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B Lynch Sutures for Atonic Postpartum Haemorrhage - A Hospital Based Study

Dr. Ravella Sowjanya[1], Dr. M. N. Bhagyasree[2], Dr Prasad Usha[3]
[1]*Associate professor, Obstetrics and Gynaecology, Siddhartha medical college, Vijayawada.*
[2]*postgraduate in Department of Obstetrics and gynaecology, Siddhartha Medical College, Vijayawada*
[3]*Associate professor, Obstetrics and Gynaecology, Siddhartha medical college, Vijayawada.*
Corresponding author: Dr Prasad Usha

Abstract
Background: Postpartum Haemorrhage is one of the leading causes of maternal mortality and morbidity
.Aim: To evaluate the efficacy of B-Lynch sutures in controlling atonic post partum hemorrhage at caesarian section.
This prospective observational hospital based study was conducted at Government General Hospital Vijayawada from Jan 2019 to Dec 2015. All women who underwent caesarean section and who developed atonic post partum haemorrhage and were refractory to medical management were included in the study. Exclusion criteria were those cases who developed Disseminated Intravascular Coagulation, bleeding diathesis and traumatic pph. Results were tabulated and analysed using SPSS version 22.
Results: The maximum number of cases were in the age group of 20 to 25 years and the number was 81(63.28%). 92 cases were multigravida with percentage of 71.87%. The most common indication for caesarean section was one or two previous LSCS (42.96%). Twins was the second most common indication for LSCS (14.84%). B-Lynch alone was successful in controlling post partum hemorrhage in 103 cases (80.46%).
Conclusion: B-Lynch suture is a simple safe and effective method to control atonic postpartum hemorrhage .
Keywords: *Atonic postpartum hemorrhage, B-Lynch suture, maternal mortality*

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I. Introduction

Postpartum Haemorrhage is one of the leading causes of maternal mortality and morbidity [1, 2].When medical management of postpartum haemorrhage fails, various invasive modalities have been described to control bleeding. The various interventions described are Compression sutures (B- lynch , Hayman , Cho) , Step wise devascularisation of uterus, Tamponade, Internal iliac artery and hysterectomy. Christopher B- Lynch in 1997 described B- Lynch suture that envelops and compresses the uterus to control life threatening post partum haemorrhage[3] .

II. Materials And Methods

This prospective observational hospital based study was conducted at Government General Hospital Vijayawada from Jan 2019 to Dec 2015. A total number 128 cases were include in the study. All women who underwent caesarean section and who developed atonic post partum haemorrhage and were refractory to medical management were included. Exclusion criteria was cases of Disseminated Intravascular Coagulation, bleeding diathesis and traumatic PPH. Results were tabulated and analysed using SPSS Version 22.

III. Results

Table 1: Demographic factors

Demographic Factors	No. Of cases (n=128)	Percentage
AGE:		
15 to 20 yrs	27	21.09%
20 to 25 yrs	81	63.28%
25 to 30 yrs	8	6.25%
30 to 35 yrs	12	9.37%
PARTY:		
Primi	36	28.12%
Multi	92	71.87%

The maximum number of cases were in the age group of 20 to 25 years and the number was 81(63.28%). 92 cases were multigravida with percentage of 71.87%.

Table 2: Indications for caesarean section.

Indication	No. Of cases	Percentage
CPD	9	7.03%
Prolonged labour	10	7.81%
Twins	19	14.84%
Fetal distress	6	4.6%
Failed induction	17	13.28%
APH	12	9.37%
Previous LSCS	55	42.96%

The most common indication for caesarean section was one or two previous LSCS(42.96%). Twins was the second most common indication for LSCS (14.84%).

Table 3: Type of Caesarean section

Type	No. Of cases	percentage
Elective	32	23%
Emergency	96	75%

96 cases (75%) were emergency LSCS and 32 cases were elective LSCS

Table 4: Type of intervention

Type of intervention	No. Of cases	percentage
B-lynch	103	80.46%
B-lynch +uterine artery ligation	11	8.59%
B-lynch + internal iliac artery ligation	2	1.56%
Hysterectomy alone	8	6.25%
Hysterectomy + internal iliac artery ligation	4	3.12%

B-Lynch alone was successful in controlling post partum hemorrhage in 103 cases (80.46%).In 11 cases (8.59%) uterine artery ligation and in 2 cases (1.56%) internal iliac artery ligation was required in addition to B-Lynch suture. Hysterectomy alone was required in 8 cases (6.25%) and in 4 cases (3.12%) internal iliac artery ligation was required in addition to hysterectomy.

Table 5: Maternal complication

Maternal complication	No. Of cases	percentage
Massive blood transfusion	34	26.56%
ARF	4	3.12%
Pulmonary edema	5	3.90%
DIC	11	8.59%
Maternal death	2	1.56%

Massive blood transfusion was required in 34 cases (26.56). Acute renal failure (ARF) was seen in 4 cases (3.12%) . Pulmonary edema in 5 cases (3.90) , DIC in 11 cases (8.59) and maternal death in 2 cases (1.56%).

IV. Discussion:

Uterine artery is the most common cause of postpartum excessive bleeding which is also the most common cause of maternal death in the developing countries, [4,5,6]. Uterine compression sutures is the

effective way to treat uterine artery. It was first reported by B-lynch et al in 1997 with an average success rate of 97% varying from 76% to 100% [7]. Wohlmoth et al [8] performed B-lynch suture on 22 patients at caesarean section to control intractable postpartum haemorrhage that did not respond to uterotonic agents. In 12 cases B-lynch suture was the only intervention, In 10 cases it was accompanied with vessel ligation. In the study by Neelam et al [9] in 82.67% cases B- lynch was the only intervention similar to this study where B-lynch alone was able to control postpartum haemorrhage in 80.46% of cases. Faruqi et al [10] performed B-lynch sutures on 45 women to control postpartum haemorrhage. They were successful in 97.8% cases. Choudry et al performed B lynch sutures on 17 patients with refractory postpartum haemorrhage where in 12 patients it was applied during caesarean section. In the present study B-Lynch alone was successful in controlling post partum hemorrhage in 103 cases (80.46%).In 11 cases (8.59%) uterine artery ligation and in 2 cases (1.56%) internal iliac artery ligation was required in addition to B-Lynch suture. Hysterectomy alone was required in 8 cases (6.25%) and in 4 cases (3.12%) internal iliac artery ligation was required in addition to hysterectomy. B-lynch suture was not very successful in controlling bleeding following major degree placenta previa and adherent placenta with internal iliac artery ligation and some times hysterectomy was required.

V. Conclusion:

B-Lynch suture is a simple safe and effective method to control atonic postpartum hemorrhage especially during cesarian section. However, B-lynch suture was not very successful in controlling bleeding following major degree placenta previa and adherent placenta.

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