素合成细胞如中性粒细胞、巨噬细胞摄取药物后抑制前列腺素的生物合成,从而对患者疼痛部位进行靶向性地消炎镇痛,降低手术创伤引起的痛觉过敏。脂微球制剂不但具有起效快、药效强、持续时间长、且不易引起胃粘膜损伤等优点,另外还不存在抑制中枢、影响患者苏醒等优势,但近几年研究发现该药在大手术情况下的疗效不佳,可能与药效以及药物代谢动力有关^[19,20]。

总而言之,试验结果表明氟比洛芬酯无中枢抑制作用,且具有良好的镇痛效果,证实其实减低全身麻醉苏醒期躁动发生率。

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