Post-Partum Hemorrhage Summary

Always remember the 4 T's : Tone, Tissue, Trauma, Thrombin

TONE[9,11]

Causes:

1. Too Sick *(chorioamnionitis)*
2. Too Tired *(IOL, oxytocin, prolonged labour, high parity)*
3. Too big *(polyhydramnios, macrosomia, multiple gestation)*
4. Too surprised *(precipitous labour)*
5. Too squished *(full bladder, retained products, fibroids)*
6. Other : SSRI/SNRI, BMI > 30

Management

Uterotonics [9,11]

a) Oxytocin 20-40 units in 1L NS

b) Misoprostil 400mcg SL or 800mcg PR

c) Carbeprost 250mcg IM/IMM Q15min (max 8 doses)

d) Ergonovine 250mcg IM/IV Q2H prn

Surgical

- Compression sutures, vessel ligation, hysterectomy[9,11]

Radiology

- Artery embolization[9,11]

TISSUE[9,11]

Causes:

1. Retained placenta, including acreta spectrum disorders
2. Clots
3. Uterus inversion
4. Uterine rupture

Management

a) Manual removal of clots/placenta (unless acreta spectrum disorder, which should be managed by OBYGN, always!)[12]

b) Manual reduction of an inverted uterus with appropriate anesthesia and medications for uterine relaxation[9]

TRAUMA[9,11]

Causes:

1. Genital tract lacerations including cervix, vagina, perineum (higher risk with assisted vaginal deliveries, big babies, precipitous labours)
2. Episiotomy

Management:

a) Repair is key

- Clamp bleeders and call for assistance if beyond your scope

THROMBIN[9,11]

Causes:

1. Inherited (von Willebrand, hemophilias, etc.)
2. Acquired (ITP, TTP, DIC, low platelets due to pre-eclampsia/HELLP)

Management:

a) Advanced planning and factor replacement if required in inherited causes[4]

b) Tranexamic acid 1g IV over 10 minutes[11]

c) FFP, Cryoprecipitate, fibrinogen, platelets[9]

d) MTP management – normothermia, calcium replacement[9]

General Management Principles[9,11]

1. Call for HELP *(may include OBGYN, extra nurses, anesthesia, transfusion team)*
2. IV access, Monitors, ABCs
3. Oxytocin IM or IV (preferred)
4. Bimanual massage
5. IV Crystalloids
6. Consider additional uterotonics for the boggy uterus : Ergonovine, Carboprost, Misoprostol
7. STAT labs : CBC, Coags., Fibrinogen, Lactate, Calcium
8. Type and Cross match 2 units of PRBC
9. Uterine exploration
10. Inspect for lower genital tract trauma & repair
11. Foley catheter insertion
12. TXA within 3 hours
13. Uterine balloon tamponade
14. Massive Transfusion Protocol activation
15. Interventional radiology (uterine artery embolization) and/or OBGYN (laparotomy)
16. If any coagulation concerns are identified – manage accordingly (FFP, Cryoprecipitate, Platelets, RBC, +/- Fibrinogen)
17. Documentation & Debrief once stable

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