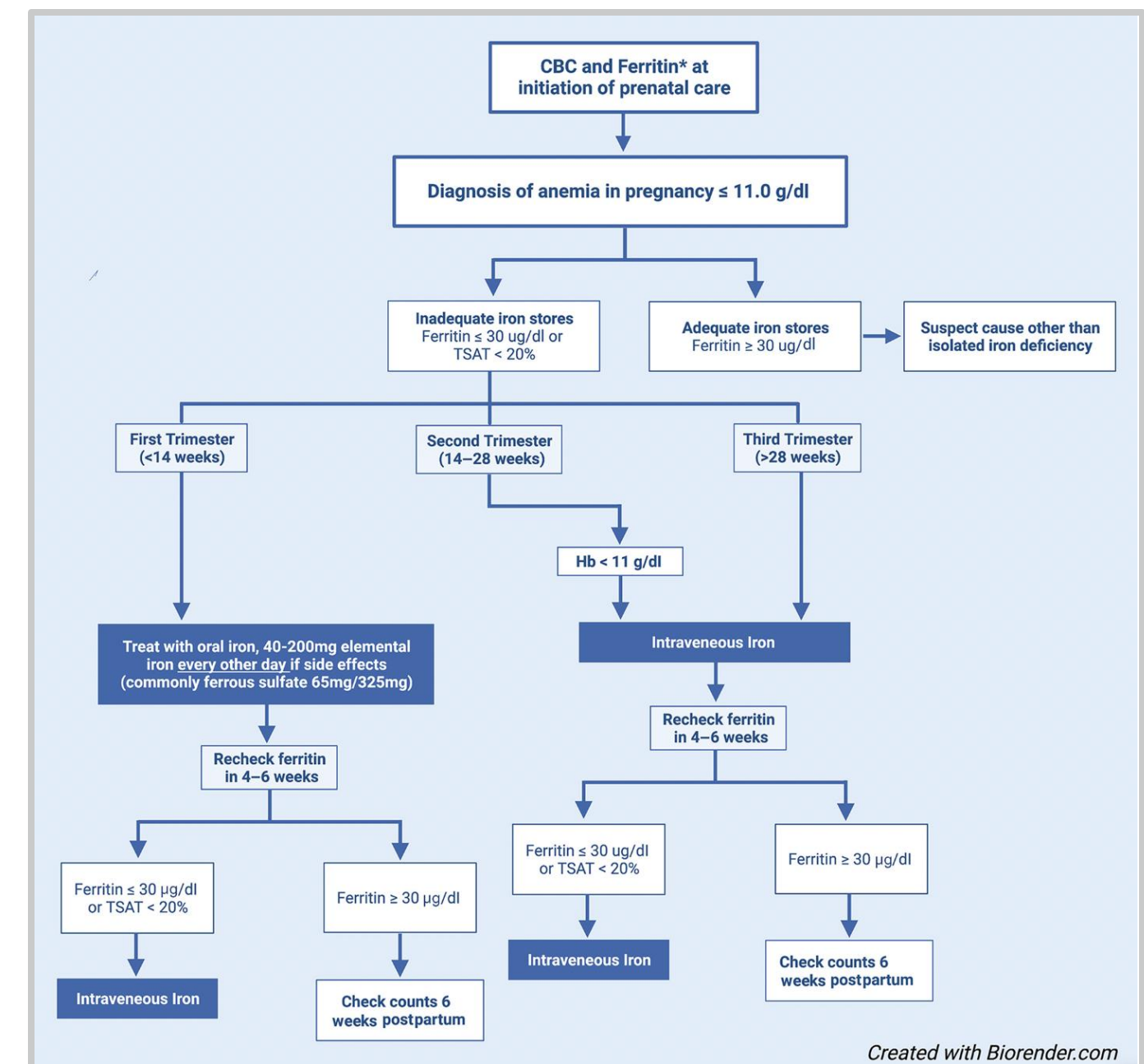


BACKGROUND

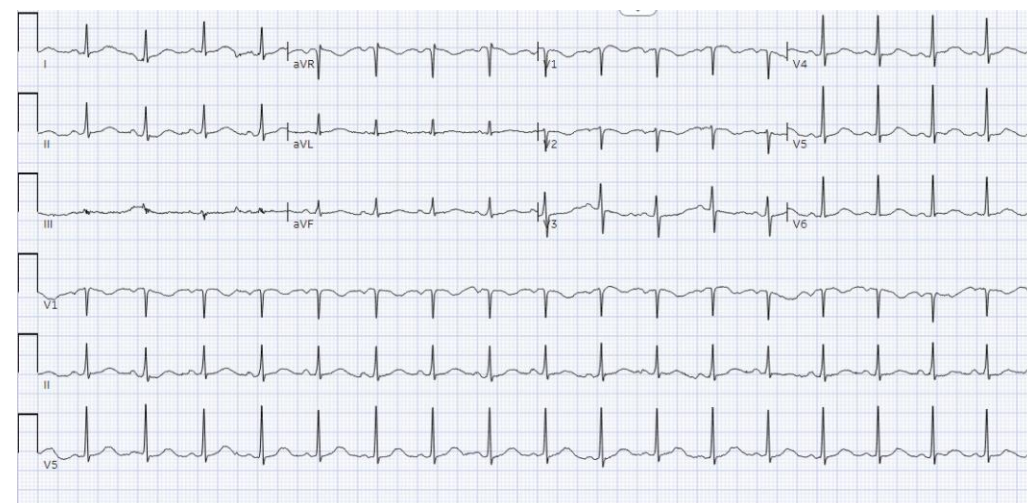
- Iron is the most common nutritional deficiency in pregnancy
- Iron deficiency anemia can be associated with poor maternal and fetal outcomes including preterm labor, postpartum hemorrhage, increased ICU admission, preterm birth, low birth weight, and fetal distress
- Anemic parturients may be treated with intravenous iron infusion in addition to packed red blood cells transfusion
- Reactions to IV iron or blood transfusions may be rare but potentially fatal and therefore should be identified and addressed early

Figure 1 (Right): A proposed algorithm for the identification and treatment of iron deficiency anemia in pregnancy, from *Benson et al. 2022*

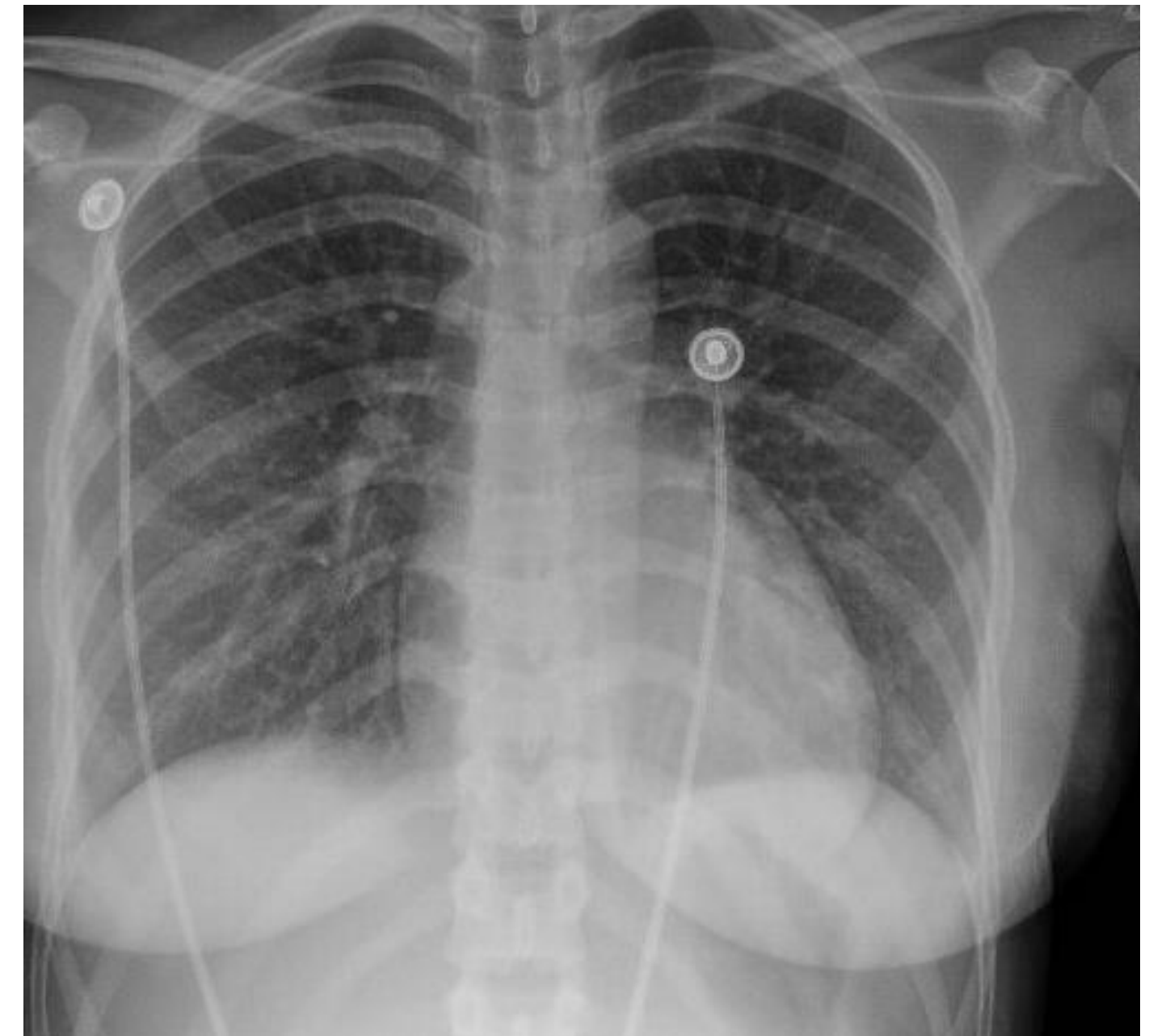


CASE

- 21 yo G3P0 at 28w3d presenting with multiple syncopal episodes and hemoglobin of 7.7g/dL
- Was first given 300 mg of IV iron
- Then during transfusion of crossmatched pRBCS, she suddenly developed midsternal chest tightness, difficulty breathing, and back and abdominal pain
- Afebrile, hemodynamically stable, no cutaneous changes
- Symptoms resolved with IV acetaminophen



1. Left ventricular systolic function is hyperdynamic with an ejection fraction of 73 %.
2. Right ventricular systolic function is normal.
3. No significant valvular disease.
4. Small pericardial effusion localized near the right ventricle. No echocardiographic evidence of cardiac tamponade.
5. Collapsed inferior vena cava, suggestive of volume depletion (RAP = 0 mmHg).



DISCUSSION

- A Fishbane reaction is a mild hypersensitivity reaction to iron infusion with 1% frequency
- This reaction is thought to be due to intravascular release of labile iron
- Reactions usually consist of acute chest and back tightness and joint pain without hemodynamic shifts or respiratory distress
- Lower infusion rate and treat corticosteroids and IV acetaminophen instead of epinephrine

REFERENCES

1. Benson D. Eur J Haematol 2022. PMID: 36153674
2. Georgieff M. Am J Obstet Gynecol 2021. PMID: 32184147
3. Rampton D. Haematologica 2014. PMID: 25420283.
4. Stojanovic S. J Allergy Clin Immunol Pract 2021. PMID: 33248279.
5. Crookston K. J Infus Nurs 2015. PMID: 25723832

| Reaction | Frequency | Symptoms | Management |
|--|-------------|--|--|
| Fishbane reaction | 1 in 100 | Chest/back pain Chest tightness | Stop iron infusion for 15 minutes Restart at half the rate Symptoms usually self-limited |
| Mild allergic transfusion reaction | 1 in 50 | Itching Urticaria | Stop transfusion Administer antihistamine |
| Febrile non-hemolytic transfusion reaction | 1 in 100 | Fevers/chills Nausea/vomiting | Stop transfusion Administer acetaminophen |
| Severe allergic transfusion reaction/ Anaphylaxis | 1 in 30,000 | Hypotension Wheezing Urticaria Angioedema | Stop transfusion Administer antihistamine and epinephrine Airway management |
| Acute hemolytic transfusion reaction | 1 in 75,000 | Hypotension DIC | Stop transfusion Follow blood bank protocol for returning donor blood |