

doi: 10.13241/j.cnki.pmb.2020.09.029

不同麻醉方式分娩镇痛对产程及母婴结局的影响*

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摘要 目的:探讨不同麻醉方式分娩镇痛对产程及母婴结局的影响。**方法:**选取2016年7月至2018年7月我院收治的154例分娩镇痛产妇为研究对象,根据随机抽签原则将受试者进行分组,对照组77例产妇接受常规的静脉麻醉镇痛,研究组77例产妇接受硬膜外麻醉镇痛,比较两组产妇的产程时间、疼痛分级、母婴结局及24h泌乳情况。**结果:**研究组产妇的产程时间显著短于对照组($P<0.05$),0级及I级疼痛的比率显著低于对照组($P<0.05$),II级及III级疼痛的比率显著高于对照组($P<0.05$),产妇阴道助产、中转剖宫产、尿潴留及产后出血量均显著少于对照组($P<0.05$),新生儿宫内窘迫及窒息的发生率显著低于对照组($P<0.05$)。两组新生儿出生后1 min、5 min及10 min的Apgar评分比较无统计学差异($P>0.05$),研究组产妇产后24h有效泌乳率显著高于对照组($P<0.05$)。**结论:**硬膜外麻醉镇痛可有效缩短产程时间,减轻疼痛,改善母婴结局,促进产后泌乳。

关键词:分娩镇痛;静脉麻醉;硬膜外麻醉;产程时间;疼痛分级;母婴结局;24h泌乳量

中图分类号:R714.3;R614 文献标识码:A 文章编号:1673-6273(2020)09-1737-04

Effects of Different Anesthesia Methods on the Labor Analgesia and Outcomes of Maternal and Infant*

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ABSTRACT Objective: To explore the effect of different anesthesia methods on the labor analgesia and outcomes of maternal and child. **Methods:** 154 maternity with labor analgesia from July 2016 to July 2018 were selected as the subjects. According to the principle of random lottery, the maternity were divided into the control group and study group with 77 cases in each group. The control group was given conventional intravenous anesthesia for analgesia, while the study group maternity was given anesthesia for analgesia. The maternal labor time, pain grading, maternal and infant outcomes and maternal 24h lactation were compared between the two groups. **Results:** The maternal labor time of study group were significantly shorter than that of the control group ($P<0.05$). The rate of pain in grade 0 and grade I of the study group was significantly lower than that of the control group. The ratio of grade II and grade III pain was significantly higher than that of the control group ($P<0.05$). The vaginal midwifery, transit cesarean section, urinary retention and postpartum hemorrhage in the study group were significantly lower than those in the control group ($P<0.05$). The incidence of intrauterine distress and asphyxia in the study group was significantly lower than that in the control group ($P<0.05$). There was no significant difference in the Apgar scores between the two groups at 1 minute and 10 minutes after birth ($P>0.05$). The effective lactation rate of study group was significantly higher than that of the control group at 24 hours postpartum ($P<0.05$). **Conclusion:** Epidural anesthesia can effectively shorten the time of labor, reduce pain, improve maternal and infant outcomes, promote the postpartum lactation.

Key words: Labor analgesia; Intravenous anesthesia; Epidural anesthesia; Labor time; Pain grading; Maternal and infant outcomes; 24h milk production

Chinese Library Classification(CLC): R714.3; R614 Document code: A

Article ID: 1673-6273(2020)09-1737-04

前言

分娩是育龄期妇女必经的生理过程,分娩疼痛作为自然分娩最为常见的临床症状不仅可导致一系列神经内分泌反应,还会导致胎盘血流减少及血管收缩。在分娩过程中,产妇不仅要求保证母婴安全,更希望减轻疼痛来顺利分娩^[1]。近年来,随着

无痛分娩技术的兴起,临床上常通过静脉麻醉减轻分娩痛,但持续输注通过作用于全身阿片受体导致患者全身感知能力下降,在一定程度上延长产程,且用药剂量较大,影响产后泌乳^[2-3]。硬膜外麻醉通过椎管内给药起到神经阻滞的麻醉效果,用药剂量少,对母婴的影响小,可使产妇在第一产程得到充分休息,保存体力,当宫口全开时可有效缩短分娩时间,另外可作

* 基金项目:陕西省重点研发计划项目(S2017-ZDYF-YBXM-0615)

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(收稿日期:2019-08-27 接受日期:2019-09-23)

为紧急情况下椎管内给药行阻滞麻醉,有效保证母婴安全^[4-6]。研究表明硬膜外麻醉在缓解分娩疼痛方面镇痛效果显著,且安全性极高^[7]。本研究选取 2016 年 7 月至 2018 年 7 月我院收治的 154 例分娩镇痛产妇为研究对象,探讨了不同麻醉方式无痛分娩对产程及母婴结局的影响,现将研究结果进行报道如下。

1 资料与方法

1.1 一般资料

选取 2016 年 7 月至 2018 年 7 月我院 154 例分娩镇痛产妇为研究对象,根据随机抽签原则将受试者进行分组。其中,对照组 77 例产妇年龄 22-38 岁,平均年龄(30.25±2.53)岁;孕周 37-41 周;平均孕周 (39.42±1.63) 周, 体重 61-80kg, 平均(67.53±3.47)kg;初产妇 48 例,经产妇 29 例;研究组 77 例患者年龄 21-39 岁,平均年龄(30.35±2.75)岁;孕周 37-42 周;平均孕周(39.85±1.44)周,体重 60-81kg,平均(68.16±3.35)kg;初产妇 50 例,经产妇 27 例。两组产妇的年龄、孕周、体重、产次等基本资料经统计学分析无显著性差异($P>0.05$),具有可比性。

1.2 纳入及排除标准

所有产妇均为单胎足月妊娠,胎儿无宫内异常,无剖宫产分娩指征,产妇自愿选择自然分娩,签署知情同意书,且排除胎儿宫内异常、妊娠期并发症、相关麻醉药物过敏史、剖宫产史、乳腺疾病、母乳喂养禁忌症、认知障碍、精神异常者。

1.3 方法

研究组产妇接受硬膜外麻醉镇痛,产妇取侧卧位,于 L3-4

腰椎节段行椎管内穿刺,穿刺成功回抽无血后缓慢注入 1%的盐酸利多卡因注射液 (北京紫竹药业有限公司, 国药准字 H11022388)4 mL,之后于头端置入硬膜外导管,确认无局部麻醉药物中毒指征及蛛网膜下腔阻滞,再经导管注入 0.1%的盐酸罗哌卡因注射液(AstraZeneca AB, SE-151 85 Sweden.进口药品注册证号:H20140763)及 0.5 μg/mL 的舒芬太尼注射液(宜昌人福药业有限责任公司,批号 81A07221)混合液 10 mL,给药期间观察产妇的疼痛程度。对照组产妇接受常规的静脉麻醉镇痛,两组产妇均全程监测血压、心率、胎心变化、宫内压、宫缩等,一旦出现胎儿宫内异常则即刻中转开腹,保证母婴安全。

1.4 观察指标

产妇的产程时间、疼痛分级、阴道助产、中转剖宫产、尿潴留、产后出血量、产后 24h 泌乳情况以及新生儿宫内窘迫及窒息的发生率、出生后 1 min、5 min 及 10 min 的 Apgar 评分。

1.5 统计学方法

应用 SPSS 19.0 进行数据分析,计量资料以均数±标准差($\bar{x} \pm s$)表示,组间及组内比较行独立样本 t 检验和配对样本 t 检验,计数资料以率(%)表示,组间比较行 χ^2 检验,以 $P<0.05$ 表示存在统计学差异。

2 结果

2.1 两组产妇产程时间的比较

研究组产妇的产程时间显著短于对照组,两组比较存在统计学差异($P<0.05$),见表 1。

表 1 两组产妇产程时间的比较($\bar{x} \pm s, h$)

Table 1 Comparison of the duration of labor between the two groups($\bar{x} \pm s, h$)

Groups	NNT	first stage of labor	second stage of labor	Third stage of labor	Total stage of labor
Study group	77	6.55±1.28*	0.79±0.33*	0.15±0.03*	7.49±1.64*
Control group	77	9.12±2.24	1.46±0.25	0.23±0.04	10.81±2.53
t		17.632	21.426	31.452	22.347
P		<0.05	<0.05	<0.05	<0.05

Note: Compare with the control group,* $P<0.05$.

2.2 两组产妇的疼痛分级比较

研究组产妇 0 级及 I 级疼痛的比率显著低于对照组, II 级

及 III 级疼痛的比率显著高于对照组,两组比较存在统计学差异($P<0.05$),见表 2。

表 2 两组产妇的疼痛分级比较[例(%)]

Table 2 Comparison of the pain grade of puerpera between two groups[n(%)]

Groups	NNT	0 Level	I Level	II Level	III Level
Study group	77	27(35.06)*	39(50.65)*	11(14.29)*	0*
Control group	77	9(11.69)	18(23.38)	47(61.04)	3(3.90)
χ^2		8.653	9.754	13.654	4.253
P		<0.05	<0.05	<0.05	<0.05

Note: Compare with the control group,* $P<0.05$.

2.3 两组产妇结局的比较

研究组产妇阴道助产、中转剖宫产、尿潴留及产后出血量均显著低于对照组,两组比较存在统计学差异($P<0.05$),见表 3。

2.4 两组新生儿结局的比较

研究组新生儿宫内窘迫及窒息的发生率显著低于对照组($P<0.05$), 两组新生儿出生后 1 min、5 min 及 10 min 的 Apgar 评分比较无统计学差异($P>0.05$),见表 4。

表 3 两组产妇结局的比较[例(%)]

Table 3 Comparison of the maternal outcome between the two groups[n(%)]

Groups	NNT	Vaginal midwifery	Transfer to cesarean section	Urinary retention	Postpartum bleeding
Study group	77	3(3.90)*	2(2.60)*	0(0.00)*	238.56± 21.75*
Control group	77	12(15.58)	9(11.69)	4(5.19)	293.64± 28.76
χ^2/t		5.983	4.794	4.107	4.653
<i>P</i>		<0.05	<0.05	<0.05	<0.05

Note: Compare with the control group, **P*<0.05.

表 4 两组新生儿结局的比较

Table 4 Comparison of the neonatal outcomes between the two groups

Groups	NNT	Intrauterine distress	Neonatal asphyxia	Apgar score		
				1 min	5 min	10 min
Study group	77	1(1.30)	0(0.00)*	8.18±0.72	8.82±0.56	9.72±0.56
Control group	77	7(9.09)	4(5.19)	8.11±0.68	8.76±0.66	9.67±0.52
χ^2		4.747	4.107	0.108	0.112	0.085
<i>P</i>		>0.05	<0.05	>0.05	>0.05	>0.05

Note: Compare with the control group, **P*<0.05.

2.5 两组产妇产后 24h 泌乳情况的比较

研究组产妇产后 24h 有效泌乳率为 88.31%(68/77), 对照

组产妇产后 24h 有效泌乳率为 71.43%(55/77), 显著低于研究组, 两组比较存在统计学差异(*P*<0.05), 见表 5。

表 5 两组产妇产后 24h 泌乳情况的比较[例(%)]

Table 5 Lactation of the two groups of parturient women at 24h after delivery[n(%)]

Groups	NNT	Enough	Fair	Lack	Effective lactation rate
Study group	77	30(38.96)	38(49.35)	9(11.69)	68(88.31)*
Control group	77	24(31.17)	31(40.26)	22(28.57)	55(71.43)

Note: Compared with the control group, **P*<0.05.

3 讨论

近年来, 随着医疗技术水平及产妇对分娩要求的不断提高, 产妇对减轻分娩疼痛的需求也日渐强烈, 无痛分娩技术因其可有效减轻疼痛、提高产妇的舒适度而深受广大产妇的喜爱^[8-11]。但选择何种镇痛方式可提高镇痛效果、缩短产程、改善母婴结局及产后泌乳目前临床上仍无统一论。

静脉麻醉镇痛及硬膜外麻醉镇痛均为无痛分娩常用的镇痛方式, 其中硬膜外麻醉是使用局部麻醉药物阻断了伤害性刺激向中枢传导, 可满足长时间不同程度的镇痛效果, 阻断 " 高通气 - 低通气 " 循环, 且其应用浓度在满足镇痛剂产妇满意度的基础上为药物的最低局部麻醉药浓度, 同时可最大限度的降低运动阻滞程度, 且对母婴影响小, 是目前持续有效缓解分娩疼痛的主要手段^[12-15]。临床上大量研究表明在硬脊膜外间隙注射阿片类药物可产生明显的选择性镇痛作用, 具有用量少、局部麻醉起效时间短的优点, 其给药作用机制主要为作用于脊髓的阿片受体或作用于脑干及全身外周的阿片受体, 若作用于脊髓则可有效避免静脉全身给药所致的呼吸抑制、镇静等不良反应, 且具有起效快、不延长产程、可控性好的优点, 不影响产妇产缩、运动、进食、下地行走及主动参与到分娩中, 还可灵活满足产前助产及中转剖宫产的麻醉需求^[16-20]。

罗哌卡因属长效氨基酰胺类局麻药, 可有效抑制痛觉传导纤维的速度及深度, 且不影响子宫胎盘血流、心血管及中枢神经系统, 在无痛分娩中应用可有效发挥镇痛作用, 促进宫颈扩张, 且不影响产妇正常的肢体活动^[21-23]。舒芬太尼血流动力学稳定, 在分娩镇痛中可有效保证产妇心肌的血氧供应, 与罗哌卡因可协同性的发挥镇痛效果, 减少药量^[24]。

本研究结果表明研究组产妇的产程时间显著短于对照组, 其原因可能为静脉麻醉对产妇腹肌及下肢肌肉力量的影响更大从而延长产程时间^[25]。此外, 研究组产妇 0 级及 I 级疼痛的比率显著低于对照组, II 级及 III 级疼痛的比率显著高于对照组, 进一步提示硬膜外麻醉起效快、可控性好的优点, 可在时间最长的第一产程有效镇痛, 减少产妇分娩时的恐惧及产后疲倦, 保存体力, 使宫口全开时有足够的体力完成分娩^[26-28]。本研究中研究组产妇阴道助产、中转剖宫产、尿潴留及产后出血量均显著少于对照组, 新生儿宫内窘迫及窒息的发生率显著低于对照组, 提示硬膜外麻醉对母婴的影响更小。两组新生儿出生后 Apgar 评分比较无统计学差异, 可见两种麻醉方式对新生儿的影响差别不大。产后泌乳与产妇的心理因素、环境因素及内分泌系统等多种因素有关, 有研究表明分娩过程中疼痛程度越轻微, 血浆泌乳素水平越高, 泌乳始动时间越短, 泌乳量越大^[29]。本研究中研究组产妇产后 24 h 有效泌乳率显著高于对照

组,表明硬膜外麻醉更能有效的提高分娩镇痛效果,故更有利于促进早泌乳、多泌乳^[30]。

综上所述,硬膜外麻醉镇痛可有效缩短产程时间,减轻疼痛,改善母婴结局,促进产后泌乳。

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