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04/14/2024

Evaluation and Management Postpartum Anemia (PPA):

1. Definition or Key Clinical Information: (Moya et al., 2022, pp. 1-2)

The World Health Organisation defines postpartum anemia as a hemoglobin concentration of < 11 g/dl at one-week post-delivery and < 12 g/dl in the first postpartum year. Although maternal iron stores are expected to replenish after delivery, the prevalence of anemia in women after childbirth remains high in both developed (22–50%) and developing (50–80%) countries. Anemia is the state in which there is insufficient body iron to maintain the tissue's normal physiological function. Untreated PPA may impair physical capacity and performance and negatively impact health-related quality of life. Hemoglobin <7 g/dl is considered severe anemia but hemoglobin <8 g/dl is an indication for a blood transfusion. Morbidity and Mortality are a concern for hemoglobin <5 g/dl.

2. Assessment (Jordan et al., 2018)

i. Risk Factors: *Postpartum women are susceptible to anemia because of low maternal iron stores prior to and in pregnancy, blood loss during childbirth >500ml, iron use for breast milk production, Pre-pregnancy BMI >24, premature or post-term deliveries, bleeding during pregnancy, low socioeconomic status, placenta previa, hypertension, and poor iron supplementation during postpartum. Other risk factors of PPA include young maternal age, Poorly-balanced diet/malnutrition, vegetarian/vegan diet, heavy menstrual cycles before pregnancy, closely spaced pregnancies, smoking, multiples pregnancy, absorption disorders, inadequate antenatal care visits, and type of birth such as a cesarean (Wemakor et al., 2022).*

ii. Subjective Symptoms *Patients may report feeling weak, tired, pale, having chills or feeling cold, shortness of breath, dizzy, fainting spells, irritability, mood swings, low libido, decreased immunity, headaches, fatigue, depression, confusion, rapid heartbeat with exercise or activity, reduced breast/chest milk, restless legs, pica, or abnormal/excessive bleeding.*

iii. Objective Signs *Hemoglobin of <11 g/dl between 48 hours to the first week and <12 g/dl in the remaining first year postpartum. The patient may look pale, have trouble concentrating on the conversation, seem tired or weak, rapid heartbeat, have shallow short respirations, peripheral edema, jaundice, brittle nails, irritability, and hypotension.*

iv. Clinical Impressions *Midwives should be aware of these complications and each patient's risks related to anemia developing and discuss with each client how their anemia is affecting their lives and the best plan of action based on how quickly results are needed, like an iron infusion or blood transfusion for faster results for severe anemia, oral supplementation, or increasing dietary aspects for slower results for mild to moderate anemia. Cultural beliefs must also be considered when recommending solutions, as some may be against a blood transfusion like Jehovah's Witnesses. Considerations for anemia's effect on milk supply and successful*

breastfeeding and the effect that may have on emotional and bonding aspects should be considered when discussing treatment.

v. Clinical Test Considerations *CBC at 48 hours to 1 week PP, 2 weeks, 4 weeks, and 6 weeks postpartum. Ferritin is unreliable in postpartum and therefore not worth testing. A CMP and thyroid panel could be included to rule out differential diagnosis.*

iv. Differential Diagnosis: *Thalassemia, malnutrition, B12 deficiency, folate deficiency, RBC Dysplasia, malignancy, and chronic diseases such as congestive heart failure or celiac disease.*

3. Management plan *(King et al., 2018)*

i. Therapeutic measures to consider within the CPM scope: *Increasing oral iron intake through organ meats, red meat, eggs, fish, dark leafy greens, blackstrap molasses, brewers yeast, cherry juice, and quinoa. An increase in folate, cobalt, copper, phosphorus, B12, Vitamin C, and hydrochloric acid supplements or foods such as citrus fruits, bell peppers, strawberries, tomatoes, and cruciferous vegetables to aid absorption. Oral iron supplementation can be done every other day, such as Ferrasorb, which usually contains ferrous sulfate, ferrous gluconate, ferric citrate, and/or ferric sulfate. Organ meat capsules also could be taken if dietary wasn't preferred. Increasing fiber in their diet, prune juice, magnesium citrate, or other stool softening agents as needed due to iron's relation to commonly causing constipation. Advise adequate rest and hydration as well.*

ii. Therapeutic measures commonly used by other practitioners *A blood transfusion or iron infusion, especially for persistent severe anemia of Hemoglobin <8g/dl. If against blood products or transfusion, then volume expansion could be offered with fluids, erythropoiesis-stimulating agents, Recombinant Factor VIIa, Prothrombin Complex Concentrate, Fibrinogen Concentrate, and Thrombopoietin Agonists (DeLoughery, T., 2020).*

iii. Ongoing Care *After getting the patient started on iron supplementation, dietary changes, and/or an infusion, re-evaluate symptoms and labs every two weeks or after four weeks. Individuals with only dietary may need to increase to oral supplementation if not an adequate change. Individuals with oral iron and dietary may need an infusion if low levels persist or there is no change within four weeks.*

iv. Indications for Consult, Collaboration, or Referral *The patient will need to be referred for a prescription for iron supplements if they cannot afford over-the-counter so insurance will cover it. This can be done through a referral to a PCP or OBGYN. Persistent or severe anemia needs a referral to hematology for an iron infusion if hemoglobin <8 g/dl or is considered for severe symptoms in a higher hemoglobin level, such as 7 g/dl-10 g/dl if impacting quality of life. Consider a referral to a hematologist or PCP if lab results are consistent with a differential diagnosis outside of CPM scope. A client should be sent to the hospital immediately for management if they have a hemoglobin of <5 g/dl, as this is life-threatening. They may also need a referral to a lactation consultant if their milk supply has been impacted.*

v. Client and family education *Client's should be aware of what anemia is, their current level, and what anemia can affect with physical symptoms, breastfeeding, and emotional symptoms. Meet the client where they are when giving recommendations. Recommend and give resources for WIC or EBT services for those who can not afford adequate dietary intake of iron-rich foods, offer a referral for prescriptions of iron supplements for individuals who can not afford over-the-counter, and try to find the closest hematology clinic to limit energy expense on the*

birther and gas costs. Advise to limit calcium and antacid intake as this can limit absorption. Advise on common side effects of iron supplementation, such as constipation, stomach cramps, and nausea, and possibly consider switching brands if possible. Discuss their support system and see what help they have while feeling the effects of anemia and what emotional support they have. Offer symptom-based advice for coping in daily activities and tips for conserving energy and asking for help. Also discuss awareness of PPMD if the anemia contributes to a large shift in mood.

References

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