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CASE STUDY OF ATONIC POSTPARTUM HEMORRHAGE FOLLOWING CAESAREAN SECTION

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ABSTRACT

Postpartum hemorrhage is often easily diagnosed by external vaginal bleeding. The association of polyhydromnios, large fetus and primary postpartum hemorrhage is well known in obstetrics owing to the effect of adverse maternal outcome.[13] We present a case report of a patient with polyhydromnios with large fetus in which primary postpartum hemorrhage was major complication after LSCS which is caused by uterine atony. Resulting use of condom tamponade.

KEYWORDS: Postpartum Hemorrhage, Caesarean Section, Atonic Uterus, Large Fetus Polyhydromnios, Condom Tamponade.

INTRODUCTION

Obstetric haemorrhage is a major contributor to worldwide maternal morbidity and mortality.[10] the overall prevalence of PPH worldwide is estimated to be 6 to 11 percent.[11] even with standard management, approximately 3% of vaginal deliveries result in postpartum hemorrhage. PPH can kill rapidly if not managed in time. Death from postpartum haemorrhage is avoidable by timely detection and management. According to the world health organization, obstetrics haemorrhage causes 127,000 deaths annually worldwide and is the leading cause of maternal mortality. Uterine atony is responsible for 80% of primary PPH. The rest are attributed to retained placental tissues, uterine rupture, lower genital tract trauma, consumptive coagulopathy etc.[12]

Postpartum hemorrhage (PPH) is reported as the cause of death in 19.9 – 36.2% of all maternal deaths worldwide. according to who 10.5% of live birth complicated with PPH. Reported incidence of PPH in India is 2% -4% after vaginal delivery and 6% after caesarean section with uterine atony being the most common cause (50%).[1] primary postpartum hemorrhage was defined as the loss of more than 500 ml of blood within the first 24 hours of delivery or loss of any amount that is enough to cause hemodynamic instability in the mother or loss of more than 10% of the total blood volume.

Uterine balloon tamponade (UBT) is being advocated by various guidelines for the noninvasive management atonic PPH.

A case deals with atonic PPH followed by caesarean section diagnosed early in which severe PPH caused by atonic uterus due to polyhydromnios and large fetus.

CASE REPORT

A 27 years old primi patient with precious pregnancy conceived 7 years after marriage has regular ANC follow ups with no co-morbidities and no underlying medical problems passed through antenatal period with minor complaints of bipedal edema and itching over abdomen. At 32 weeks of gestation on clinical examination amniotic fluid noted to be on higher side and blood sugar level within normal range throughout antenatal period.

Ultrasonography done at 37^{+6} weeks of gestation suggested polyhydromnios with amniotic fluid index approximately 25cm and estimated fetal weight about 4025 grams.

At 39^{+3} weeks of gestation patient developed PROM. On pelvic examination cervical dilatation of 2cm with high leak s/o MSL. Per abdominal examination suggestive of fetal head on brim, clinically polyhydromnios with big baby.

Patient was taken up for a caesarean section due to fetal distress. Healthy male baby delivered with APGAR score 7/8, fetal weight 4200 grams during surgery as prophylactic following uterotonics were given to avoid uterine atony due to over distended uterus.

- Inj. Carboprost 250mg IM,
- Inj. Methargine 200mcg IM ,
- Inj. Pitocine 20 IU IV with 500ml RL,
- Tb. Misoprostol 400mcg.

Uterus closed with vicryl 1-0, hemostasis achieved and confirmed, abdomen closed layer wise skin sutured with ethilon 2-0, dressing pad applied.

At the time of vaginal toileting blood clots about 1000cc passed with active bleeding followed by flabby uterus. Uterine bimanual compression given, on examination pulse 124/min with blood pressure 90/60 mm of Hg. Active and continuous fresh bleeding inspite of conservative measures. About 1800 ml total blood loss noted within 15 minutes of post-operative period. Simultaneously one haemaccel, IV fluids given and 4 pack cell volume(PCV) and 4 fresh frozen plasma(FFP) issued and given, Tb. Misoprostol 800 mcg given, Inj. Pitocine 40 IV fast infusion started still uterus felt flabby.

Lithotomy position given diagnosis is confirmed to be "Atonic PPH" after excluding deficient coagulation or retained placental tissue. Bimanual compression and uterotonics were not effective hence we decided to go with less invasive method i.e. UBT (uterine balloon tamponade). condom Foley's was prepared by applying condom on Foley's catheter and tying with thread and then inserted transvaginally using sponge holding forceps.15 ml normal saline inflated in Foley's bulb to avoid sliding of condom, condom inflated with normal saline upto 300 ml till uterine cavity occupied by condom. After inflating condom tamponade bleeding stoped within 10 minutes, Inj.pitocine 40IU infusion continued. After 1 hour condom tamponade noted bulging in vagina, during examination bleeding completely stop and uterus felt hard normal saline slowly deflated and tamponade removed .uterus felt well retracted with per vaginal bleeding. patient shifted to recovery room and observed for bleeding, pulse, BP, urine output, AG.

After 2 hours patient shifted to ward, post-operative condition was stable with normal pulse, BP. On post-operative day 2nd ambulation and liquid diet was advised, since 3rd day hematinic diet, oral hematinic given. On day 5th dressing done under adequate aseptic precaution, healthy wound noted, on 8th day sutures removed, suture line seen healthy and discharged on same day in good condition.

INVESTIGATION

	Pre-op.	After LSCS before blood transfusion	Post op. Day 3
Hb	13gm/dl	8gm/dl	10gm/dl
TLC	8,000	10,000	20,000
Platelet	272,000	143,000	190,000
P.T.	14.5	15	-
INR	0.99	1.01	-
B.T.	1.50	1.30	-
C.T.	5.10	5.50	-

Blood group – AB positive

HIV - Negative

HBsAg- Negative

VDRL – Negative

HBA1c – 5%

DISCUSSION

Postpartum haemorrhage is an obstetric emergency and a leading cause of maternal morbidity and mortality. The recommendation is a step-wise approach to management of post-partum haemorrhage from less invasive therapies like uterine massage and uterotonic to more invasive ones like arterial embolization, uterine compression sutures, uterine artery ligation and ultimately hysterectomy.[2] patient had atonic PPH unresponsive to uterotonics, bleeding controlled successfully with condom tamponade. PPH a major composite of obstetric haemorrhage is ubiquitous as it can kill even healthy women within 2 hr, if unattended. World Health Organization, the international Federation of Gynecology and Obstetrics, and the Royal College of Obstetricians and Gynaecologists all recommend a uterine balloon tamponade (UBT) if uterotonics and uterine massage fail to control bleeding.[3] Rathod et al used foley's catheter for tamponade and reported a success rate of 94%.[4] the intrauterine balloon is considered to act by exerting "inward-to-outward pressure,[5] that is greater than the systemic arterial pressure to prevent continual bleeding. The presumed mechanism of action of the tamponade in stopping the bleeding is by creating an intrauterine pressure which exerts hydrostatic pressure on the capillaries and veins in the uterus. The pressure does not necessarily have to be higher than the systemic arterial pressure.[6,7] In addition, hydrostatic pressure effect of the balloon on the uterine arteries has been proposed and stimulation of uterine contractions by the balloon in the cervix has also been demonstrated.[8,9]

It is therefore imperative for every skilled birth attendant to be able to proceed to a second line of treatment such as putting a condom tamponade when medical treatment fails.

CONCLUSIONS

Condom tamponade is a noninvasive, effective, conservative method of PPH management. In cases of failure it provides a temporary tamponade effect and time to prepare for other interventions.

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