地佐辛与盐酸右美托咪定预防小儿术后躁动的效果比较

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摘 要 **目的** 探讨地佐辛与盐酸右美托咪定预防小儿术后躁动的效果及安全性。**方法** 择期行包皮套扎术患儿 90 例,随机分为地佐辛组、右美托咪定组和对照组,每组 30 例,均采用全身麻醉联合阴茎背神经阻滞麻醉。地佐辛组麻醉诱导后静脉泵注地佐辛 0.1 mg·kg^{-1};右美托咪定组麻醉诱导后静脉泵注盐酸右美托咪定 0.5 μg·kg^{-1};对照组麻醉诱导后静脉泵注等剂量 0.9%氯化钠注射液。观察患儿躁动发生率、手术后苏醒时间、手术中追加丙泊酚的量及手术结束后 6 h 内的不良反应。**结果** 3 组患儿均顺利完成手术,手术后苏醒时间差异无统计学意义($P>0.05$);地佐辛组、右美托咪定组和对照组手术后躁动发生率分别为 3.33%,0.00%和 46.67%($P<0.05$),3 组患儿术中均未追加丙泊酚,术后6 h内均未见明显不良反应。**结论** 地佐辛与盐酸右美托咪定均可有效预防患儿术后躁动,无明显不良反应,临床可安全使用。

关键词 地佐辛;右美托咪定,盐酸;躁动;麻醉

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Comparison of Effects of Dezocine and Dexmedetomidine Hydrochloride on Prevention Pediatric Postoperative Agitation

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ABSTRACT **Objective** To evaluate the effects and safety of dezocine and dexmedetomidine hydrochloride on the prevention of the pediatric postoperative agitation. **Methods** A total of 90 pediatric patients undergoing prepuce cerclage were randomly divided into 3 groups($n=30$): dezocine group(Group Dez), dexmedetomidine group(Group Dex) and control group (Group C), all groups were implemented general anesthesia combining with penile dorsal nerve block anesthesia. After induction of anesthesia, Group Dez and Group Dex were given 0.1 mg · kg^{-1} of dezocine and 0.5 μg · kg^{-1} of dexmedetomidine hydrochloride, respectively, Group C was given 0.9% sodium chloride solution. The rate of pediatric agitation, the operating room, the recovery time, the amount of additional propofol during the operation and the adverse reaction incidence within 6 hours after the surgery(circulation and respiratory depression, drowsiness, headache, nausea and vomiting) were observed and recorded . **Results** All groups have the surgery successfully done. There were no significantly difference among the three groups on the recovery time($P>0.05$) . The incidence of postoperative agitation was 3.33% in Group Dez, 0.00% in Group Dex, 46.67% in Group C , respectively($P<0.05$) . All of the pediatrics in three groups were not given additional propofol. There was no obvious adverse reaction at the time of 6 hours after surgery. **Conclusion** Dezocine and dexmedetomidine hydrochloride both can reduce the rate of postoperative agitation in pediatric patients and have no obvious side effects. Therefore, the clinical use of dezocine and dexmedetomidine hydrochloride are safe and effective.

KEY WORDS Dezocine; Dexmedetomidine, hydrochloride; Agitation; Anesthesia

小儿包皮套扎术是儿科常见手术,手术时间短,创伤小,多采阴茎背神经阻滞麻醉,但由于小儿难以配合,常常需要联合全身麻醉。全身麻醉苏醒期躁动(emergence agitation,EA)是全身麻醉苏醒期常见的并发症,有一定的自限性,但若不及时处理会引起严重的后果,如伤口裂开、出血等。给小儿留下不良的心理刺激,影响日后的恢复和精神发育,给家长及护士护理带来困难,降低了患儿家属的满意度[1-4]。因此小儿苏醒期躁动引起了麻醉医生关注,已证实多种药物可预防小儿苏醒期躁动如:阿片类药物、非甾体类药物、苯二氮 类药物、水合氯醛[1-7]等。1990 年地佐辛在美国上市,随后广泛应用于术后镇痛和癌性镇痛[8-9]。盐酸右美托咪定是新型镇静、镇痛、抗焦虑药物[10-11]。2015 年 7 月 1 日—8 月 1 日,笔者比较地佐辛与盐酸右美托咪定用于预防小儿术后躁动的效果及安全性,为临床用药提供参考。

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1 资料与方法

1.1 临床资料 选择在小儿外科手术室全身麻醉联合阴茎背神经阻滞麻醉下择期行包皮套扎术患儿 90

例,按照美国麻醉医师协会(American Society of Anesthesiologists,ASA)分级为Ⅰ或Ⅱ级,年龄3~6岁。排除困难气道、手术复杂、体质量超出标准体质量±20%及严重心肺等并发症患儿。本研究通过本院伦理委员会批准,患儿家属同意并签署知情同意书。

1.2 分组与麻醉方法　使用随机数字表法,随机分为地佐辛组、右美托咪定组和对照组,每组30例。手术前1 d访视患儿,充分与患儿沟通并与患儿建立良好的关系,取得患儿的合作。3组患儿手术前常规禁食8 h、禁饮3 h,3组患儿均不使用术前药物,入手术室前30 min在病房建立静脉通道。患儿入手术室后给予面罩吸氧,监测心电图(ECG)、血压(BP)、心率(HR)、血氧饱和度(SpO_2),保持手术室温度24~26 ℃。并以8~10 mL·kg^{-1}·h^{-1}速度静脉滴注复方林格溶液。麻醉诱导:3组患儿均经静脉给予丙泊酚(西安力邦制药有限公司,批准文号:国药准字H20010368,规格20 mL:200 mg)2.5 mg·kg^{-1},注射速度0.4 mL·s^{-1}。地佐辛组静脉泵注地佐辛(扬子江药业集团有限公司,批准文号:国药准字H80932002,规格1 mL∶5mg)0.1 mg·kg^{-1};右美托咪定组静脉泵注盐酸右美托咪定(江苏恒瑞医药股份有限公司,批准文号:国药准字H20090248,规格2 mL∶200 μg)0.5 μg·kg^{-1};对照组静脉泵注等容量0.9%氯化钠注射液。3组患儿静脉泵注时间10 min,剂量10 mL。患儿入睡后静脉泵注药物的同时,开始外科消毒,铺无菌巾,阴茎背神经阻滞后给予包皮套扎术。维持心率、血压在麻醉前基础水平±20%。手术结束后将患儿转入麻醉恢复室,1 min轻拍患儿眉间呼唤患儿1次,待患儿睁眼后送回病房。

1.3 异常情况及处理　手术期间各组患儿若出现体动,则暂停手术,静脉追加丙泊酚2 mg·kg^{-1}(注射速度0.4 mL·s^{-1});若心率低于基础水平±20%,静脉注射阿托品0.01 mg·kg^{-1};若出现呼吸抑制,给予球囊辅助呼吸(处理标准:呼吸频率<12次·min^{-1}、SpO_2<95%)。

1.4 观察指标　观察并记录患儿入室前、入室后、出手术前的配合情况,配合则无躁动,哭闹、躯体及四肢乱动则为躁动;手术后呼唤睁眼时间、术中追加丙泊酚的量及手术结束后6 h内由责任护士观察患儿不良反应(循环及呼吸抑制、嗜睡、头痛、恶心呕吐)的发生率。

1.5 统计学方法　采用SPSS16.0版统计学软件,计量资料以均数±标准差($\bar{x}\pm s$)表示,计数资料均用率表示。计量资料采用单因素方差分析,计数资料采用卡方检验。以$P<0.05$为差异有统计学意义。

2 结果

2.1 临床资料比较　3组患儿年龄、体质量、手术时间及苏醒均差异无统计学意义(均$P>0.05$),见表1。

表1　3组患儿一般临床资料比较

Tab.1　Comparison of baseline data among three groups of pediatric patients　　$\bar{x}\pm s$, $n=30$

组别	年龄/岁	体质量/kg	手术时间/min	苏醒时间/min
对照组	5.18±0.74	18.07±1.36	8.03±0.49	11.70±0.75
地佐辛组	5.20±0.61	18.47±1.87	8.30±0.53	11.77±0.57
右美托咪定组	5.23±0.82	18.70±1.05	8.27±0.58	11.90±0.61

2.2 患儿躁动情况　入手术室前及入手术室后3组患儿躁动发生率差异无统计学意义($P>0.05$);地佐辛组与右美托咪定组手术结束后躁动发生率差异无统计学意义($P>0.05$),均低于对照组(均$P<0.05$),见表2。

表2　3组患儿躁动发生率比较

Tab.2　Comparison of agitation rate among three groups of patients　　$n=30$

组别	入手术室前		入手术室后		手术结束后	
	例	%	例	%	例	%
对照组	9	30.00	10	33.33	14	46.67
地佐辛组	5	16.67	11	36.67	1	3.33^{*1}
右美托咪定组	8	26.67	13	43.33	0	0.00^{*1}
χ^2		1.564		0.662		29.28
P		0.457		0.718		0.000

与对照组比较,$^{*1}P<0.05$

Compared with control group, $^{*1}P<0.05$

2.3 手术中追加丙泊酚情况及手术后不良反应　3组患儿术中均未追加丙泊酚,术后6 h内3组患儿均未见循环及呼吸抑制、嗜睡、头痛、恶心呕吐等不良反应。

3 讨论

小儿包皮过长最有效的治疗方式是手术治疗,可有效预防包皮龟头炎、泌尿系统感染等疾病,传统的手术方式是采用包皮环切术,随着外科手术技术的进步,目前多采用套扎器套扎包皮,手术时间短(我院从患儿入手术室消毒、铺巾、阴茎背神经阻滞及手术的平均时间约为8.2 min)、疼痛刺激小、恢复快、便于患儿家属及护士术后护理。但由于患儿对手术存在恐惧,很难配合,常常需要全身麻醉复合阴茎背神经阻滞麻醉。患儿在术后苏醒期躁动,降低了患儿家属的满意度,影

响了整个手术的效果,也给患儿留下了心理阴影,因此对麻醉医生提出了更高的要求。本研究中丙泊酚全身麻醉复合阴茎背神经阻滞麻醉,术中患儿安静无体动,镇痛作用完全。丙泊酚起效迅速,代谢完全,不良反应少,小儿单次按 2.5 mg · kg^{-1} 给药,平均苏醒时间 8 min[12]。这就要求麻醉医生使用长效的药物,使患儿安静的渡过苏醒期,临床上广泛应用的药物如:阿片类药物、非甾体类药物、苯二氮 类药物、水合氯醛等虽然达到了镇静的效果但也带来了安全隐患[13-15]。麻醉性镇痛药如吗啡、芬太尼等主要是通过激动 μ 受体而发挥作用,镇痛疗效满意,但镇静作用强,易产生不同程度的呼吸、循环抑制及术后恶心、呕吐等不良反应[16-19]。地佐辛是一种新型强效阿片类镇痛药,1990 年在美国上市。地佐辛是苯吗啡烷类衍生物,阿片受体部分激动剂,其主要分布于大脑、脑干和脊髓的 κ 受体而产生镇痛作用,镇静作用轻微。地佐辛拮抗 μ 受体,依赖性小而列入非麻醉品范畴,广泛应用于术后镇痛和癌性镇痛[8-9]。盐酸右美托咪定 1999 年在美国批准用于重症监护病房患者的短期镇静。盐酸右美托咪定是一种新型的高选择性的 α_2 肾上腺素能受体激动药,通过抑制去甲肾上腺素的释放而产生镇静、镇痛作用。盐酸右美托咪定有口内含化、口服、滴鼻、皮下注射、肌内注射、静脉注射等多种给药途径。因为静脉注射盐酸右美托咪定易引起心动过缓,一般要求给药时间大于 10 min[20]。本研究中为保证双盲 3 组患儿均采用 10 min 的给药时间。研究表明盐酸右美托咪定因给药方式不同,其达峰时间、起效时间、峰浓度均有较大差异,且该药具有双相半衰期,分布半衰期为 6 min,消除半衰期为 2 h,然而盐酸右美托咪定在体内的清除率和代谢半衰期个体差异很小。符合本研究长效的镇静、镇痛要求。静脉输注盐酸右美托咪定剂量为 0.2~0.7 μg · kg^{-1} · h^{-1}时,呼吸率和氧饱和度仍可保持在正常范围内,未见明显的呼吸抑制[10-11,19]。本研究表明地佐辛与盐酸右美托咪定均可用于预防小儿术后躁动,未见明显的不良反应,提高患儿围手术期的安全性和舒适度,为小儿安静的术后护理提供了一个全新的选择。

综上所述,地佐辛与盐酸右美托咪定均可有效预防小儿术后躁动,不延长术后苏醒的时间,无明显不良反应,可安全应用于小儿麻醉,值得临床推广。

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前列地尔联合百令胶囊治疗早期慢性肾脏病46例

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摘 要 目的 探讨前列地尔联合百令胶囊治疗早期慢性肾脏病的疗效。**方法** 早期慢性肾脏病患者94例,随机分为治疗组46例和对照组48例。对照组给予百令胶囊5粒,tid,po;治疗组在对照组治疗基础上加用前列地尔注射液2 mL加入0.9%氯化钠注射液20 mL中,静脉推注,qd,两组均以4周为1个疗程。2个疗程后,观察两组肾功能改善情况,NK细胞和T细胞亚群CD_3^+、CD_4^+、CD_8^+等细胞因子水平变化和不良反应。**结果** 对照组和治疗组有效率分别为60.42%,91.30%($P<0.05$);治疗组肾功能指标:24 h尿蛋白(1.15±0.35) g,血肌酐(78.52±10.63) μmol·L^{-1},尿素氮(8.23±1.65) mmol·L^{-1},均明显降低($P<0.05$);NK细胞(21.89±2.73)%,T细胞亚群CD_3^+(71.02±5.61)%,CD_4^+(38.84±3.52)%,CD_4^+/CD_8^+(1.28±0.14),均明显升高,CD_8^+(30.21±3.03)%,明显降低(均$P<0.05$);两组不良反应均差异无统计学意义(均$P>0.05$)。**结论** 前列地尔联合百令胶囊对早期慢性肾脏病患者疗效较好,可以改善肾功能指标,调节细胞因子水平。

关键词 前列地尔;百令胶囊;肾脏病,慢性,早期;肾功能;细胞因子
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Alprostadil Combined with *Bailing* Capsule in the Treatment of 46 Case of Early Stage Chronic Kidney Disease

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ABSTRACT Objective To explore the efficacy of alprostadil combined with *Bailing* capsule in the treatment of early chronic kidney disease. **Methods** A total of 94 early stage chronic kidney disease patients were selected and divided into treatment group($n=46$) and control group($n=48$).The patients in control group were treated with *Bailing* capsule,5 capsules, tid,po.The patients in treatment group were treated with *Bailing* capsule combined with 2 mL alprostadil in 20 mL 0.9% sodium chloride injection,intravenous injection,qd.The patients were treated for 4 weeks as a course of treatment in both groups.After 2 courses of treatment,the improvement of renal function,the changes in cytokine levels including NK cells and T cell subsets CD_3^+, CD_4^+,CD_8^+,adverse reactions of two groups were observed. **Results** The effective rates of the control group and the treatment group were 60.42%,91.30%,respectively($P<0.05$).The renal function index 24 h urine protein were(1.15±0.35) g,serum creatinine were(78.52±10.63) μmol·L^{-1},urea nitrogen were(8.23±1.65) mmol·L^{-1},all of which were decreased significantly ($P<0.05$).The levels of NK cells were(21.89±2.73)%,T cell subsets CD_3^+ were(71.02±5.61)%,CD_4^+ were(38.84±3.52)%, CD_4^+/CD_8^+ were(1.28 ± 0.14),which were increased significantly,while the level of CD_8^+ were(30.21±3.03)% was decreased significantly($P<0.05$).There was no significant difference between two groups in the adverse reactions($P>0.05$). **Conclusion** The combination of alprostadil and *Bailing* capsule is effective to early stage chronic kidney disease by improving the renal function and regulating the level of cytokines.

KEY WORDS Alprostadil; *Bailing* capsule; Kidney disease,chronic ,early; Renal function; Cytokine