Case Series

CG Balloon Application

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Abstract
Post partum hemorrhage is a nightmare for all the obstetricians. If not controlled, it can lead to maternal mortality to the extent of 30%. Even a mother having normal antenatal and intranatal events can have PPH making it a life-threatening and unpredictable third stage complication.The conservative methods include various uterotonics including oxytocin, PGF_2 alpha, PGE_1 analogues, methylergometrine to bimanual uterine massage to uterine packing to B-Lynch suture to stepwise devascularization, with last resort being hysterectomy, thereby sealing the future obstetrical career of the patient. Efforts are going on for a more conservative approach to control PPH and to save hysterectomy. Another conservative approach is hydrostatic intrauterine balloon tamponade. Bakri catheter, Sengstaken Blakemore tube which are used for this approach are effective but either not available or very costly. India's answer to these is CG Balloon (Chhattisgarh balloon) which has been made by an Indian obstetrician from Raipur. It can be made with minimal costs and effectively controls postpartum hemorrhage.
In our 3 case series we have used CG balloon for PPH during LSCS and saved maternal mortality.

Key Words:- Postpartum haemorrhage, hysterectomy, balloon tamponade.

Introduction

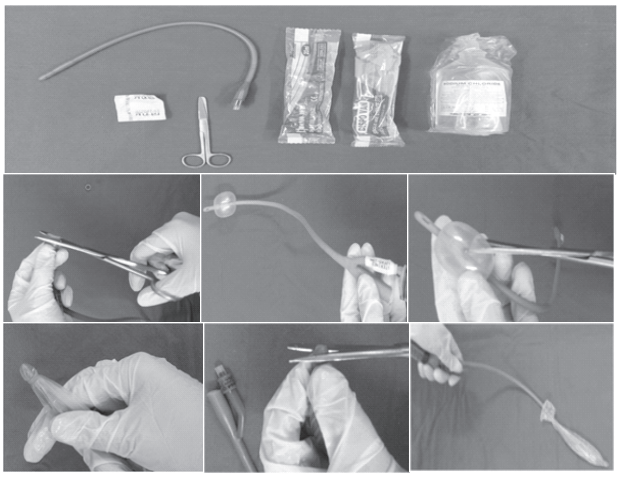
Postpartum hemorrhage (PPH) is a nightmare for all the obstetricians. If not controlled, can lead to maternal mortality to the extent of 30%. Even a mother having normal antenatal and intranatal events can have PPH making it a life-threatening and unpredictable third stage complication. Primary PPH occurs in the first 24 hours following delivery whereas secondary PPH is any abnormal or excessive bleeding from the birth canal occurring between 24 hours and 12 weeks postnatally. The most common cause of PPH is uterine atony (80%) followed by retained tissue, trauma to genital tract and coagulation disorders. In 40% of cases PPH occurs without any risk factors thus WHO recommends active management of third stage of labour for prevention of PPH. Still an obstetrician encounters this serious complication quite often. The conservative methods include various uterotonics including oxytocin, PGF_2 alpha, PGE_1 analogues, methylergometrine to bimanual uterine massage to uterine packing to B-Lynch suture to stepwise devascularization with last resort being hysterectomy, thereby sealing the future obstetrical career of the patient. Efforts are going on for a more conservative approach to control PPH and to save hysterectomy.

Another conservative approach is hydrostatic intrauterine balloon tamponade. This is a 'balloon' usually made of synthetic rubber balloon catheters such as Foley catheters, Rush catheters, SOS Bakri catheters, Sengstaken-Blakemore and even using sterile rubber glove, condom, or other devices that is attached to a rubber urinary catheter and isthen inserted into the uterus under aseptic conditions. This device is attached to a syringe and filled with sufficient saline solution, usually 300 mL to 500 mL, to exert enough counter-pressure to stop bleeding. Amoung these Bakri balloon, Sengstaken Blakemore tube are effective but either not available or very costly(Bakri balloon costs around Rs.15000). India's answer to Bakri balloonis CG Balloon (Chhattisgarh balloon) which has been made by an Indian obstetrician from Raipur. It can be made with minimal costs and effectively controls postpartum hemorrhage.

In our 3 case series we have used CG balloon for PPH during LSCS and saved maternal mortality.

Material And Method

- Material required for CG balloon preparation is readily available in the labour room of a hospital which is - 22F Foley's catheter, 500ml NS bottle, condom, scissors, 2 syringes(10cc), urobag
- Under complete asepsis, 2 rings of 5mm thickness are cutfrom the draining end of Foley's catheter. The bulb of Foley's is inflated with air and is excised.
- The condom is unfolded over the tip of Foley's and the 2 rings that were initially cut are used as rubber bands to hold the condom
- The tip of the Foley's with condom over it is cut which will act as draining port
- The condom is inflated through the channel used to inflate the bulb of Foley's
- The condom is inflated with 50-100ml NS (upto max. of 500cc) and CG balloon is placed in uterine cavity and long end of catheter is brought out through the cervical os into the vagina and out at introitus
- Vagina is packed with sterile roll gauge so that balloon remains in place
- Further filling can now be done (usually 300- 500 ml of warm normal saline is sufficient)
- Drainage bag is attached to the catheter as normally done and that is used to collect any blood draining from uterine cavity.



Case-1

28 yr old $G_3P_2L_2$ admitted vide CR 42120 with 9monthPOG with major degree placenta previa completely covering the os with previous 2 LSCS came with BPV. She was taken up for emergency section on20.10.2016 and classical caesarean section had to be performed because there were dense adhesions in lower segment. The placental bed was bleeding and was not approachable as uterus was opened for classical section. CG balloon was immediately prepared and inserted through uterine incision and initially inflated with 90-100cc NS. Catheter brought down via os and after closing the uterine incision balloon was inflated further with 200cc of NS. Abdomen was closed after the vitals of the patient stabilized. Oxytocin drip was continued and patient observed for vitals and bleeding through the attached urobag. The blood in drainage bag was 20cc after 12hours. Balloon was partially deflated after 12hours, patient observed for any fresh bleeding P/Vfor further 2 hours with oxytocin drip continuingand finally balloon removed.

Case-2

26yr old G3P1A1 admitted vide CR 44159 with 38+3 weeks POG with major degree placenta praevia(placenta reaching the os) with previous LSCS. She was taken up for elective LSCS on 7.11.16.Intraop uterus became atonic.Decision for CG Balloon insertion was taken. Inserted through uterine incision, catheter brought down via os. Uterine incision closed, balloon was inflated with 300cc NS. Urobag was attached to draining end of CG Balloon. At the end of surgery urobag had 50cc of blood. After 12 hours CG balloon removed with stepwise deflation of 100ml everytime and BPV was observed

Case-3

24yr oldprimigravida admitted vide CR 42635 with 9 month POG with thrombocytopenia with hypothyroidism. She went into spontaneous labour and had arrest of cervical dilatation for which emergency LSCS was done on 14.11.16. Intra-op uterus became atonic, after giving uterotonics decision for CG balloon taken. CG balloon inflated with 250cc. At the end of surgery urobag had 30cc of blood. After 12 hours CG balloon removed with stepwise deflation of 100ml everytime and BPV was observed

Discussion

Our case series includes application of CG balloon in caesarean patients though it can be used after vaginal delivery as well.When uterus did not respond to uterotonic drugs then CG balloon was resorted for as second line of treatment.Patients were kept under monitoring and drainage if any was observed from the outlet channel of Foley's. Balloon was deflated 10-12 hours after surgery and patients were observed for any bleeding P/V.Patients recovered well and were discharged with follow up in OPD.

CG balloon comes handy with material readily available in the labour room and can be put to use after training the paramedics and students to save many precious lives.

Conflict of Interest None

References

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