

doi: 10.13241/j.cnki.pmb.2019.15.022

Cook 双球囊联合改良 B-Lynch 缝合术对产后出血的治疗效果观察 *

邵迎春 赵爱妮[△] 夏慧芳 潘珂 张小娟 肖新春

(陕西省中医药大学附属医院妇产科 陕西 咸阳 712000)

摘要 目的:探讨 Cook 双球囊联合改良 B-Lynch 缝合术对产后出血的治疗效果。方法:选取 2015 年 6 月~2018 年 6 月在我院经剖宫产分娩并发生产后出血的产妇 81 例进行回顾性分析。根据术中止血方法的不同分为两组,对照组 40 例采用 Cook 双球囊进行止血,观察组 41 例在对照组的基础上应用改良 B-Lynch 缝合术进行止血。对两组患者的手术相关指标、止血成功率、子宫切除率、术后恢复情况和并发症发生情况进行比较。结果:观察组的术中出血量、术后 24 h 出血量和输血量显著低于对照组($P<0.05$),止血时间显著短于对照组($P<0.05$);观察组患者的止血成功率显著高于对照组($P<0.05$),子宫切除率和切口恢复时间显著低于对照组($P<0.05$),两组患者的住院时间和并发症发生率比较无统计学差异($P>0.05$)。结论:Cook 双球囊联合改良 B-Lynch 缝合术对剖宫产产后出血患者的临床效果显著优于单用 Cook 双球囊,且安全性较高。

关键词:Cook 双球囊;改良 B-Lynch 缝合术;产后出血

中图分类号:R714.461 **文献标识码:**A **文章编号:**1673-6273(2019)15-2900-04

Effect of Cook Double Balloon Combine with Modified B-lynch Suture on the Postpartum Hemorrhage*

TAI Ying-chun, ZHAO Ai-ni[△], XIA Hui-fang, PAN Ke, ZHANG Xiao-juan, XIAO Xin-chun

(Department of gynaecology and obstetrics, Affiliated hospital of shaanxi university of Chinese medicine, Xianyang, Shaanxi, 712000, China)

ABSTRACT Objective: To explore the effect of Cook double balloon combine with modified B-lynch suture on postpartum hemorrhage. **Methods:** A retrospective analysis was performed on 81 cases of postpartum hemorrhage in the cesarean section delivered in our hospital from June 2015 to June 2018. The patients were divided into two groups according to different hemostasis methods. The control group was treated with Cook's double balloon hemostasis, and the observation group was treated with improved B-lynch suture on the basis of control group. The indicators related to surgery, success rate of hemostasis, uterine excision, postoperative recovery and complications were compared between the two groups. **Results:** The intraoperative blood loss, postoperative blood loss and blood transfusion amount of the observation group were significantly lower than the control group, and the hemostatic time was significantly shorter than the control group($P<0.05$). The success rate of hemostasis in the observation group was significantly higher than that of the control group, while the uterine excision rate and incision recovery time were significantly lower than that of the control group ($P<0.05$). No statistical difference was found in the length of hospital stay and the incidence of complications between the two groups ($P>0.05$). **Conclusion:** Cook double balloon surgery combined with improved B-lynch suture can significantly enhance the hemostatic effect with high safety than cook double balloon surgery alone for the postpartum hemorrhage patients after cesarean section.

Key words:Cook double balloon; Modified B-lynch suture; Postpartum hemorrhage

Chinese Library Classification(CLC): R714.461 **Document code:** A

Article ID: 1673-6273(2019)15-2900-04

前言

产后出血是指自然分娩后 24 h 内出血量超过 500 mL,剖宫产产后出血量超过 1000 mL^[1-3],是导致产妇死亡的重要原因,发病率约为 3%。随着大龄产妇的增多,二胎的开放,瘢痕子宫、前置胎盘等高危病例逐渐增加,剖宫产率显著上升,产后出血的发病率也呈现上升趋势^[4,5]。产后出血患者的病情发展较

快,如果不能得到及时有效的救治,最终可能导致子宫切除,甚至导致多脏器功能衰竭等严重并发症而危及产妇的生命^[6-8]。

产后出血发生原因主要有宫缩乏力、软产道损伤、合并并发症和胎盘因素等,目前临床常用的治疗方法主要有药物、宫腔填塞、子宫切除、缝合、血管结扎等,但均存在一定的限制和弊端^[9-11]。大多产后出血患者不能接受子宫切除,因其不仅影响患者的生育功能,还会给患者带来极大的心理负担。传统的纱

* 基金项目:陕西省教育厅专项科研计划项目(16JK1206)

作者简介:邵迎春(1974-),女,硕士,副主任医师,研究方向:子痫前期、复发性流产早产、妊娠期血栓前状态、肺栓塞的防治,

E-mail: Taiyingchun1974@163.com

△ 通讯作者:赵爱妮(1974-),女,本科,副主任医师,主要研究方向:流产早产,E-mail: 573560054@qq.com,电话:13892967000

(收稿日期:2018-11-26 接受日期:2018-12-21)

布宫腔填塞操作复杂,反复填塞容易形成感染。球囊填塞简单、方便,可保留患者的子宫,在临床的应用越来越广泛^[12,13]。改良B-Lynch缝合术与传统B-Lynch缝合术相比,可防止缝线脱落,避免肠管的损伤^[14,15]。本研究主要探讨了Cook双球囊联合改良B-Lynch缝合术对产后出血的效果,以期为产后出血的临床治疗提供更多的参考依据。

1 资料与方法

1.1 病例资料

选取2015年6月~2018年6月在我院住院分娩的剖宫产术中发生产后出血的产妇81例进行回顾性分析。纳入标准:①符合剖宫产术后出血的诊断标准;②无凝血功能异常;③临床病例资料完整。排除标准:④合并重要脏器功能障碍者;⑤子宫下段撕裂伤严重至产后出血者;⑥其他血液系统疾病者。根据止血方法不同将患者分为两组,对照组采用Cook双球囊止血,观察组在对照组的基础上应用改良B-Lynch缝合术进行止血。对照组40例,年龄26~30岁,平均28.65±3.27岁;孕周37~40周,平均39.25±1.24周;产次1~3次,平均1.33±0.31次;出血原因:胎盘因素12例,子痫前期18例,其他10例。观察组41例,年龄27~31岁,平均29.32±3.85岁;孕周37~39周,平均38.96±1.12周;产次1~3次,平均1.41±0.38次;出血原因:胎盘因素11例,子痫前期19例,其他11例。两组一般资料相比无统计学差异($P>0.05$),具有可比性。

1.2 治疗方法

两组均给予缩宫素20U静脉注射和卡前列素氨丁三醇250μg肌肉注射,并进行补充体液、吸氧及抗休克等治疗,严密监视产妇的生命体征。对照组:采用Cook双球囊止血,Cook双

球囊放置方法:经剖宫产切口处将宫腔球囊和阴道球囊放入子宫,注水段均经阴道送至台下助手处,在宫腔球囊注水端注入40mL生理盐水,并向下方牵拉球囊,使得阴道球囊置于宫颈下方阴道内,由阴道球囊注水端注入20mL生理盐水,固定球囊。给予敏感抗生素预防感染,止血后分次放液50~100mL,直至液体完全放出后取出球囊,球囊放置时间不超过24h。观察组在对照组的基础上给予改良B-Lynch缝合术进行止血,以剖宫产切口下缘为进针点,充分暴露子宫下段的情况下穿过宫腔至切口上缘后从子宫底部出针,向下缝合2针后在离宫角3~4cm处进针,绕至子宫体后壁后出针,再沿水平位置进针至宫腔,由子宫体后壁出针,经缝线拉至子宫前方,在右侧对应子宫切口上下缘分别进出针,拉紧缝线并在子宫切口下缘结扎。双球囊放置方法同对照组。

1.3 观察指标

①手术相关指标。②止血成功率、子宫切除率和术后恢复情况,有效:阴道出血小于等于50mL/h,子宫收缩情况良好,生命体征平稳;无效:阴道出血量大于50mL/h,子宫收缩情况不佳,生命体征难以控制或无尿。③并发症发生情况。

1.4 统计学方法

采用SPSS 20.0进行数据分析,计量资料用 $\bar{x}\pm s$ 表示,组间比较行t检验;计数资料采用例数和百分率表示,组间比较行 χ^2 检验,以 $P<0.05$ 表示差异有统计学意义。

2 结果

2.1 两组手术相关指标的比较

观察组术中出血量、术后24h出血量和输血量均显著低于对照组,止血时间显著短于对照组($P<0.05$),见表1。

表1 两组患者手术相关指标比较($\bar{x}\pm s$)
Table 1 Comparison of the operation-related indicators between the two groups($\bar{x}\pm s$)

Groups	n	Intraoperative blood loss(mL)	Blood loss 24 h after surgery(mL)	Time of hemostasis(min)	Blood transfusion volume(mL)
Control Group	40	95.64±22.13	1121.37±201.54	18.85±5.12	654.32±123.25
Observation group	41	84.85±18.32	847.65±186.94	14.54±3.74	464.85±101.28
t	-	2.393	6.339	4.318	7.567
P	-	0.019	<0.001	<0.001	<0.001

2.2 两组止血成功率和子宫切除率的比较

观察组止血成功率显著高于对照组,子宫切除率和切口恢

复时间显著低于对照组($P<0.05$),两组患者的住院时间比较差异无统计学意义($P>0.05$),见表2。

表2 两组患者止血成功率和子宫切除率比较[例(%)]
Table 2 Comparison of the success rate of hemostasis and uterine excision between the two groups[n(%)]

Groups	n	Success rate of hemostasis	Excision rate of uterine	Hospital stays(d)	Recovery time of notch (d)
Control Group	40	33(82.50)	5(12.50)	13.02±3.58	9.32±2.85
Observation group	41	40(97.56)	0(0.00)	12.21±3.21	7.13±2.14
χ^2/t	-	5.160	5.462	-1.073	3.904
P	-	0.029	0.026	0.286	<0.001

2.3 两组并发症发生情况的比较

两组并发症发生率比较无统计学差异($P>0.05$),见表3。

表 3 两组患者并发症发生情况比较[例(%)]
Table 3 Comparison of complications occur rate between the two groups[n(%)]

Groups	n	Puerperalism	Urinary tract infection	Poor Uterine involution	Total complication rate
Control Group	40	2(5.00)	2(5.00)	2(5.00)	6(15.00)
Observation group	41	1(2.44)	2(4.88)	1(2.44)	4(9.76)
χ^2	-				0.514
P	-				0.519

3 讨论

目前,我国的剖宫产率较高,已达到20%~30%,而剖宫产的并发症的发生率较高,尤其是产后出血的发生率远高于阴道自然分娩,且随着高龄产妇的增加,剖宫产率逐年上升,产后出血的发生率也呈现上升的趋势^[16-18]。发生产后出血后如不及时处理会危及产妇的生命。当药物治疗无效时,传统的纱布填塞操作较慢,且容易造成感染,填塞不紧还会造成止血失败。Cook双球囊有宫腔球囊和阴道球囊,可共同互相压迫子宫下段起到止血的效果^[19-21]。B-Lynch缝合术是在1993年首次报道的一种控制产后出血的缝合方法,具有较好的止血效果,但这种缝合方式可能会出现缝线脱落而导致手术失败^[22,23]。因此,本研究主要探讨了Cook双球囊联合改良B-Lynch缝合术对剖宫产产后出血的效果。

Cook双球囊具有定点压迫止血的作用,可针对性的对子宫下段的出血点进行压迫止血,尤其是对于宫腔内出血点较低的患者止血效果更加突出^[24-26]。B-Lynch缝合术可在子宫的表面形成牵拉,进而对子宫产生压迫,使其处于收缩的状态。另外,还能够压迫大部分子宫动静脉分支,减慢血液流速,使得出血窦关闭,进一步对子宫收缩形成刺激,达到止血的目的^[27,28]。改良B-Lynch缝合术在传统B-Lynch缝合术的基础上在子宫底左右各缝一针,缝线更加稳固不易脱落,对子宫的收紧作用更加持久,止血效果更加显著。本研究结果显示Cook双球囊联合改良B-Lynch缝合术处理的产妇术中出血量、术后24 h出血量、止血时间和输血量显著低于单用Cook双球囊组,表明两种方式联合应用的止血效果更好,降低了患者的输血量和子宫切除率,不仅节约了住院治疗费用也降低了患者输血的风险,而且保留了患者的生育功能和正常的生理结构,利于患者的产后恢复^[29,30]。此外,产后出血患者的并发症主要有产褥病、尿道感染、子宫复旧不良等,但Cook双球囊联合改良B-Lynch缝合术的并发症发生率与单用Cook双球囊相比无统计学差异,说明改良B-Lynch缝合术不会增加患者的并发症发生率,可能是由于改良B-Lynch缝合术的缝线不穿透蜕膜层,避免了子宫肌层和感染的发生^[31]。

综上所述,Cook双球囊联合改良B-Lynch缝合术对剖宫产产后出血患者的临床效果显著优于单用Cook双球囊,且安全性较高。

参考文献(References)

- [1] Evensen A, Anderson J M, Fontaine P. Postpartum Hemorrhage: Prevention and Treatment [J]. American Family Physician, 2017, 95(7): 442-449
- [2] Ducloy-Bouthors A S, Duhamel A, Kipnis E, et al. Postpartum haemorrhage related early increase in D-dimers is inhibited by tranexamic acid: haemostasis parameters of a randomized controlled open labelled trial[J]. British Journal of Anaesthesia, 2016, 116(5): 641-648
- [3] Papanikolaou J, Makris D, Tsolaki V, et al. Post-partum hemorrhage complicated by reverse-Takotsubo cardiogenic shock; a novel therapeutic approach[J]. American Journal of Emergency Medicine, 2016, 35(6): 935.e1-935.e3
- [4] Goffman D, Nathan L, Chazotte C. Obstetric hemorrhage: A global review[J]. Seminars in Perinatology, 2016, 40(2): 96-98
- [5] Umar A S, MBBS, MPH, et al. Maternal Mortality in the Main Referral Hospital in Angola, 2010-2014: Understanding the Context for Maternal Deaths Amidst Poor Documentation [J]. International Journal of Mch & Aids, 2016, 5(1): 61-71
- [6] You W B, Zahn C M. Postpartum hemorrhage: abnormally adherent placenta, uterine inversion, and puerperal hematomas[J]. Clinical Obstetrics & Gynecology, 2016, 49(1): 184-197
- [7] Vlassoff M, Diallo A, Philbin J, et al. Cost-effectiveness of two interventions for the prevention of postpartum hemorrhage in Senegal[J]. International Journal of Gynecology & Obstetrics, 2016, 133 (3): 307-311
- [8] Hanley G E, Smolina K, Mintzes B, et al. Postpartum Hemorrhage and Use of Serotonin Reuptake Inhibitor Antidepressants in Pregnancy[J]. Obstetrics & Gynecology, 2016, 127(3): 533-561
- [9] Jin B, Du Y, Zhang F, et al. Carbetocin for the prevention of postpartum hemorrhage: a systematic review and meta-analysis of randomized controlled trials [J]. J Matern Fetal Neonatal Med, 2016, 29(3): 1-8
- [10] Chen C Y, Su Y N, Lin T H, et al. Carbetocin in prevention of postpartum hemorrhage: Experience in a tertiary medical center of Taiwan[J]. Taiwanese Journal of Obstetrics & Gynecology, 2016, 55(6): 804-809
- [11] Frimat M, Decambron M, Lebas C, et al. Renal Cortical Necrosis in Postpartum Hemorrhage: A Case Series[J]. American Journal of Kidney Diseases, 2016, 68(1): 50-57
- [12] Maswime S, Buchmann E. A systematic review of maternal near miss and mortality due to postpartum hemorrhage[J]. International Journal of Gynecology & Obstetrics, 2017, 137(1): 1-7
- [13] Wei L, Ma S, Pan W, et al. Combination of motherwort injection and oxytocin for the prevention of postpartum hemorrhage after cesarean section [J]. Journal of Maternal-Fetal Medicine, 2016, 29 (15): 2489-2492

- [14] Kaya B, Guralp O, Tuten A, et al. Which uterine sparing technique should be used for uterine atony during cesarean section? The Bakri balloon or the B-Lynch suture?[J]. Archives of Gynecology & Obstetrics, 2016, 294(3): 511-517
- [15] Nishikawa A, Matsuzaki S, Mimura K, et al. Short interpregnancy interval after B-Lynch uterine compression suture: a case report[J]. Clin Exp Obstet Gynecol, 2016, 43(3): 434-436
- [16] O'Neill S M, Curran E A, Dalman C, et al. Birth by Caesarean Section and the Risk of Adult Psychosis: A Population-Based Cohort Study[J]. Schizophrenia Bulletin, 2016, 42(3): 633-641
- [17] Heemelaar S, Nelissen E, Mdoe P, et al. Criteria-based audit of caesarean section in a referral hospital in rural Tanzania [J]. Tropical Medicine & International Health, 2016, 21(4): 525-534
- [18] Robson S J, de Costa C M. Thirty years of the World Health Organization's target caesarean section rate: time to move on [J]. Medical Journal of Australia, 2017, 206(4): 181-185
- [19] Yang F, Huang S, Long Y, et al. Double-balloon versus single-balloon catheter for cervical ripening and labor induction: A systematic review and meta-analysis [J]. Journal of Obstetrics & Gynaecology Research, 2017, 44(1): 27-34
- [20] Umit A, Filiz A. Diagnostic and Therapeutic Capability of Double-Balloon Enteroscopy in Clinical Practice [J]. Clinical Endoscopy, 2016, 49(2): 157-160
- [21] Vijayasree M. Efficacy of Prophylactic B-Lynch Suture during Lower Segment Caesarian Section in High Risk Patients for Atonic Postpartum Haemorrhage[J]. Kathmandu Univ Med J, 2016, 14(53): 9-12
- [22] Matsubara S. Bakri balloon vs. B-Lynch suture as hemostatic procedures for atonic bleeding: clarification and concerns [J]. Archives of Gynecology & Obstetrics, 2016, 293(5): 1-2
- [23] Abbas A M, Sheha A M, Ali M K, et al. Successful term delivery after Khairy's modified B-lynch suture technique: First case report[J]. Middle East Fertility Society Journal, 2017, 22(1): 87-90
- [24] Tang L, Huang L Y, Cui J, et al. Effect of Double-Balloon Enteroscopy on Diagnosis and Treatment of Small-Bowel Diseases[J]. Chin Med J, 2018, 131(11): 1321-1326
- [25] Yamamoto H. Fifteen years since the advent of double-balloon endoscopy [J]. Clinical Gastroenterology & Hepatology the Official Clinical Practice Journal of the American Gastroenterological Association, 2017, 15(11): 1647-1650
- [26] Jamil L H. Migrated esophageal stent retrieved via oral double-balloon enteroscopy[J]. Gastrointestinal Endoscopy, 2017, 2(3): 62-63
- [27] Indiran V, Kannan K, Maduraimuthu P. CT and MR imaging of uterine necrosis following B-Lynch and Hayman suturing for postpartum hemorrhage [J]. Indian Journal of Medical Specialities, 2016, 7(3): 125-126
- [28] Smithers L G, Mol B W, Wilkinson C, et al. Implications of caesarean section for children's school achievement: A population-based study[J]. Aust N Z J Obstet Gynaecol, 2016, 56(4): 374-380
- [29] Arab M, Ghavami B, Saraeian S, et al. Successful Management of Two Cases of Placenta Accreta and a Literature Review: Use of the B-Lynch Suture and Bilateral Uterine Artery Ligation Procedures[J]. Iranian Red Crescent Medical Journal, 2016, 18(4): e35006
- [30] Harlow F H, Smith R P, Nortje J, et al. Catastrophic uterine rupture associated with placenta accreta after previous B-Lynch sutures [J]. Journal of Obstetrics & Gynaecology the Journal of the Institute of Obstetrics & Gynaecology, 2017, 38(2): 282-284
- [31] Abbas A M, Sheha A M, Ali M K, et al. Successful term delivery after Khairy's modified B-lynch suture technique: First case report[J]. Middle East Fertility Society Journal, 2017, 22(1): 87-90

(上接第 2872 页)

- [26] Lee HJ, Ock M, Kim K, et al. Estimation of population-based utility weights for gastric cancer-related health states [J]. Patient Preference & Adherence, 2018, 12(14): 909-918
- [27] Wang T, Lu ZY, Tu XF, et al. Computerized tomography findings in calcified signet-ring gastric cancer receiving chemotherapy: a case report[J]. Bmc Cancer, 2018, 18(1): 474
- [28] Frenkel A, Bichovsky Y, Perry Z H, et al. Management of gastros-

- plenic fistula in the emergency setting-A case report and review of the literature[J]. Annals of Medicine & Surgery, 2018, 04(12): 26-29
- [29] Arrangoiz R, Papavasiliou P, Dushkin H, et al. Case report and literature review: Metastatic lobular carcinoma of the breast an unusual presentation[J]. Int J Surg Case Rep, 2011, 2(8): 301-305
- [30] Kim KH, Lee HJ, Lee SH, et al. Mixed adenoneuroendocrine carcinoma in the stomach: a case report with a literature review[J]. Annals of Surgical Treatment & Research, 2018, 94(5): 270-273