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持续镇痛分娩对产妇分娩结局和新生儿评分的影响*

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摘要 目的:研究持续镇痛分娩对产妇分娩结局和新生儿评分的影响。**方法:**选择 2018 年 7 月~2019 年 7 月中国医科大学航空总医院(本院)采取硬膜外分娩镇痛的 101 例产妇,将其随机分为两组。当产生确切的镇痛效果,进入第二产程后,观察组的 51 例产妇采用 0.4 $\mu\text{g/mL}$ 舒芬太尼以及 0.08 % 罗哌卡因进行持续镇痛分娩;对照组的 50 例产妇则在宫口开全后,使用生理盐水替代泵内的局麻药物,直到分娩结束。比较两组产妇催产素的使用率,宫口扩张度和第一、第二产程按压硬膜外自控镇痛泵的次數,分娩方式,新生儿的体质量,脐动脉血 pH 值,出生后 1 min 和 5 min Apgar 评分,产妇修复会阴部时的视觉模拟评分(visual analogue scale, VAS)评分及产妇对于第二产程镇痛的满意度评分。**结果:**两组产妇催产素的使用率、宫口扩张度和第一、第二产程按压硬膜外自控镇痛泵的次數、分娩方式(剖宫产率、器械助产率、自然分娩率)、第一产程镇痛时间、第一以及第二产程时间相比均无显著差异($P>0.05$);两组新生儿的体质量,脐动脉血 pH 值,出生后 1 min 和 5 min Apgar 评分小于 8 分的新生儿所占的比例相比没有明显的差异($P>0.05$);观察组产妇修复会阴部时的 VAS 评分明显低于对照组($P<0.05$),产妇对于第二产程镇痛的满意度评分明显高于对照组($P<0.05$)。**结论:**持续镇痛分娩对产妇分娩结局和新生儿评分无明显的影响,但可显著提高产妇对第二产程镇痛和修复会阴部时镇痛的满意度。

关键词:持续镇痛分娩;产妇分娩结局;新生儿评分

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Effect of Continuous Analgesia on the Delivery Outcome and Neonatal Score of Parturients*

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ABSTRACT Objective: To study the effect of continuous analgesia on delivery outcome and neonatal score of parturients. **Methods:** From July 2018 to July 2019, 101 parturients with epidural analgesia in our hospital from July 2018 to July 2019 were randomly divided into two groups. When the exact analgesic effect was achieved, after entering the second stage of labor, 51 parturients in the observation group used 0.4 $\mu\text{g/mL}$ sufentanil and 0.08 % ropivacaine for continuous analgesia delivery. 50 parturients in the control group used physiological saline the local anesthetics in the pump after the uterine cavity was opened, until the end of delivery. Compare the rates of oxytocin use, uterine dilatation and the number of times the epidural self-controlled analgesia pump is pressed during the first and second stages of labor, delivery methods, newborn body weight, umbilical blood pH, and min and 5 min Apgar scores, VAS scores during maternal repair of the perineum, and maternal satisfaction scores for analgesia in the second stage of labor. **Results:** There was no significant difference in the use rate of oxytocin, dilatation of the uterine orifice and the number of times of pressing the epidural self-controlled analgesia pump in the first and second stages of labor, the method of delivery (cesarean delivery, device assisted delivery, natural delivery rate), analgesia time in the first stage of labor, and first and second stage of labor between the two groups ($P>0.05$). There was no significant difference in body weight, umbilical artery blood pH value, and the proportion of newborns with Apgar scores less than 8 in 1 min and 5 min after birth between the two groups ($P>0.05$). The VAS score of the observation group when repairing the perineum was significantly lower than that of the control group ($P<0.05$), and the satisfaction score of the women during the second stage of labor the observation group was significantly higher than that of the control group ($P<0.05$). **Conclusion:** Continuous analgesic delivery has no significant effect on maternal delivery outcome and neonatal scores, but it can significantly increase maternal satisfaction with

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analgesia in the second stage of labor and with analgesia when repairing the perineum.

Key words: Continuous analgesic delivery; Maternal delivery outcome; Neonatal score

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前言

产妇在自然分娩的过程中往往会出现比较剧烈的产痛,产痛不仅会使产妇的不良情绪加重,而且会影响宫缩,使产程明显延长,导致胎儿宫内窘迫、新生儿窒息等并发症的发生,而且部分产妇患者由于无法忍受产痛,即使没有剖宫产的临床医学指征,也会坚持选用剖宫产,不利于母婴健康^[1-3]。多项研究表明分娩的疼痛可导致产妇的氧离曲线左移、呼吸性碱中毒、子宫动脉痉挛、高儿茶酚胺血症、耗氧量增加以及胎儿氧供减少等反应^[4-6]。

随着人们生活理念的不断转变,越来越多的产妇及其家属不但要求分娩过程中需要有效保障母婴的安全,而且更加重视降低产妇的疼痛程度,而硬膜外分娩镇痛的应用,可以明显减轻产痛,缩短产程,有利于确保母婴的安全^[7,8]。不同的硬膜外给药方式可能会对分娩结局以及镇痛效果产生一定程度的影响。因此,本研究选取了本院收治的 100 例采取硬膜外分娩镇痛的产妇,分别在产程后期暂停和持续给予硬膜外镇痛,分析其对产妇分娩结局和新生儿评分的影响,现将结果报告如下。

1 资料与方法

1.1 一般资料

选择 2018 年 7 月~2019 年 7 月在我院采取硬膜外分娩镇痛的 100 例产妇,纳入标准:头位,单胎、足月妊娠,均知情同意。排除标准:产道异常、头盆不称、胎盘前置和原发性宫缩乏力产妇;合并有全身系统性疾病产妇;合并有硬膜外穿刺禁忌证的产妇;长期服用阿片类药物的产妇。无脱落病例。用抽签法将产妇随机分为两组。观察组 51 例,年龄 20~37 岁,平均(28.06±2.48)岁;孕周 38~42 周,平均(39.46±0.73)周;体重 57~79 kg,平均(70.24±13.89) kg。对照组 50 例,年龄 20~36 岁,平均(27.83±2.31)岁;孕周 38~42 周,平均(39.97±0.84)周;体重 58~79 kg,平均(71.36±14.25) kg。两组的基线资料比较差异均无统计学意义($P>0.05$),具有可比性。

1.2 麻醉方法

表 1 两组催产素的使用率、宫口扩张度和按压硬膜外自控镇痛泵的次数比较

Table 1 Comparison of the usage rate of oxytocin, dilatation of uterine orifice and the times of pressing epidural self-controlled analgesia pump between the two groups

Groups	n	Usage rate of oxytocin	Dilatation of uterine orifice (cm)	Times of pressing epidural self-controlled analgesia pump in the first stage of labor	Times of pressing epidural self-controlled analgesia pump in the second stage of labor
Control group	50	16 (32.00)	1.97±0.36	1 (2.00)	0 (0.00)
Observation group	51	17 (33.33)	2.03±0.41	1 (1.96)	0 (0.00)

2.2 两组分娩方式和第一产程镇痛时间、第一、第二产程时间比较

两组分娩方式、第一产程镇痛时间、第一以及第二产程时

产妇采取左侧的卧位,在产妇的 L3~4 之间的间隙实施硬膜外穿刺,给予 3 mL 的 1.5 %利多卡因,然后给予 10~15 mL 负荷剂量的局麻药物(0.4 μ g/mL 舒芬太尼以及 0.125 %罗哌卡因),当产生确切的镇痛效果后,连接硬膜外自控镇痛泵(局麻药为 0.4 μ g/mL 舒芬太尼以及 0.08 %罗哌卡因)。连接硬膜外自控镇痛的方案具体为:自控量设置为每次 8 mL,持续量设置为每小时 6~10 mL,锁定时间设置为 30 min。当镇痛不完全时,产妇可以自行按压给药,直到镇痛效果满意。观察组的 50 例产妇持续应用连接硬膜外自控镇痛泵,直到分娩结束。对照组的 50 例产妇则在宫口开全后,使用生理盐水替代泵内的局麻药物,直到分娩结束。

1.3 观察指标

记录两组产妇镇痛后催产素的使用率、在分娩镇痛开始时的宫口扩张度和分娩镇痛过程中按压硬膜外自控镇痛泵的次數;分娩方式(剖宫产率、器械助产率、自然分娩率);第一产程、第一产程镇痛时间、第二产程;产妇对第一和第二产程镇痛效果的满意度(其中,0 分表示不满意;100 分表示非常满意);修复产妇会阴部的损伤时的 VAS 评分(其中,0 分表示无痛;10 分表示不能忍受的剧烈疼痛);并且记录新生儿的体质量,脐动脉血 pH 值,出生后 1 min 和 5 min Apgar 评分小于 8 分的新生儿所占的比例。

1.4 统计学分析

采用 SPSS 20.0 进行数据分析,两组间计量资料对比用 t 检验,计数资料组间比较采用 χ^2 检验,以 $P<0.05$ 为差异有统计学意义。

2 结果

2.1 两组催产素的使用率、宫口扩张度和按压硬膜外自控镇痛泵的次數比较

两组产妇催产素的使用率、宫口扩张度和第一、第二产程按压硬膜外自控镇痛泵的次數相比无明显的差异($P>0.05$),见表 1。

间相比无明显的差异($P>0.05$),见表 2。

2.3 两组新生儿 Apgar 评分<8 分例数、体质量及脐动脉血 pH 值比较

表 2 两组分娩方式和第一产程镇痛时间、第一、第二产程时间的比较

Table 2 Comparison of delivery mode, first labor analgesia time, first and second labor time between the two groups

Groups	n	Delivery mode			Duration of labor(min)		
		Natural childbirth	Instrumental midwifery	Cesarean section	First stage of labor	Analgesic time during the first stage of labor	Second stage of labor
Control group	50	47(94.00)	1 (0.00)	2 (4.00)	465.73±114.29	281.32±149.31	40.29±13.78
Observation group	51	48 (94.12)	0 (0.00)	2 (3.92)	469.36±123.78	279.36±153.24	39.26±11.48

两组新生儿的体质量,脐动脉血 pH 值,出生后 1 min 和 5 min Apgar 评分小于 8 分的新生儿所占的比例相比没有明显的差异($P>0.05$),见表 3。

表 3 两组新生儿 Apgar 评分 < 8 分例数、体质量及脐动脉血 pH 值比较

Table 3 Comparison of Apgar score < 8 in number of newborns, body mass and umbilical artery blood pH between the two groups

Groups	n	1 min Apgar score < 8	5 min Apgar score < 8	Body mass (kg)	Umbilical artery blood pH
Control group	50	5 (10.00)	1 (2.00)	3325.49±278.41	7.19±0.24
Observation group	51	5 (9.80)	1 (1.96)	3327.34±293.67	7.20±0.25

2.4 两组修复会阴部时的 VAS 评分和对第一、第二产程镇痛的满意度比较

($P<0.05$), 产妇对于第二产程镇痛的满意度评分明显高于对照组($P<0.05$),见表 4。

观察组产妇修复会阴部时的 VAS 评分明显低于对照组

表 4 两组修复会阴部时的 VAS 评分和对第一、第二产程镇痛的满意度比较($\bar{x}\pm s$, 分)Table 4 Comparison of the VAS score and satisfaction with analgesia during the first and second stages of labor between the two groups($\bar{x}\pm s$, score)

Groups	n	Satisfactory analgesia in the first stage of labor	Satisfactory analgesia during the second stage of labor	VAS score for perineal repair
Control group	50	93.42±11.79	83.67±12.35	1.24±0.59
Observation group	51	94.17±12.64	91.64±13.65*	0.73±0.21*

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

3 讨论

自然分娩不但有助于产妇在产后迅速恢复,还能有效预防手术创伤以及羊水积存等因素导致的不良影响^[9,10]。但产妇在自然分娩时由于子宫收缩而导致的疼痛感会贯穿整个的分娩过程,分娩疼痛会对胎儿及产妇造成如胎盘血流减少、血管收缩等多种的不良影响,而且初产妇之前无分娩的经验,会发生不同程度的心理以及身体改变,导致心率加快和血压升高,造成胎儿宫内缺血及缺氧,不利于母婴的生命安全^[11-13]。关注分娩镇痛表现出对生命个体的尊重,是“生育文明”的重要体现,也是社会文明程度的一个重要标准^[14]。

研究表明镇痛分娩不但可以缓解产妇的心理障碍,还可以改善由于疼痛刺激导致产妇的泌乳功能降低^[15,16]。由于镇痛分娩属于区域性镇痛,可使运动阻滞的程度明显减轻,产妇能在产程的早期保持比较强的活动能力和精力,减少助产机会,增加产妇的满意度,而且可以降低尿潴留以及膀胱麻痹等的发生风险^[17-20]。临床上选择理想镇痛分娩的方法时必须谨慎和严格,需要具备下面的 4 个要求:(1)药物起效快,给药方便,安全性高^[21];(2)镇痛方法对婴儿以及母体的影响比较小^[22];(3)防止运动阻滞,对产妇宫缩和运动没有影响^[23];(4)情况必要时可实施手术^[24]。舒芬太尼是属于阿片类的药物。罗哌卡因对中枢神经

系统的毒性和对心脏的毒性比较低,阻滞感觉神经纤维的作用明显优于运动神经纤维,因而在低浓度时,可以较好的分离运动神经阻滞和感觉神经阻滞^[25-28]。虽然罗哌卡因能通过胎盘,但不会明显抑制新生儿的终身神经和呼吸神经^[29]。

本研究表明在产程后期暂停和持续给予硬膜外镇痛对催产素的使用率、宫口扩张度和按压硬膜外自控镇痛泵的次数、产妇的分娩方式和第一产程镇痛时间、第一、第二产程时间、新生儿评分的影响基本相当。产程后期的疼痛主要来自产妇产会阴的牵拉以及产道的进一步扩张^[30]。本研究结果表明与暂停镇痛分娩相比,持续镇痛分娩可以提高产妇对第二产程镇痛的满意度和修复会阴部时镇痛的满意度。分析其原因为产程后期暂停进行硬膜外镇痛分娩后,造成骶神经阻滞不全,从而造成产妇产会阴部和腰骶部的疼痛程度加重。

综上所述,持续镇痛分娩对产妇产分娩结局和新生儿评分无明显的影 响,但是可以提高产妇对第二产程镇痛和修复会阴部时镇痛的满意度。

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