**University of the Philippines - Manila**

**Philippine General Hospital**

**Department of Obstetrics and Gynecology**

**OB-GYN 251: Clinical Clerkship in Obstetrics and Gynecology**

**POSTPARTUM HEMORRHAGE CASE PROTOCOL**

**LEARNING OBJECTIVES:**

1. To present a complete history and physical examination of a case on postpartum hemorrhage
2. To interpret pertinent laboratory and diagnostic examinations
3. To define postpartum hemorrhage, its risk factors, causes, management, prevention and complications
4. To discuss the different uterotonic agents

**HISTORY**

**General Data**

SR, 37-year-old G6P5 (5-0-0-5), single, Roman Catholic, unemployed, from Cavite

**Chief Complaint**

Watery vaginal discharge

**Past Medical History**

No diabetes mellitus, hypertension, tuberculosis, bronchial asthma, cancer, cardiovascular disease, thyroid disorders

No previous hospitalizations

No previous surgeries

No previous transfusions

No known food or drug allergies

Medications: Prenatal medications (Ferrous sulfate 1 tablet once a day, Calcium carbonate 1 tablet twice a day, Multivitamins 1 tablet once a day)

**Family medical history**

(-) Diabetes mellitus, hypertension, tuberculosis, bronchial asthma, allergy, cancer, cardiovascular disease, thyroid disorders

**Personal, Social, and Sexual History**

Patient is a high school graduate, unemployed and homemaker

Non-smoker, non-alcoholic beverage drinker, and she denies illicit drug use.

First sexual contact was at 15 years old with 2 male non-promiscuous partners.

Patient has a history of oral contraceptive pills use for 2 years but no intrauterine devices or had any implants

She has no history of any sexually transmitted diseases.

**Menstrual History**

Her menarche was when she was 15 years old. Her menses had regular intervals of 28-35 days, lasting 3-4 days, soaking 2 moderate to fully soaked pads per day. She does not experience dysmenorrhea during her menses. Her last menstrual period was last Dec 8, 2019.

**Obstetric History**

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| --- | --- | --- | --- | --- | --- | --- | --- |
| **No. of Pregnancy** | **Date** | **AOG** | **Mode of Delivery** | **Place** | **Sex** | **Birthweight** | **Outcome/Status Complication** |
| G1 | 2000 | Full Term | Spontaneous Vaginal Delivery | Bulacan Hospital | M | AGA | (-)feto-maternal complications |
| G2 | 2003 | Full Term | Spontaneous Vaginal Delivery | Bulacan Hospital | M | AGA | (-)feto-maternal complications |
| G3 | 2005 | Full Term | Spontaneous Vaginal Delivery | Bulacan Hospital | M | AGA | (-)feto-maternal complications |
| G4 | 2016 | Full Term | Spontaneous Vaginal Delivery | Pangasinan Hospital | F | AGA | (-)feto-maternal complications |
| G5 | 2017 | Full Term | Spontaneous Vaginal Delivery | San Andres Lying-In | M | AGA | (-)feto-maternal complications |
| G6 | 2019 | Current pregnancy | | | | | |

AOG: 38 1/7 weeks by amenorrhea (as of 8/31/2020)

EDC: September 13, 2020

Prenatal check-up: 2 times at Lying-In Clinic

First PNCU Feb 2020; Last PNCU on May 17, 2020

No dexamethasone given.

Prenatal medications: Ferrous sulfate 1 tablet once a day, Calcium carbonate 1 tablet twice a day, Multivitamins 1 tablet once a day

**History of Present Illness**

16 hours prior to admission, patient experienced crampy hypogastric 3/10 which does not radiate to the lower back. There was good fetal movement. No bloody or watery vaginal discharge noted. No consult was done.

Interim, there was increasing pain now radiating to the lower back.

2 hours prior to admission, the patient noted passage of watery vaginal discharge associated with labor pains. This prompted the patient to consult to a lying-in clinic where on internal examination, the foot of the baby was palpated. She was then advised admission at a tertiary hospital hence prompting consult at our institution.

**Review of Systems**

(-) headache

(-) blurring of vision

(-) prolonged vomiting

(-) fever

(-) nondependent edema

(-) epigastric/right upper quadrant pain

(-) decreased fetal movement

(-) dysuria

**PHYSICAL EXAM**

|  |  |
| --- | --- |
| **General** | Awake, alert, comfortable, not in cardiorespiratory distress |
| **Anthropometrics** | Current weight: 65kg Height:160cm |
| **Vitals** | BP 120/80 mmHg HR 107 bpm RR 30 bpm O2 Sat 98% T 36.5C |
| **HEENT** | Anicteric sclera, pink palpebral conjunctivae, (-) cervical lymphadenopathy, (-) neck vein engorgement |
| **Chest** | Equal chest expansion, clear breath sounds |
| **CVS** | Adynamic precordium, distinct heart sounds, normal rate, regular rhythm |
| **Abdomen** | ***Fundic height:*** 27 cm ***Estimated fetal weight:*** 2.6-2.8 kg  ***Presentation*** breech; ***Fetal heart tones:*** 130 bpm on right upper quadrant |
| **Extremities** | Full, equal, pulses, pink nail beds, CRT<2s, (-) cyanosis, edema |
| **Pelvic/Internal Exam** | Speculum exam: pooling, with egress of clear amniotic fluid  Normal external genitalia, (-) masses, (-) lesions, smooth parous vagina; cervix is 4 cm dilated, (+) fetal part—foot, no cord corpus is enlarged to age of gestation, |
| **Pelvimetry** | Diagonal conjugate: >11.5 Bispinous diameter > 9.5 cm, blunt spines, parallel sidewalls, hollow sacral curvature, posterior sacral inclination, wide sacral notches, wide sacral width, pubic arch > 90 degrees, movable coccyx, bituberous diameter > 8.5 cm |

**DIAGNOSTICS**

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| **Urinalysis**   |  |  | | --- | --- | | Color | Yellow | | Transparency | Clear | | Bilirubin | Negative | | Urobilinogen | Normal | | Ketone | Negative | | Glucose | Normal | | Albumin | Trace | | Blood | +1(5-10 Ery/uL) | | pH | 6.0(acidic) | | Nitrite | Negative | | Leucocytes | Negative | | Specific gravity | 1.021 | | RBC | 44 | | WBC | 4 | | Epithelial cells | 9 | | Bacteria | 158 | | Mucus thread | 221 | | **Complete Blood Count**   |  |  | | --- | --- | | WBC | 11.5 | | RBC | 3.56 | | Hemoglobin | 94 | | Hematocrit | 0.29 | | MCV | 81.3 | | MCH | 26.3 | | MCHC | 324 | | RDW | 16.9 | | Platelet Count | 166 | | Neutrophil | 0.86 | | Lymphocyte | 0.08 | | Monocyte | 0.05 | | Eosinophil | 0.01 | | Basophil | 0.00 |   HBsAg: 0.18 NONREACTIVE |

**COURSE IN THE WARDS:**

Patient underwent emergency primary low segment cesarean section for malpresentation and bilateral tubal ligation under spinal anesthesia. Intraoperatively, she was given first dose of Tranexamic Acid 1g IV and oxytocin 10u/IM after placental separation. She delivered to a live baby girl, 38 weeks by pediatric Aging, 3000g, appropriate for gestational age, breech, Apgar score 9,9, length of 47cm. Baby was directly roomed in. The estimated blood loss during the operation was 400cc. The entire procedure lasted for 47 minutes.

Initial postoperative vital signs were: BP 100/60, HR 91, RR 20, Temp 36.7, 98% O2 saturation. She was monitored every 15 minutes for the first hour then every hour for the next 4 hours. She was put temporarily on NPO. She was hydrated with 1L D5NR + 30u oxytocin for 8 hours while on NPO. Patient medications are the following:

1. Ferrous Sulfate 1 tab PO OD
2. Multivitamins 1 tab PO OD
3. Calcium carbonate 1 tab PO BID
4. Tranexamic Acid 1g IV Q8 X 3 doses
5. Celecoxib 200mg/cap BID X 5 days
6. Malunggay 1 cap TID

1 hour and 15 minutes later, patient was referred by the clerk-in-charge hypotension with BP as low as 70/40 mmHg, HR 120s but was asymptomatic at this time. She had no complaints of dizziness, weakness, palpitations or difficulty of breathing. Repeat vital signs by the DR resident showed BP 80/60, HR 115, RR 20, O2sat 97, Temp 36.9. Patient was awake and conversant. Physical examination showed anicteric sclerae, pale palpebral conjunctiva, clear breath sounds, distinct heart sound, soft abdomen, nontender. Her surgical wound dressing was intact and not soaked with blood. The uterus was soft and boggy. She had full equal pulses, pink nail beds. She then reported a sudden gush of blood per vagina and upon checking her diaper, there were fresh blood and large blood clots almost soaking the underpad. The estimated blood loss at this time was ~1L. Uterine massage was initiated and ice packs placed on the hypogastic area. She was then placed on trendenlenburg position, given oxygen supplementation and 300cc of PNSS was given as resuscitative measures. She was given with Carbetocin 100mcg SIVP. Indwelling foley catheter was inserted to monitor her urine output. Patient was continuously monitored for persistence of hypotension, tachycardia, pallor and poor contraction of her uterus. Another large bore IV line was inserted. A STAT hemoglobin and hematocrit were requested which revealed hemoglobin of 68 and hematocrit 0.24. Blood transfusion with 3 units of packed RBC was done. At this time, vital signs are reported within BP 90-120/60-80 HR 73-98 RR 20 Temp 36.9C O2sat 98%. Post blood transfusion CBC revealed that her hemoglobin went up to 98.

There were no other subsequent episodes of postpartum bleeding and hypotension.

**GUIDE QUESTIONS**

1. What are the salient points of the case based on the history and physical examination? What additional information would you like to know?

2. What is postpartum hemorrhage?

3. What are the causes of postpartum hemorrhage?

4. Describe the pathophysiology behind postpartum hemorrhage.

5. What are the risk factors for postpartum hemorrhage?

6. What diagnostics will you order?

7. How will you manage the patient?

8. What medications can be given to control postpartum hemorrhage?

9. What are the possible complications Postpartum Hemorrhage?

10. How can postpartum hemorrhage be prevented?