

doi: 10.3978/j.issn.2095-6959.2021.09.015

View this article at: <https://dx.doi.org/10.3978/j.issn.2095-6959.2021.09.015>

## 缩宫素、米索和卡前列素氨丁三醇治疗胎盘早剥产后大出血的临床研究

谷琳, 杨帆, 刘庆研, 郑蓉

(北京积水潭医院妇产科, 北京 100036)

**[摘要]** 目的: 观察缩宫素+米索+卡前列素氨丁三醇治疗胎盘早剥产后大出血的疗效。方法: 选取2017年5月至2020年5月北京积水潭医院收治的82例胎盘早剥产后大出血患者为对象, 采用随机数字表法将其均分为观察组( $n=41$ )和对照组( $n=41$ ), 对照组给予缩宫素、米索治疗, 观察组给予缩宫素、米索和卡前列素氨丁三醇治疗, 比较两组治疗后的临床疗效、术中和术后出血量、持续出血时间、住院时间、血压、心率及不良反应发生率。结果: 治疗后观察组术中出血量( $453.27\pm 20.21$ ) mL, 术后10 min出血量( $227.47\pm 12.25$ ) mL, 术后60 min出血量( $257.17\pm 12.61$ ) mL, 术后2 h出血量( $297.31\pm 15.12$ ) mL, 术后24 h出血量( $318.56\pm 15.84$ ) mL, 持续出血时间( $28.12\pm 6.51$ ) h, 均显著低于对照组的( $553.37\pm 25.33$ ) mL、( $310.51\pm 15.24$ ) mL、( $368.09\pm 16.07$ ) mL、( $411.23\pm 18.19$ ) mL、( $436.16\pm 18.77$ ) mL及( $36.57\pm 4.43$ ) h (均 $P<0.05$ ); 治疗后观察组血红蛋白含量( $124.33\pm 15.20$ ) g/L高于对照组的( $108.41\pm 13.60$ ) g/L, 止血时间( $18.35\pm 5.12$ ) min和住院时间( $6.28\pm 1.31$ ) d均短于对照组的( $30.28\pm 10.46$ ) min和( $9.29\pm 2.62$ ) d (均 $P<0.05$ ); 治疗后观察组有效率高于对照组( $87.80\%$  vs  $63.41\%$ )( $P<0.05$ ); 治疗后两组舒张压、收缩压、心率及不良反应发生率均无显著性差异(均 $P>0.05$ )。结论: 联合使用缩宫素、米索和卡前列素氨丁三醇治疗胎盘早剥产后大出血的临床疗效显著, 可缩短持续性出血时间和住院时间, 值得临床进一步推广。

**[关键词]** 胎盘早剥产后大出血; 缩宫素; 米索; 卡前列素氨丁三醇

## Clinical study on the treatment of massive hemorrhage after placental abruption with oxytocin, misoprostol and carboprost tromethamine

GU Lin, YANG Fan, LIU Qingyan, ZHENG Rong

(Department of Obstetrics and Gynaecology, Beijing Jishuitan Hospital, Beijing 100036, China)

**Abstract** **Objective:** To observe the therapeutic effect of oxytocin, misoprostol and carboprost tromethamine on massive hemorrhage after placental abruption. **Methods:** From May 2017 to May 2020, 82 patients with postpartum hemorrhage after placental abruption were selected from Beijing Jishuitan Hospital. By using random number table method, they were divided into an observation group ( $n=41$ ) and a control group ( $n=41$ ). The control group

收稿日期 (Date of reception): 2020-09-24

通信作者 (Corresponding author): 谷琳, Email: [bjgl741@163.com](mailto:bjgl741@163.com)

was treated with oxytocin and misoprostol, while the observation group was given oxytocin, misoprostol and carboprost tromethamine to treat. The clinical efficacy after treatment, intraoperative and postoperative blood loss, continuous bleeding time, the length of hospital stay, blood pressure, heart rate and adverse reaction rate were compared between the 2 groups. **Results:** After the treatment, the intraoperative blood loss, blood loss at 10 min, 60 min, 2 h and 24 h after operation, and bleeding duration of the observation group were (453.27±20.21) mL, (227.47±12.25) mL, (257.17±12.61) mL, (297.31±15.12) mL, (318.56±15.84) mL, and (28.12±6.51) h, respectively, significantly less or shorter than those [(553.37±25.33) mL, (310.51±15.24) mL, (368.09±16.07) mL, (411.23±18.19) mL, (436.16±18.77) mL and (36.57±4.43) h, respectively] of the control group ( $P<0.05$ ). Additionally, the hemoglobin level in the observation group was (124.33±15.20) g/L, higher than that [(108.41±13.60) g/L] in the control group. The hemostasis time and length of hospital stay were (18.35±5.12) min and (6.28±1.31) d, shorter than those [(30.28±10.46) min and (9.29±2.62) d] of the control group ( $P<0.05$ ). After the treatment, the effective rate in the observation group was 87.80%, higher than 63.41% in the control group ( $P<0.05$ ). Meanwhile, there were no significant differences in diastolic blood pressure, systolic blood pressure, heart rate, and the incidence of adverse reactions between the 2 groups after the treatment ( $P>0.05$ ). **Conclusion:** The combined use of oxytocin, misoprostol and carboprost tromethamine can achieve significant clinical effects in the treatment of massive hemorrhage after placental abruption. It can shorten the duration of bleeding and the length of hospital stay, and is worthy of further promotion in clinical practice.

**Keywords** massive hemorrhage after placental abruption; oxytocin; misoprostol; carboprost tromethamine

胎盘早剥是妊娠期妇女常见的并发症之一,也是产妇产中及术后发生大出血的主要原因之一<sup>[1]</sup>。其中重症胎盘早剥患者常伴有子宫胎盘卒中,使凝血功能出现障碍,导致临床治疗难度增加。若出血得不到及时的处理可危及母婴的生命安全<sup>[2]</sup>。相关数据<sup>[3]</sup>显示:产后出血是目前孕妇产后死亡的主要原因,而大约70%的产后出血是由宫缩乏力引起的,因此对孕妇产后出血的预防及治疗尤为重要。传统的治疗方法为宫腔填纱、子宫血管结扎、使用缩宫素、米索前列醇等,虽有一定的止血效果,但其止血较慢,难以有效地控制病情<sup>[4]</sup>。而卡前列素氨丁三醇是预防和治疗产后大出血的常用药物,具有起效快、作用持久等优势,可收缩子宫平滑肌,缓解出血症状<sup>[5]</sup>。但目前胎盘早剥产后大出血患者中联合使用缩宫素、米索和卡前列素氨丁三醇的报道较少。基于以上所述,笔者进一步研究联合使用缩宫素、米索与卡前列素氨丁三醇治疗胎盘早剥产后大出血的疗效及不良反应发生率,具体报告如下。

## 1 对象及方法

### 1.1 对象

选取2017年5月至2020年5月北京积水潭医院收治的82例胎盘早剥产后大出血患者为对象。纳入标准:1)符合《妇产科学》<sup>[6]</sup>中胎盘早剥的诊断

标准;2)年龄21~36岁;3)知情同意并获得医学伦理委员会批准。排除标准:1)器质性疾病者;2)严重妊娠期合并症及精神障碍患者;3)凝血功能障碍者。采用随机数字表法将患者分为观察组和对照组,各41例。

### 1.2 治疗方法

对照组:缩宫素(H12020482)治疗,自然分娩者肌内注射缩宫素20 U,剖宫产者静脉注射缩宫素20 U,并在宫体内注射缩宫素20 U,同时直肠给予200 μg的米索(H20094183);观察组:在对照组基础上给予宫体内注射卡前列素氨丁三醇(H20094183)250 μg治疗,以上药物均在胎儿娩出后立即用药。

### 1.3 患者观察指标

1)疗效<sup>[7]</sup>:①治愈,1次给药后10 min,患者子宫收缩显著改善,阴道出血量减少至<240 mL;②显效,1次给药后20 min,患者子宫明显收缩,阴道出血量减少至<275 mL;③有效,2次给药后30 min,子宫收缩有所缓解,阴道出血量减少至<300 mL;④无效,多次给药后子宫收缩及阴道出血量无任何改变。总有效率=(有效人数+显效人数+治愈人数)/总例数×100%;2)观察并记录两组术中和术后出血量、持续出血时间、住院时间、止血时间、不良反应发生率。3)应用HLC-723G8全自动血红蛋白分析仪测量血红蛋白含量,严格按照试



表4 两组止血、住院时间及血红蛋白含量比较( $n=41, \bar{x} \pm s$ )Table 4 Comparison of hemostasis, the length of hospital stay and hemoglobin between the two groups ( $n=41, \bar{x} \pm s$ )

组别	止血时间/min	血红蛋白含量/(g·L <sup>-1</sup> )	住院时间/d
观察组	18.35 ± 5.12	124.33 ± 15.20	6.28 ± 1.31
对照组	30.28 ± 10.46	108.41 ± 13.60	9.29 ± 2.62
<i>t</i>	6.559	4.998	6.580
<i>P</i>	<0.05	<0.05	<0.05

表5 两组血压及心率变化情况比较( $n=41, \bar{x} \pm s$ )Table 5 Comparison of blood pressure and heart rate between the two groups ( $n=41, \bar{x} \pm s$ )

组别	舒张压/mmHg		收缩压/mmHg		心率/min <sup>-1</sup>	
	治疗前	治疗后10 min	治疗前	治疗后10 min	治疗前	治疗后10 min
观察组	71.23 ± 6.88	83.12 ± 9.33	117.23 ± 11.28	124.36 ± 13.06	83.12 ± 8.04	85.63 ± 9.52
对照组	70.95 ± 6.82	85.47 ± 10.05	118.04 ± 11.33	126.11 ± 13.75	82.79 ± 8.01	87.23 ± 10.17
<i>t</i>	0.185	1.097	0.324	0.591	0.186	0.735
<i>P</i>	0.854	0.276	0.746	0.556	0.853	0.464

1 mmHg=0.133 kPa.

表6 两组不良反应率比较( $n=41$ )Table 6 Comparison of adverse reaction rates between the two groups ( $n=41$ )

组别	恶心呕吐/ [例(%)]	腹泻/ [例(%)]	感染/ [例(%)]	心率增快/ [例(%)]	血压一次性升高/ [例(%)]	总不良反应/ [例(%)]
观察组	1 (2.44)	1 (2.44)	3 (7.32)	0 (0.00)	3 (7.32)	8 (19.51)
对照组	2 (4.88)	2 (4.88)	3 (7.32)	1 (2.44)	3 (7.32)	11 (26.83)
$\chi^2$						0.616
<i>P</i>						>0.05

### 3 讨论

随着我国二胎政策的实施和高龄产妇增加, 孕妇因高龄多产等导致胎盘早剥的高危因素存在<sup>[8-9]</sup>。加上胎盘早剥症状不明显而错过最佳治疗时期<sup>[10]</sup>。故预防胎盘早剥及产后大出血至关重要<sup>[11]</sup>。

文献[12]报道: 在第三产程结束后, 其被灭活消除, 药效消失。缩宫素是脑垂体释放的激素, 子宫壁通过作用于子宫肌层缩宫素受体而增加细胞钙离子内流并收缩子宫平滑肌。产妇产后子宫平滑肌收缩受到缩宫素的影响, 当其全部缩宫素受体结合则不能促进子宫收缩加强, 故存在局限性。米索前列醇是E1衍生物, 具有收缩妊娠子

宫的作用。此外, 米索前列醇还具有E类的药理活性, 其吸收速度快, 不受个体激素水平的影响, 可软化宫颈、扩张宫颈管直径、使蜕膜组织萎缩、促进宫颈成熟<sup>[13]</sup>。卡前列素氨丁三醇是一种钙离子载体, 含有天然前列腺素F<sub>2α</sub>的(1S)-15甲基衍生物的氨丁三醇盐溶液, 其经宫体注射能够快速起作用, 可有效抑制腺苷酸环化酶, 刺激妊娠子宫平滑肌肌原纤维和肌层收缩, 同时能够发挥与前列腺素类似成分的作用, 强化血管收缩、促进血小板聚集及释放凝血因子形成凝血块堵塞剥离暴露血管。药理学研究<sup>[14]</sup>表明: 其较同等剂量的缩宫素具有更强的促进宫缩作用, 具有生物活性高和半衰期较长的特点。通过联合用药具有

协同的作用, 可促进宫缩, 具有起效迅速、作用维持时间长等优势。

研究<sup>[15]</sup>指出: 应用大剂量的缩宫素会导致产妇发生水中毒。而本研究联合使用缩宫素、米索与卡前列素氨丁三醇治疗胎盘早剥产后大出血, 结果显示: 治疗后观察组出血量比对照组少, 持续出血时间比对照组短, 这与党玮等<sup>[16]</sup>的研究结果相符, 提示联合使用缩宫素、米索与卡前列素氨丁三醇能够减少出血量, 缩短出血持续时间, 较单独使用缩宫素更具优势, 进一步分析其可能机制为: 前列素能有效抑制腺苷酸环化酶, 刺激妊娠子宫平滑肌肌原纤维和肌层的收缩, 增加宫内压力, 使开放宫腔内的血窦和血管迅速闭合, 同时可增强血管收缩, 促进血小板聚集和释放凝血因子形成凝血凝块, 从而达到止血目的。同时本研究发现, 观察组血红蛋白含量比对照组高, 止血时间和住院时间均比对照组短, 提示联合使用缩宫素、米索与卡前列素氨丁三醇止血较快, 能够减少血红蛋白丢失量, 缩短患者住院时间, 其原因可能与缩宫素、米索与卡前列素氨丁三醇减少出血量有关, 通过减少出血量减少血红蛋白丢失, 从而改善患者预后。两组治疗后舒张压、收缩压、心率及不良反应发生率(呕吐恶心、心率增快、腹泻、感染及血压一次性升高)对比无统计学差异, 提示缩宫素、米索及卡前列素氨丁三醇安全性均高, 可稳定血流动力学水平。与其他研究不同的是, 本研究进一步分析发现两者治疗后舒张压、收缩压及心率均上升, 原因可能为: 患者在短时间内大量吸收缩宫素, 会出现短暂性血压下降和心率增快等现象, 因此在应用缩宫素时将其稀释缓慢注射, 以避免出现短暂性血压下降和心率增快等现象。本研究还存在不足: 研究纳入例数较少, 研究可能存在一定的差异。今后应扩大样本量进一步研究。

综上所述, 联合使用缩宫素、米索和卡前列素氨丁三醇较单纯使用缩宫素可缩短胎盘早剥产后出血患者的持续出血时间与住院时间, 且疗效显著, 值得推广应用。

## 参考文献

1. Inoue A, Kondoh E, Suginami K, et al. Vaginal delivery after placental abruption with intrauterine fetal death: A 20-year single-center experience[J]. *J Obstet Gynaecol Res*, 2017, 43(4): 676-681.
2. 周新娥, 梅又文, 程薇, 等. 胎盘早剥并产后出血的危险因素及

- 围产结局分析[J]. *中国计划生育和妇产科*, 2017, 9(12): 13-17.  
ZHOU Xin'e, MEI Youwen, CHENG Wei, et al. Analysis of risk factors and perinatal outcomes of placental abruption complicated with postpartum hemorrhage[J]. *China Family Planning and Obstetrics Gynecology*, 2017, 9(12): 13-17.
3. 杨妍. 宫体注射卡前列素氨丁三醇对预防剖宫产产后出血的效果观察[J]. *中国妇幼保健*, 2017, 32(4): 700-702.  
YANG Yan. Observation on the effect of carboprostol injection in utero on preventing postpartum hemorrhage after cesarean section [J]. *Maternal and Child Health Care of China*, 2017, 32(4): 700-702.
4. 刘瑞枝. 卡前列素氨丁三醇联合米索前列醇在产后出血中的应用效果[J]. *山西医药杂志*, 2016, 45(20): 2420-2422.  
LIU Ruizhi. Effect of carprostol combined with Misoprostol on postpartum hemorrhage [J]. *Shanxi Medical Journal*, 2016, 45(20): 2420-2422.
5. 冯苗苗, 邢梅. 卡前列素氨丁三醇联合卡贝缩宫素对前置胎盘剖宫产产后出血的疗效观察[J]. *中国计划生育和妇产科*, 2017, 9(9): 56-58.  
FENG Miaomiao, XING Mei. Curative effect evaluation of carboprost tromethamine combined with carbetocin in treating postpartum hemorrhage of patients with placenta previa[J]. *China Family Planning and Obstetrics Gynecology*, 2017, 9(9): 56-58.
6. 孙迎春, 王晓娟, 李秀兰. 妇产科学学习指南[M], 上海第二军医大学出版社, 2009: 108.  
SUN Yingchun, WANG Xiaojuan, LI Xiulan. Study Guide to Obstetrics and Gynecology[M], Shanghai Second Military Medical University Press, 2009: 108.
7. 周新枚, 华秀兰, 何昱雯. 卡前列素氨丁三醇联合卡孕栓防治宫缩乏力性产后出血疗效观察[J]. *海南医学*, 2016, 27(15): 2535-2536.  
ZHOU Xinmei, HUA Xiulan, HE Yuwen. Effect of carboprostine combined with pregnancy suppository on preventing and treating postpartum hemorrhage due to uterine inertia[J]. *Hainan Medical Science*, 2016, 27(15): 2535-2536.
8. 王瑞姣, 韩汝芳, 颜杰文, 等. 缩宫素联合卡前列素氨丁三醇预防高危产妇剖宫产产后出血的效果研究[J]. *中国妇幼保健*, 2016, 31(15): 3033-3035.  
WANG Ruijiao, HAN Rufang, YAN Jiewen, et al. Effect of oxytocin combined with carboprostol on preventing postpartum hemorrhage after cesarean section in high-risk pregnant women[J]. *China Maternal and Child Health*, 2016, 31(15): 3033-3035.
9. Dohbit JS, Foumane P, Nkwabong E, et al. Uterus preserving surgery versus hysterectomy in the treatment of refractory postpartum haemorrhage in two tertiary maternity units in Cameroon: a cohort analysis of perioperative outcomes[J]. *BMC Pregnancy Childbirth*, 2017;17(1): 158.

10. 胡静. 卡前列素氨丁三醇联合缩宫素治疗子宫收缩乏力性出血的临床研究[J]. 现代药物与临床, 2017, 32(11): 2177-2181.  
HU Jing. Clinical study on carboprost tromethamine combined with oxytocin in treatment of uterine atony hemorrhage[J]. Modern Medicine and Clinical Practice, 2017, 32(11): 2177-2181.
11. Li Y, Tian Y, Liu N, et al. Analysis of 62 placental abruption cases: Risk factors and clinical outcomes[J]. Taiwan J Obstet Gynecol, 2019;58(2): 223-226.
12. 宋小侠, 卢燕玲, 翁廷松, 等. 马来酸麦角新碱、卡贝缩宫素及卡前列素氨丁三醇预防和治疗宫缩乏力性产后出血效果的比较[J]. 广东医学, 2017, 38(18): 2850-2852.  
SONG Xiaoxia, LU Yanling, WENG Tingsong, et al. Comparison of the effects of ergoxin maleate, cabetin and carboprostol on the prevention and treatment of postpartum hemorrhage due to uterine fatigue[J]. Guangdong Medical Journal, 2017, 38(18): 2850-2852.
13. 潘琴. 卡前列素氨丁三醇联合缩宫素在高危妊娠且行剖宫产术中的应用价值分析[J]. 解放军医药杂志, 2017, 29(9): 6-8.  
PAN Qin. Value of Carboprost Tromethamine Combined with Oxytocin in Application of High Risk Pregnancy Women Undergoing Cesarean Section[J]. Medical Journal of Beijing Military Region, 2017, 29(9): 6-8.
14. Zhu HM. Value of Carprost Aminobutanol Injection Combined with Oxytocin in the Prevention of Postpartum Hemorrhage in High-risk Pregnancy[J]. Journal of Mathematical Medicine, 2019, 32(7): 1045-1046.
15. 李玉梅, 谭白菊. 益母草注射液联合卡前列素氨丁三醇用于预防剖宫产产后出血的临床观察[J]. 中国药房, 2017, 28(9): 1197-1200.  
LI Yumei, TAN Baiju. Clinical Observation of Leonurus artemisia Injection Combined with Carboprost Tromethamine for Prevent-ing Postpartum Hemorrhage after Cesarean Section[J]. China Pharmacy, 2017, 28(9): 1197-1200.
16. 党玮, 李冰, 付天芳, 等. 卡前列素氨丁三醇、米索前列醇和缩宫素联合应用治疗产后出血的疗效分析[J]. 药物评价研究, 2016, 39(3): 433-436.  
DANG Wei, LI Bing, FU Tianfang, et al. Clinical observation of carboprost tromethamine and misoprostol combined with oxytocin in treatment of postpartum hemorrhage[J]. Drug Evaluation Research, 2016, 39(3): 433-436.

本文引用: 谷琳, 杨帆, 刘庆研, 郑蓉. 缩宫素、米索和卡前列素氨丁三醇治疗胎盘早剥产后大出血的临床研究[J]. 临床与病理杂志, 2021, 41(9): 2066-2071. doi: 10.3978/j.issn.2095-6959.2021.09.015  
**Cite this article as:** GU Lin, YANG Fan, LIU Qingyan, ZHENG Rong. Clinical study on the treatment of massive hemorrhage after placental abruption with oxytocin, misoprostol and carboprost tromethamine[J]. Journal of Clinical and Pathological Research, 2021, 41(9): 2066-2071. doi: 10.3978/j.issn.2095-6959.2021.09.015