



STUDY OF B LYNCH SUTURES IN ATONIC PPH :A PROSPECTIVE STUDY

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ABSTRACT

Background: Postpartum hemorrhage is one of the major obstetric emergencies encountered worldwide. Uterine atony is one of the most common causes of PPH and is estimated to cause every 10 minutes a women's death, mainly in developing countries. B-lynch sutures is most popular method in treatment of uterine atony if oxytocics fail.

Method: A prospective observational study of 232 women with atonic PPH during vaginal and caesarean section were included in our study and had undergone B-lynch sutures for control of PPH. Blood loss was estimated and outcome of B-lynch was seen and need of hysterectomy was evaluated.

Results: Among 232 cases, 22% had blood loss <1000ml; 54% had blood loss between 1000 to 1500ml, 16% had loss between 1501 to 2000ml and about 8% had loss >2000ml. The effectiveness of B lynch sutures was found to be 93.5%.

KEYWORDS : B-lynch, Postpartum hemorrhage, Uterine atony.

INTRODUCTION

A blood loss of >500ml following vaginal delivery and about >1000ml following Caesarean section is defined as postpartum hemorrhage. It leads to maternal morbidity and mortality especially in developing countries like India.¹

Postpartum hemorrhage may occur in 1-5% of deliveries and is one of the leading cause of maternal mortality and morbidity in both developed and developing countries²

PPH has been classified into 2 types ; Primary and Secondary. Primary PPH is defined as blood loss of more than 500ml following vaginal delivery and more than 1500ml following C-section within first 24hrs of delivery. Its incidence is 5%.

Many studies; local as well as international reveals that the main cause of PPH is uterine atony followed by vaginal hematoma, cervical or vaginal tear , adherent placenta, uterine angle extension and retained placenta. If PPH is massive it may lead to complications like hypovolemic shock, DIC, hepatic dysfunction , ARDS and renal failure.^{3,4,5}

Different management procedures adopted for management of PPH includes Medical and Surgical methods . Medical methods include use of oxytocin ; methylergometrine and prostaglandins.

Surgical method includes uterine artery ligation; internal iliac artery ligation ; B lynch sutures; Hysterectomy.

The study is to evaluate role of B-lynch sutures in PPH management.

MATERIALS AND METHODS

A hospital based cross section study was conducted on all women who were diagnosed with PPH from June 2019 to March 2021 at Obstetrics and Gynaecology at VVPF hospital , Ahmednagar . Study consisted of total number of deliveries , mode of deliveries , No. of cases with PPH, their duration of hospital stay and complications. Patient having PPH after vaginal delivery and PPH with uterine atony were not

included. Primary indication in these cases was persistent atonic uterus which did not respond to conservative measures like uterotonics (oxytocin, ergometrine, carboprost and misoprost).

If patient did not respond to medical management , bimanual compression applied followed by modified B lynch sutures. Technique included sutures to be taken by catgut no. 1.

Needle is inserted ~2cm above bladder into uterus and taken out from posterior wall. Uterus is compressed between 2 hands and sutures tied above fundus. Similar sutures taken on left side . Incision line observed for any bleeding.

We considered 232 cases during the study period. The amount of blood loss measured by amount of blood suctioned out in suction apparatus after the placental delivery and my mops soaked with blood. Immediate complications like fever , wound gaping etc.

RESULTS

Total deliveries 6650, 3350 vaginal 3300 lscs. Due to more number of high risk cases like placenta previa, preeclampsia, multiple gestation , incidence of PPH at our institute was taken to be about 4.5%.

The incidence was found to be more in during lscs as compared to vaginal as there was high risk cases like placenta previa , preeclampsia etc. 35% vaginal deliveries and 65% lscs patients encountered atonic PPH.

We included 232 cases of PPH amongst which 82 were delivered vaginally and 150 had undergone lscs.

Table 1: Demographic characteristics of the study subjects

Demographics	Percentage	Frequency
Age group (in years)		
<20	28.00	65
21-25	52.00	120
26-30	20.00	47
Gravida		

Primi	48.00	201
Multi	52.00	218
Religion		
Hindu	77.00	184
Christian	7.00	18
Muslim	8.00	201
Others	4.00	10
Socio economic status		
Class 1	2.001	5
Class 2	10.00	25
Class 3	20.00	45
Class 4	40.00	92
Class 5	28.00	65
Booking status		
Booked	46.00	106
Un booked	54.00	125
Gestational age		
≤28	2.00	5
29-32	12.001	28
33-36	16.00	38
37-40	64.00	148
≥41	6.00	13

Maximum cases were found in age group of 21 to 25 years, multigravida who were Hindu by religion with gestational age range of 37 to 40weeks. About 106 cases were booked. Majority patients belonged to Class4.

Table 2: Distribution based on outcome

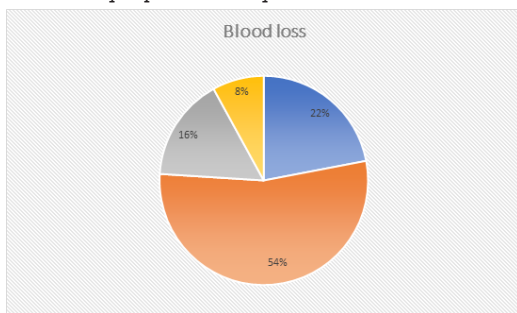
About 93.5% of the cases were successful and 6.5% failed in this study to achieve haemostasis after Blynch sutures were taken.

Outcome	Frequency	Percentage
Successful	217	93.5
Failure	12 (internal iliac ligation) 3(obstetrics hysterectomy)	6.5
Total	232	100.0

Table 3: Distribution of the study subjects based on immediate complications (n=232)

Immediate Complications	Frequency	Percentage
Wound gaping	14	6
Fever	43	10
Hospital stay for more than 7 days	43	10
Wound infection	51	12
Venous Thromboembolism	0	0

About 6% cases had were found to have gaping of wound, 10% had H/O. fever and a hospital stay of more than 7 days. Infection of wound occurred in 12% cases. About 90% had return of fertility in present study.



Among 50 cases , 22% had blood loss < 1000ml, 54% had loss between 1000 to 1500ml, 16% had loss between 1501 to 2000ml and about 8% had loss >2000ml.

DISCUSSION

PPH is most common cause of premature mortality of women worldwide. Risk factors for PPH include anaemia ,

uncontrolled HTN, multiple pregnancy, multigravida, prolonged labor. PPH is life threatening complication associated with delivery. Common causes of PPH include uterine atony, trauma, abnormal placental implantation, coagulopathies. Thus most important step is to identify the cause and correct it accordingly. If not managed medically then usually different suture techniques are applied. Blynch sutures were first described and shown to be the most effective suture technique in managing atonic pph.

Kaoiean reported successful outcome of B lynch sutures in 23 out of 24 patients. Marasinghe et al. ¹⁸ did prospective observational study in 17 womens to see effect of Blynch sutures in atonic uterus and showed successful outcome in 13 patients and 4 required hysterectomy. The success rate in our study was 93.5 %. Higher as compared to Devi PU et al. equal to Gadappa SN et al and Sudha HC et al.

Among 232 cases , 22% had blood loss < 1000ml, 54% had loss between 1000 to 1500ml, 16% had loss between 1501 to 2000ml and about 8% had loss >2000ml. The amount of blood loss equivalent to studies conducted by Gadappa SN et al, Sudha HC et al, El Sökkary M et al.

About 6% cases were found to have gaping of wound, 10% had H/O. fever and a hospital stay of more than 7 days . Infection of wound occurred in 12% cases. Ghodake VB et al 11 (2008) in their study found 5 cases of fever post procedure and 3 cases of wound gaping. El Sökkary M et al 10 (2016) included 2 groups in their study, Group 1 had used the modified technique of B Lynch and Group 2 had the classic technique of the B Lynch suturing. Among the modified technique group, bleeding from multiple sites were found in 7 cases, 1 case had haematometra, 4 cases had wound haematoma, wound infection in 4 cases and fever in 5 cases. Similarly among the classic group, 13 cases were found to have bleeding from multiple sites, 5 cases had haematometra, wound infection in 4 cases and haematoma and 8 cases had fever. Gadappa SN et al 7 (2018) noted that about 4 cases in their study suffered from fever and 2 cases had wound gaping.

Some limitations of our study was that it was time bound and observational study. It highlighted importance of B lynch sutures and not other suture techniques.

CONCLUSION

Our study concluded that B lynch sutures are inexpensive, quick and easy method for controlling atonic PPH. The success rate of B lynch sutures in our study was found to be 93.5%.

There were less post operative complication seen.

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