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Case Report

AN ADVERSE EVENT ASSOCIATED WITH INTRAVENOUS IRON INFUSION, A LIMB-THREATENING CELLULITIS IN PREGNANT LADY

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Abstract: *Iron deficiency anemia is acute morbidity in pregnant women and can pose serious risks to the mother and the child. Oral iron therapy is inefficient for treatment for this condition due to side effects and non-compliance. Hence, parenteral iron therapy is preferred in pregnant patients as it has little to no adverse effects and treats the patient rapidly. Iron sucrose is recommended as it is safe and can be used as an alternative to other parenteral iron therapies. Other iron agents and immune mechanisms often release bioactive iron in the system, leading to oxidative stress and other side effects. Iron sucrose has been proven effective and safer than other iron alternatives; this report shows a pregnant woman with severe iron deficiency who experienced a fatal anaphylactic reaction to iron sucrose..*

Keywords: Iron Deficiency Anemia, Acute Morbidity, Pregnant Women, Oxidative Stress

Introduction

Iron-deficiency anemia is a frequent condition in pregnant women. Almost 10-30% of pregnant women suffer from anemia which is principally caused by deficiency of the main nutrient component, iron (Garzon et al., 2020). Anemic women may require blood transfusion as further blood loss during delivery or in conditions like placenta previa may be fatal to the parturient (Igbinosa et al., 2022). However, homologous blood transfusion may not be favorable in patients with rare erythrocyte phenotypes and alloimmunity (James, 2021). Autologous blood transfusion is performed in such patients, but it can also create complications if the patient has an iron deficiency.

The traditional treatment of iron deficiency anemia with oral therapy and transfusion poses serious risks to the patient. (Govindappagari and Burwick, 2019). Oral therapy results in serious adverse effects, including non-compliance. In contrast, intravenous iron, i.e., iron sucrose, responds rapidly, compensates for the body's iron deficiency quickly, and can be used as an alternative to blood transfusion (Lewkowitz et al., 2019). Other intravenous iron alternatives may result in side effects, including anaphylactic reactions (Tang et al., 2019). We report a case of a pregnant woman with severe iron deficiency who experienced a fatal anaphylactic reaction to iron sucrose.

Case Presentation

A 27-year female presented with Gestational Amenorrhea of 27 weeks. She is Gravida2, Para, 1^{+O}. The patient had 8 days history of redness and swelling in the left upper limb. The patient is in 3rd trimester of pregnancy and was getting regular venofer infusions. After her last injection, she experienced pain plus redness, which extended up to her forearms in 2 days. It also involved all digits, more middle fingers, which got gangrenous and necrotized. It also showed multiple blebs formations on digits with fever. A pictorial view of the same is given below in figure 1. On examination, she has gangrene of the 3rd digit of all distal interphalangeal joints, plus the thumb of the left hand, warm on touch; pulses were palpable, radial, ulnar, and brachial. Her motor and sensory features were intact. Power was 2/5 in left digits. Patches of erythema up to the mid-upper arm were found. Upon investigation, she had raised the WBC count and CRP. Doppler ultrasound showed cephalic vein thrombosis; she has been given Heparin 5000IU. Her D-Dimers was 28105. The patient was immediately referred to Plastic Surgery for figure amputation and treated for Cephalic vein thrombosis and necrotizing.

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Figure: Pictorial View of side effects of Intravenous Iron Administration

Conclusion

Intravenous iron administration is a recommended treatment of iron-deficiency anemia in pregnant women. However, this therapy may cause adverse effects, including anaphylactic reactions and cellulitis. Therefore, caution must be considered before using any iron infusions in pregnant women. This case report would be a big help.

Conflict of interest

The authors declared absence of conflict of interest.

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