B lynch suturing in uterine atony during ceasarean section

ภาณุพงศ์ เจริญดำรงทรัพย์ พ.บ. *

Abstract

Objective B Lynch suture in uterine atony prophylaxis postpartum hemorrhage during ceasarean section.

Method A Descriptive study, April 2013 – May 2014 was controlled at Suratthani hospital Thailand. During that period there were 7500 deliveries with a ceasarean section rate of 45% (3375). Our of those 3375 ceasarean section the first author had performed 600 (17%), 50(8.3%) of which needed B-Lynch suture to control the uterine atony.

Results Total 50 cases , 47 cases successful for prevention of uterine atony. 3 cases had postoperative postpartum hemorrhage (2 cases from placenta previa,1 case from eclampsia) and need PRC methegin, nalador, cytotec for resuscitation.No case needed reoperation from postpartum hemorrhage and none require a hysterectomy.

Conclusion B-Lynch technique is a safe, effective, easily and prevention implemented method of postpartum hemorrhage due to uterine atony during ceasarean section.

Panupong Charoendumrongsup, MD.,*
Department of Obstetrics and Gynaecology,
Surathani Hospital
Surathani 84000,Thailand.

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บทคัดย่อ

วัตถุประสงค์ : วิธีการเย็บมดลูก B-Lynch ป้องกันการตกเลือดหลังคลอดในภาวะมดลูกไม่หดรัดตัวขณะที่ผ่าท้องคลอด

วิธีการ : การศึกษาแบบย้อนหลังตั้งแต่ เมษายน 2556 ถึง พฤษภาคม 2557 ในโรงพยาบาลสุราษฎร์ธานี ประเทศไทย. ขณะที่ศึกษามีหญิงตั้งครรภ์มาคลอดทั้งหมด 7500 ราย และมีการผ่าท้องคลอด 3375 ราย คิดเป็นร้อยละ 45 โดยผู้ทำการศึกษาได้ผ่าท้องคลอด 600 ราย คิดเป็นร้อยละ 17 และได้ทำการเย็บมดลูก B-Lynch 50 รายคิดเป็นร้อยละ 8.3ในการป้องกันการตกเลือดจากภาวะมดลูกไม่หดรัดตัวในขณะผ่าท้องคลอด

ผลการศึกษา : พบว่าใน 47 รายจาก 50 ราย สามารถป้องกันการตกเลือดจากภาวะมดลูกไม่หดรัดตัวในขณะผ่าท้องคลอด มีเพียง 3 รายที่มีภาวะตกเลือดหลังคลอด โดย 2 รายมีภาวะของรกเกาะต่ำ อีก 1 รายมีภาวะชักจากครรภ์เป็นพิษร่วมด้วยและมีการให้เลือดและใช้ยา Methergin Nalador และ Cytotec ในการรักษาร่วมด้วย ไม่มีการผ่าตัดใหม่และตัดมดลูกจากภาวะตกเลือดหลังผ่าท้องคลอด

สรุป : วิธีการเย็บมดลูก B-Lynch ปลอดภัย ได้ผลดี ทำง่ายและสามารถป้องกันการตกเลือดหลังคลอดในภาวะมดลูกไม่หดรัดตัวขณะที่ผ่าท้องคลอด

คำหัส : ตกเลือดหลังคลอด, วิธีเย็บมดลูก B-Lynch

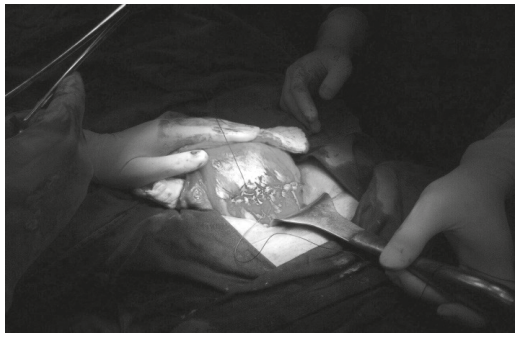
Introduction

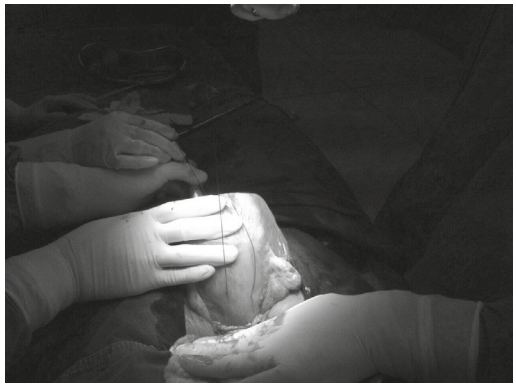
The maternal mortality rate in Thailand is 32 per 100 000live births in comparison to eight per 100 000 in theUnited States of America; and 25% of the sedeaths are due to obstetric hemorrhage, mostly postpartum hemorrhage (PPH).[1] Uterine atony is the most common cause for primary PPH and is usually managed initially with oxytocic and medical agents.If these are unsuccessful, surgical procedures such as ligation of the internal iliac arteries, ligation or embolization of the uterine arteries and hysterectomy have been proposed. B-Lynch suturing is a new and simple technique that can be used in uterine atony prophylaxis postpartum hemorrhage during ceasarean section.[2]

Methods

A Descriptive study, April 2013 – May 2014 was controlled at Suratthani hospital Thailand. During that period there were 7500 deliveries with a ceasarean section rate of 45%(3375). Out of those 3375 ceasarean section the first author had performed 600 (17%), 50(8.3%) of which needed B-Lynch suture to control the uterine atony. After starting the suturing of the uterus the tone of it was palpated and if it was found atonic the uterus was exteriorized and bimanual compression of the uterus was done. All of them received 10 unit of oytocin add in 5/D/N2 1000 ml after delivery of the baby.Methylergometrine 0.2 mg was given intravenously and the decision of applying the B-Lynch suture was made accordingly.

The author used no. 1 atraumatic chromic catgut and had no difficulty in achieving the desired effect. The patient was in supine position and after the delivery of baby through lower segment the B-Lynch suture was applied in a usual way with moderate tension causing blanching of the vessels on the surface uterus giving pale appearance between the suture lines.





Result

The average ages were 27.4 years. The average preoperative haemoglobin level was11.1 mg/dl and hematocrit was 33.7% compare postoperative haemoglobin was 10.8 mg/dl and hematocrit was 32.9%. Indication for ceasarean section was CPD (20 cases),previous caesarean section (10 cases), fetal distress(8 cases), twin (7 cases), severe preeclampsia(2 cases), eclampsia (1 cases) and placenta previa (2 cases). Total 50 cases, 47 cases succeesful for prevent of uterine atony. 3 cases had postoperative postpartum hemorrhage (2 cases from placenta previa,1 case from eclampsia) and need PRC methegin, nalador, cytotec for resuscitation. No case needed reoperation from postpartum hemorrhage and none require a hysterectomy.All patients had a good post op recovery and a six months follow up.All women resumed normal menstruation

Table.1 General descriptive data

	Minimum	Maximum	Mean	SD
Age (yrs)	16	46	27.4	6.3
GA(wks)	31	42	37.8	2.3
Parity	0	4	1.7	0.9
BW(kgs)	50.0	91.5	67.8	11.0
Height(cms)	142.0	167.0	154.0	7.1
Pre op Hb(mg/dl)	6.5	13.4	11.1	1.4
Pre op Hct (%)	20.0	40.0	33.7	3.7
Post op Hb(mg/dl)	6.4	13.7	10.8	1.5
Post op Hct(%)	19.9	40.3	33.0	4.2
Blood loss (ml)	300.0	1500.0	405.7	280.7
Fetal weight (gms)	1560.0	4630.0	3011.4	736.0

Table 2. Indication for caesarean section

N= 50	Frequency	Percent	Cumulative Percent
CPD	20	40.0	40.0
Previous C/S	10	20.0	60.0
Fetal distress	8	16.0	76.0
Twin	7	14.0	90.0
Severe preelampsia	2	4.0	94.0
Eclampsia	1	2.0	96.0
Placenta previa	2	4.0	100.0

Discussion

The most important cause of major PPH is uterine atony. Risks include nulliparity, maternal obesity, a large baby, multiple pregnancy, prolonged or augmented labor,prolonged third stage, antepartum hemorrhage, previous postpartum hemorrhage, and operative delivery, especially emergency caesarean section.[3] Despite identification of such risk factors, primary PPH still occurs unpredictably in low-risk women. Uterine atony remains the most common cause for major primary PPH. It is usually resolved with medical treatment such as oxytocics but in intractable cases surgical management may be required. [2] At the time of writing there were 10 report sinvolving a total of 38 women who had been treated with the B-Lynch surgical technique for severe PPH with 36 successes and 2 failures.[4,6-14] The reported causes of failure varied from placenta percreta and uncontrolled disseminated intravascular coagulopathy to lack of suture tension or improper suture application. [5]The prophylactic application of the B-Lynch suture was performed after cesarean delivery in 15 patients significantly at risk for PPH, and there were no reported complications. The B-Lynch surgical technique can preserve life and fertility. It has been recommended by various authorities worldwide. [15-17]The chances for success of this simple, inexpensive, and quick procedure are uniquely tested immediately before and after its performance, and the procedure can be performed by surgeons with average surgical skills at units with limited resources. Furthermore, with the B-Lynch suture, an even pressure can be achieved at the same time to both sides of the uterine body. With more than 1000 procedures performed worldwide by surgeons of various experience at units receiving widely different financial and clinical support, it is the most frequently used surgical technique for uterine compression.[5] B-Lynch suture requires 70 mm round bodies needle which is cheap,easily sterilized and is reusable. Number one catgut is still used in developing countries and it is cheap and at times available on pharmacy stock.The technique of B-Lynch suture is quick and takes extra four minutes only. The technique can be easily mastered with need of basic surgical skill only. [5] The postprocedure patency of the uterine and cervical lumens has been tested and no known postoperative mortality related to the B-Lynch suture has been reported.[10] Furthermore, as it was first applied the B-Lynch suture technique has data from a longer follow-up time than the other uterine compression techniques.[5] As it is now applied at a much lower threshold of suspicion than in the first published series and prophylactic in patients at high risk, competence for its performance will increase.[4]

Conclusions

B lynch suturing in uterine atony during ceasarean section showed a high success rate with this procedure 47 cases (96%) of patients had no postpartum hemorrhage. No patients required subsequent hysterectomy.There were no intraoperative complications and few postoperative complications. In our experience,the B-Lynch technique is a safe, effective, easy and prevention implemented method of postpartum hemorrhage due to uterine atony.

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