



BILATERAL ONE THIRD CERVICAL UTERINE AND BROAD LIGAMENT LIGATION IN CASES OF INTRACTABLE POSTPARTUM HAEMORRHAGE- STUDY IN A TERTIARY CARE CENTRE OF NORTH INDIA

Obstetrics & Gynaecology

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ABSTRACT

Introduction : Postpartum haemorrhage is a grave obstetrical complication leading to very high maternal morbidity and mortality. At our centre, we are usually treating such patients with application of vasudev panicker stitch. The following study is done to know the effectiveness of this stitch. **Method:** All the cases which were high risk factors for postpartum haemorrhage and who were undergoing caesarean section were included. Detailed history, general, per abdominal, per vaginal examination, investigations were done. A bilateral stitch was given in the space between uterine incision and bladder, which included one third tissue of the cervix, uterine artery and broad ligament of that side. **Observations:** 25 patients were included in the study out of which 18 patients were multigravida with 8% having 3 risk factors, 20% with 2 risk factors and 16% with 1 risk factor. 80%(24 patients) of the patients recovered and were discharged. One patient (4%) died due to DIC. **Discussion:** In this study, a new innovative suture was implemented, which includes: bilateral ligation of uterine artery and one third ligation of cervix and broad ligament. In this study mean age of the cases was 29.21 years with most of the cases occurring in multiparous women, similar to other studies. In this study, the most common indication of applying panicker stitch was PIH with prev LSCS(20%). In this study, none of the patients (16%) required hysterectomy. Icen et al[4] reported 2 hysterectomies after uterine artery ligation due to uncontrolled postpartum haemorrhage. **Conclusion:** Uterine devascularization by bilateral one third cervical uterine and broad ligament ligation is simple, effective and the safest surgical option with less required time and less skill during a case of postpartum haemorrhage.

KEYWORDS

INTRODUCTION

Postpartum haemorrhage is a grave obstetrical complication leading to very high maternal morbidity and mortality. It becomes acutely morbid when an unbooked antenatal patient presents in emergency with antepartum haemorrhage and in shock.

In such cases, treating and saving the patients becomes an arduous task as in emergency, senior consultants are usually not available and the said condition requires a lot of blood transfusion, mostly which is difficult to arrange, specially in resource deprived developing nations. At our centre, we are usually treating such patients with application of vasudev panicker stitch (named after Dr. Vasudev Panicker, who is a pioneer in obstetrics). After application of vasudev panicker stitch, hysterectomy has to be performed as it occludes all the blood supply to the uterus.

Advantage of vasudev panicker stitch is that it is relatively simple to apply and it leads to bloodless hysterectomy. The only disadvantage being that we cannot save the uterus, specially in primigravida patients and we still need a senior obstetrician to perform the hysterectomy. So to save the uterus and to prevent hysterectomy, we apply a stitch during LSCS between the caesarean incision and the bladder, in the lower uterine segment which includes one- third of the cervical tissue, uterine artery and broad ligament on both sides. Thus, we can reduce the postpartum haemorrhage and save the uterus.

The following study is done to know the effectiveness of this stitch. The advantages of this stitch are that it is fairly simple to apply, does not require a senior obstetrician, reduces postpartum haemorrhage and saves the uterus.

METHOD

This study was done in muzaffarnagar medical college, muzaffarnagar, in the department of obstetrics and gynaecology from January 2021 to february 2023.

Total 25 patients were enrolled which were high risk factors for postpartum haemorrhage and who were undergoing caesarean section were included in this group like multipara, previous LSCS, placenta previa and placenta accreta.

Detailed history was taken in these patients, general examination was done to know the vitals- mainly, pulse and blood pressure. Per abdominal and per vaginal examination were performed. Routine blood count, liver function test, kidney function tests and coagulation profile were done. Blood sample was sent for grouping and cross-matching. Ultrasound was done to know presentation, viability of fetus, position of placenta and scar thickness (if needed).

During LSCS, bladder was pushed down, a transverse incision was given on the uterus and baby was delivered. Placenta was removed and then, bilateral stitch was given in the space between uterine incision and bladder, which included one third tissue of the cervix, uterine artery and broad ligament of that side.

It is relatively simple to apply stitch, does not take much time, does not need much skill, does not require senior obstetrician, curtails bleeding very quickly and thus, salvages the uterus.

After applying the stitch, uterine incision was stitched and uterus was closed in layers. There were no postoperative increased morbidity and mortality.

OBSERVATIONS

Table 1 : Demographic characteristics of the patients

Variables	Statistics
Maternal age(Years)	29±6.1
PARITY	
Primigravida	07
Multigravida	18
TOTAL	25

Table 2 : Comparison of high risk factor

Risk factors	Type of risk factors	No of cases
3 risk factors	- Multigravida with previous 2 LSCS with placenta previa - Previous LSCS with rupture uterus with DIC - Twins with PIH with Previous LSCS	02(8%) 02(8%) 01(4%)

2 risk factors	- Central placenta previa with previous LSCS - PIH with previous LSCS - Abruptio placenta with deranged LFT	03(12%) 05(20%) 02(8%)
1 risk factor	- Previous LSCS - PIH - Placenta previa	04(16%) 03(12%) 03(12%)

Table 3 : Postoperative complications of patients

Recovered and discharged	24(80%)
Hysterectomy	0(0%)
Mortality	01(4%)

DISCUSSION

Postpartum haemorrhage is most leading cause of maternal mortality, mostly in developing nations and also, worldwide. There are many different treatment options for PPH like medical treatment, compression sutures, embolization and hysterectomy.

In this study, a new innovative suture was implemented, which includes: bilateral ligation of uterine artery and one third ligation of cervix and broad ligament. In this study of 25 patients, first medical treatment was tried. When it failed to curb the bleeding, one third vasudev panicker stitch was applied. Most of the cases came in emergency when senior obstetricians were not available.

Since, we could not find any study related to one third vasudev panicker stitch, so all the cases are compared with bilateral uterine artery ligation studies.

In this study mean age of the cases was 29.21 years with most of the cases occurring in multiparous women. Similarly in the study conducted by Thawal et al[1], mean age was 26.47 and majority women were multiparous.

In this study, the most common indication of applying one third panicker stitch was PIH with prev LSCS(20%) followed by postpartum haemorrhage in prev LSCS(16%) followed by prev LSCS with central placenta previa(12%). However, in a study conducted by Thawal V et al[1], 77.5 % cases had uterine atony followed by perineal trauma(15%) then retained products of placenta(5%). Tariq et al[2] also found most common cause of PPH was uterine atony. In the study conducted by Wang et al[3], uterine artery ligation was done and in 8 cases out of 9, they had no bleeding after ligation.

Obstetric hysterectomy is the major operative intervention required in severe cases of PPH and is linked with maternal and neonatal morbidity and mortality.

In this study, none of the patients (16%) required hysterectomy. Icen et al[4] reported 2 hysterectomies after uterine artery ligation due to uncontrolled postpartum haemorrhage. In this study, we had one maternal mortality due to disseminated intravascular coagulation. Icen et al[4] reported that mortality was higher in referral cases as compared to women who delivered in the same hospital.

Bilateral one third cervical uterine and broad ligament ligation is the best, safest and relatively easy management option for all cases of postpartum haemorrhage as it is a fertility preserving method as well. We have named it as one third panicker stitch.

Many studies prove and conclude, that prevention and early identification is the most important factor for prevention of PPH.

CONCLUSION

Uterine devascularization by bilateral one third cervical uterine and broad ligament ligation is simple, effective and the safest surgical option with less required time during a case of postpartum haemorrhage.

Application has no complications like haematoma, uterine trauma or associated mortality. Also there is no compromise of future pregnancy and menstrual function. It does not require a big setup and senior obstetrician. Thus, bilateral one third cervical uterine and broad ligament ligation should be implemented as the first surgical step of choice because of its simplicity, its life saving potential and the capacity to salvage the uterus.

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