RISK FACTORS AND ESPICIFIC ETIOLOGIES (PPH) UPTODATE2021

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- ✓ MANY RISK FACTORS FOR PPH HAVE BEEN REPORTED AND ARE OFTEN INTERDEPENDENT.

ALTHOUGH THERE ARE MANY KNOWN RISK FACTORS FOR PPH, KNOWLEDGE OF THESE RISK FACTORS IS NOT ALWAYS CLINICALLY USEFUL FOR PREVENTION OF HEMORRHAGE.

IN A STUDY INCLUDING OVER 154,000 DELIVERIES THAT COMPARED 666 CASES OF PPH WITH CONTROLS WITHOUT HEMORRHAGE

FACTORS SIGNIFICANTLY ASSOCIATED WITH HEMORRHAGE WERE:

-RETAINED PLACENTA/MEMBRANES
-FAILURE TO PROGRESS DURING THE SECOND STAGE OF LABOR
-MORBIDLY ADHERENT PLACENTA
-LACERATIONS
-INSTRUMENTAL DELIVERY
-LARGE FOR GESTATIONAL AGE(LGA) NEWBORN (EG, >4000 G)
-HYPERTENSIVE DISORDERS
- INDUCTION OF LABOR
-PROLONGED FIRRST OR SECOND STAGE OF LABOR

- ✓IN A STUDY INCLUDING OVER 690,000 DELIVERIES, THE FOUR RISK FACTORS ASSOCIATED WITH THE HIGHEST ODDS FOR PREDICTING THE NEED FOR MASSIVE TRANSFUSION (N = 406) DURING HOSPITALIZATION FOR DELIVERY WERE:

1)ABNORMAL PLACENTATION (PLACENTA ACCRETA OR PREVIA)
2)PLACENTAL ABRUPTION
3) SEVERE PREECLAMPSIA
4) INTRAUTERINE FETAL DEMISE

✓OTHER PURPORTED RISK FACTORS INCLUDE:

-PERSONAL OR FAMILY HISTORY OF PREVIOUS PPH

-OBESITY,

- HIGH PARITY,

- ASIAN OR HISPANIC RACE,

- PRECIPITOUS LABOR,

-UTERINE OVERDISTENTION (EG, MULTIPLE GESTATION, POLYHYDRAMNIOS, MACROSOMIA),

-CHORIOAMNIONITIS,

-UTERINE INVERSION,

-leiomyoma,
-Couvelaire uterus,
-inherited bleeding diathesis,
-acquired bleeding diathesis (eg, amniotic fluid embolism, abruptio placentae, sepsis, fetal demise),
-assisted reproductive technology,
-anemia,
-and use of some drugs (uterine relaxants, antithrombotic drugs, possibly -- antidepressants

TABLE 41-2. Obstetrical Hemorrhage: Causes, Predisposing Factors, and Vulnerable Patients

Abnormal Placentation
- Placenta previa
- Placental abruption
- Morbidly adherent placenta
- Ectopic pregnancy
- Hydatidiform mole

Injuries to the Birth Canal
- Episiotomy and lacerations
- Forceps or vacuum delivery
- Cesarean delivery or hysterectomy
- Uterine rupture
  - Previously scarred uterus
  - High parity
  - Hyperstimulation
  - Obstructed labor
  - Intrauterine manipulation
  - Midforceps rotation
  - Breech extraction

Obstetrical Factors
- Obesity
- Previous postpartum hemorrhage
- Early preterm pregnancy
- Sepsis syndrome
- Preeclampsia/eclampsia

Vulnerable Patients
- Chronic renal insufficiency
- Constitutionally small size

Uterine Atony
- Uterine overdistention
  - Large fetus
  - Multiple fetuses
  - Hydramnios
  - Retained clots
- Labor induction
- Anesthesia or analgesia
  - Halogenated agents
  - Conduction analgesia with hypotension
- Labor abnormalities
  - Rapid labor
  - Prolonged labor
  - Augmented labor
  - Chorioamnionitis
- Previous uterine atony
- Parity: primiparity, high parity

Coagulation Defects—Intensify Other Causes
- Massive transfusions
- Placental abruption
- Sepsis syndrome
- Severe preeclampsia syndrome
- Acute fatty liver
- Anticoagulant treatment
- Congenital coagulopathies
- Amnionic fluid embolism
- Prolonged retention of dead fetus
- Saline-induced abortion

PLANNING Management of risk

— Women with risk factors for PPH should be identified and counseled as appropriate for their level of risk and gestational age

--Planning for these patients involves ensuring availability of resources that might be needed, including personnel, medication, equipment, adequate intravenous access, and blood products.

--The American College of Obstetricians recommends that women identified prenatally as high risk for PPH (eg, placenta accreta spectrum, prepregnancy body mass index >50, clinically significant bleeding disorder, or other surgical/medical high risk factor) should plan to be delivered in a facility that has an appropriate level of care for their needs

Intrapartum, blood should be typed and screened for women with a medium risk factor for PPH (eg, prior uterine surgery, multiple gestation, grand multiparity, prior PPH, large fibroids, macrosomia, body mass index >40, anemia, chorioamnionitis, prolonged second stage, oxytocin >24 hours, magnesium sulfate administration)

-and typed and crossmatched for those at high risk of PPH (eg, placental previa or accreta, bleeding diathesis, two or more medium risk factors for PPH).

-- Use of a cell saver (blood salvage) should be considered for women at increased risk of PPH, but is not cost-efective as a routine in all cesarean deliveries

- Routine prophylactic use of uterotonic drugs, such as oxytocin alone or in combination with misoprostol, reduces the risk of PPH by at least 30 percent in the overall obstetric population.
- Prophylactic administration of tranexamic acid is under investigation

Specific interventions are available for managing risk in women when the following conditions are identified antenatally:

- Abnormal placentation
- Bleeding diatheses (hemophilia", and "Use of anticoagulants during pregnancy and postpartum","Thrombocytopenia in pregnancy"von Willebrand disease (VWD

✓*However, for most patients, knowledge of risk factors for PPH is not useful clinically because many women without risk factors experience PPH, and most high-risk women do not experience significant hemorrhage (risk of severe hemorrhage ranges from 2 to 7 percent).*

✓ *As an example, although the California obstetric hemorrhage quality improvement toolkit classifies patients as low, medium, or high risk for PPH, in a validation study, the incidence of severe PPH (ie, necessitating transfusion) in the three groups was 0.8, 2.0, and 7.3 percent, respectively, and only 22 percent of severe PPH cases occurred in the high-risk group .*

The California risk classification scheme is as follows:

Low risk

- Singleton pregnancy
- ≤4 previous vaginal deliveries
- No previous uterine surgery
- No history of PPH
- No known bleeding disorder

Medium risk

- Prior uterine surgery
- >4 previous vaginal deliveries
- Multiple gestation
- Large fibroids
- Chorioamnionitis
- History of PPH

High risk

- Morbidly adherent placenta or placenta previa or low lying placenta
- Hematocrit <30 percent and other risk factors
- Active bleeding (greater than show) at admission
- Known coagulopathy
- Platelet count <100,000

- Since hemorrhage may occur in low-risk women, a postdelivery management plan should always consider not only the blood loss at delivery, but also any complications that may increase the risk of continued bleeding.

- While evidence is lacking regarding the optimal approach to medium term postpartum management in women who have experienced PPH, it seems reasonable to prolong the duration of postpartum oxytocin administration when the cause was atony.

- In addition, monitoring the CBCand coagulation profile is advisable in any woman at risk for coagulopathy or symptomatic anemia from acute blood loss

خسته نباشید