MEDICAL CHANNEL

Original Article

B-LYNCH BRACE SUTURES FOR THE TREATMENT OF MAJOR PRIMARY POST PARTUM HAEMORRHAGE: AN EXPERIENCE AT ABBASI SHAHEED HOSPITAL, KARACHI.

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ABSTRACT

Back ground: In developing countries like Pakistan maternal mortality rates are quite high. Primary Post partum hemorrhage is the number 1 leading cause of maternal mortality in Pakistan. Uterine atony is the major cause of Primary post partum haemorrhage (PPH) i.e 75-90%, followed by placenta previa and genital tract trauma respectively. B-Lynch sutures are a recently devised technique performed to treat refractory post partum hemorrhage. The purpose of our study is to demonstrate the effectiveness of B-Lynch sutures in our patients with major PPH, not responding to conventional Uterotonic treatment.

Material and Method: A Prospective observational study was performed during January 2007 till June 2008 at Department of Gynecology and Obstetrics, Abbasi Shaheed Hospital, Karachi. Data was collected for all the women to whom B-Lynch sutures were applied for intractable PPH.

Results:B-Lynch suture was applied to 15 patients with primary PPH in our study. Their mean age was 26.6 years; average gestational age at time of delivery was 37.86 weeks. A total of 3505 patients admitted out of which 363 underwent major operations. A total of 2865 deliveries were performed; among them, 126 patients had PPH. Total 31 cases of severe PPH were identified. B-Lynch sutures were applied to 15 patients, 14(93.3%) had effective control of bleeding. One patient (6.6%) failed to respond suture application.

Conclusion: B-Lynch technique appears to be an effective procedure with a relatively low morbidity to control persistent severe PPH.

Key Words B-Lynch sutures, Primary Post Partum Haemorrhage (PPH), uterine atomy.

INTRODUCTION

Post partum haemorrhage (PPH) is one of the leading causes of Maternal Mortality and morbidity world wide [1-3]. According to WHO 5, 29,000 women die each year from pregnancy related causes. [4] PPH is one of the leading cause of maternal mortality i.e, (17-40%) in the developing countries and 40% of maternal morbidity.[5] In UK it is among the top three causes of direct maternal deaths during 2003 -2005. [6]

In the developing countries the risk of maternal death from PPH is one in 1000 deliveries. Maternal death rates (MMR) in India, is estimated as 560/10,000 live births and PPH is accounting for 35-56% of these deaths.[7]

In Pakistan about 30,000 women die each year due to pregnancy related causes. Our Maternal mortality rate currently is around 270/1000,000 live births according to WHO & UNICEF. Haemorrhage, hypertension, unsafe abortion, infection and obstructed labour are among the direct leading causes. [8]

Life threatening massive haemorrhage occurs in 1 in 1000 deliveries[5] Uterine atony is the major cause of primary post partum haemorrhage followed by placenta previa and genital tract trauma respectively. Uterine atony accounts for 75-90% of cases of Primary PPH.A number of treatment methods are used to treat PPH including Uterotonic drugs, Uterine tamponade and arterial embolization etc. Arterial Embolization technique is not available at all centers in Pakistan. It also requires a lot of logistics, skills and relatively haemodynamically stable patient.

It case of failure of these traditional methods, Hysterectomy is often life saving. Hysterectomy leads to multiple issues regarding maternal psychology and further fertility. This issue was first addressed by Christopher B-Lynch [3] who developed B-Lynch suture technique in 1997. A continuous suture was applied to Jacket the whole uterus and this mechanically squeeze the uterus, thus stops bleeding. It is now been performed quite successfully throughout the world. In this study we analyzed the case series in which B-lynch suture was applied due to refractory PPH and their outcomes are discussed.

PATIENTS & METHODS:

Data collection was performed by filling performas developed for this purpose from January 2007 to June 2008. There were total 2865 deliveries in this duration. Primary PPH was found in 126 cases. Patients were inducted in this study after obtaining an informed consent.

The original standard B-lynch suture technique was applied in 15 cases where PPH is refractory to respond the conventional methods of treatment like Inj. Syntocinon, Inj. Ergometerine, PGF2á and Tab. Misoprostol (Cytotec®) respectively. No other surgical method was used along with this technique.

B-Lynch sutures were applied by consultant or senior registrar on duty. Traditional methods of applying suture were used. Suture material used was Vicryl 1-0. Suture was applied and vagina was swabbed to look for the control of bleeding. All patients were followed up routinely.

RESULTS:

During this study period, total number was 3505 of Patients admitted in Gynae Unit I of Abbasi Shaheed Hospital, Karachi. A total of about 363 major operations were performed in Gynae Unit I. Total 2865 deliveries were performed. Among them, 126 patients had PPH. Total 31 cases of Severe PPH were identified. B-Lynch sutures were applied to 15 Patients by skilled operators. Most of the Patients i.e, n = 14(93.3%) had effective control of bleeding after suture application. Only one patient i.e 6.6% had failed to respond suture application and bled a lot even after B-Lynch so Hysterectomy was performed in order to save the life of Patient. This lady has previous 1 cesarean section and placenta previa type IV, for which she had repeat C-Section.

Most of them were of low parity i.e, less than para 3 are n=12 i.e, 80% and n=3 i.e, 20% were of parity more than 3. Table I All patients were young ladies of reproductive age. Their ages ranged from 17-40 years. Mean age is 26.6 years Table II

Most of the patients had uterine atony as cause of their PPH n=13 i.e, (86%), while n = 2 i.e, (13%) Patients had placenta previa of major type. Severe abruption placentae was the cause of PPH in n=1 case i.e, (6.6%).

Almost all pregnancies were full term n=13 i.e (86%). Only one patient was operated at 35 wks of gestation due to placenta type IV. Another patient had 41+2 days wks gestation at the time of (n=1 i.e, 6.6%) delivery.

Results are mentioned in tabulated form Table 3. Estimated blood loss ranges from 1500 ml to 3000 ml.

TABLE NO.I
PARTIY OF PATIENTS

S.No.	Parity	Number of Patients (n=)	%
1.	<3	11	73.2%
2.	=3	4	26.8%

TABLE NO.II
AGE OF THE PATIENTS

S.No.	Parity	Number of Patients (n=)	%
1.	15-19 yrs.	2	13.2%
2.	20-29 yrs.	8	52.8%
3.	30-39 yrs.	4	26.8%
4.	40= yrs.	1	6.66%

TABLE NO.III
MODE OF PATIENTS

S.No.	Mode of delivery	Numbers of Patients	%
1.	Vaginal delivery	9	60%
2.	Caesarean section	6	40%

DISCUSSION:

Post partum haemorrhage remains among the main causes of maternal deaths in developing as well as developed countries. In the developed countries like United Kingdom (UK), PPH still remains, an important cause of maternal deaths for about 10 women per 100,000 births. [7,9] In majority of cases uterine atony is the cause of primary PPH. Shaheen[10] at el, Stated uterine atony as the most common cause of PPH found in 65% of cases in Pakistan.

Uterine compression sutures (B-Lynch) was described by Christopher B-Lynch in 1997, now a days are commonly used world wide for PPH not Responding to uterotonic medicines. This gives an alternative modality to Hysterectomy in young patients with low parity, and who, those wants to conserve their uterus for any other reasons. Smith KL and Baskett TF. at el, [11] have assessed the use of B-Lynch sutures as an alternative to hysterectomy for severe PPH.

In our study, a total of n=15 patients had B-lynch sutures for uncontrolled severe PPH. Out of which n=13 i.e, (86%) had uterine atony, which is similar to other studies. One patient is, (6.6%) had Hysterectomy as PPH was not controlled even after application of B-lynch sutures. She was a case of Ante-Partum Haemorrhage at 35 wks of gestation with placenta Previa type IV. Hysterectomy was performed after continuous bleeding per vaginum even after B-Lynch application at cesarean section, as life saving suture measure. Regarding complication, one patient had vaginal delivery for an IUD fetus. She was admitted with severe abruption. After delivery she under went massive PPH. Utero tonic drugs were given but failed. Laparotomy was

decided. On opening abdominal cavity, uterus was found to be couvelliere. B-lynch was decided and applied. This patient suture developed acute renal failure in immediate post-operative period. She was treated in collaboration with Urologist.

Two patients had Abdominal wound contamination and dehiscence for which resuturing was performed. All other patients in this study have relatively uneventful recovery. No immediate complications of B-lynch suture application were observed in these patients, post-operatively, which is consistent with other studies. Follow up visit arranged at 6 wks post-operative was remarkably uneventful.

Further follow up for subsequent pregnancies is required to see the outcome of next pregnancy after B-lynch suture application. Allahdin S [13] at el, in their study reposted a subsequent success full pregnancy achieved in their one patient after B-lynch application. Sentihes L, at el, [14] also reported obstetric outcome in a patient who had previously under gone a stepwise uterine devascularization followed by a B-lynch suture for severe PPH.

CONCLUSION:

It is concluded that B-Lynch technique appeared to be effective, with low morbidity and less skill is required for controlling severe PPH. It is relatively simple, quick and cost effective. It can be easily taught to all obstetricians dealing day to day emergencies. We recommend considering this option before performing hysterectomy for PPH.

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Note

2nd Author was posted at the place of study at time of study.