Cureus
Part of SPRINGER NATURE

Open Access
Abstract

Cureus

Pseudo-microangiopathic hemolytic anemia due to B12 deficiency - A Case Report

Open Access
Abstract
Published 04/22/2024

Shivam Patel [1], Krima S. Patel [2], Yash Bhalala [3], Amit Correa [4]

1. MBBS, Smt. N.H.L. Municipal Medical College, ahmedabad, IND 2. MBBS, Smt. NHL Municipal Medical College, Ahmedabad, IND 3. MBBS, Shri MP shah govt. medical college Jamnagar, Gujarat, India, Jamnagar, IND 4. Oncology, The University of Texas Health Science Center, Galveston, USA

Corresponding author: Shivam Patel, shivamcpatel00@gmail.com

Categories: Internal Medicine, Hematology
Keywords: schistocytes, deficiency, hemolytic, anemia, microangiopathic

How to cite this abstract
Patel S, Patel K S, Bhalala Y, et al. (April 22, 2024) Pseudo-microangiopathic hemolytic anemia due to B12 deficiency - A Case Report. Cureus 16(4): a1251

Abstract

INTRODUCTION: Vitamin B12 (cobalamin) is a crucial vitamin for blood precursor production, particularly erythrocytes. Its deficiency can lead to complications like severe anemia (Hb < 6 mg/dL) in 2.5% of patients and intramedullary hemolysis in 1.5%.

AIM: This case report aims to describe a rare presentation of pseudo microangiopathic hemolytic B12 deficiency anaemia in a 55-year-old male.

CASE DESCRIPTION: A 55-year-old diabetic male presented with long-standing abdominal pain, nausea, decreased appetite, malaise, fatigue, and tongue pain worsening over two weeks. Examination revealed scleral icterus, reddish-brown urine, decreased sensation on bilateral soles, abnormal gait, and no focal neurological deficits. On admission, the blood workup showed Hemoglobin 5.6 mg/dl, MCV 119fL, RDW 79fL, Platelets 82000/uL, WBC 7100/uL, LDH 3611 U/L, Haptoglobin <30mg/dL. Peripheral smear showed decreased RBCs, and macrocytic normochromic anisopoikilocytosis, including schistocytes, tear drop cells, hypersegmented neutrophils, and elliptocytes. Further blood workup revealed total bilirubin 6.2mg/dL, Direct bilirubin 0.8mg/dL, Serum creatinine 0.4mg/dL, Serum methylmalonic acid 42294nmol/L, Serum homocysteine 71nmol/L, Serum B12 <100pg/dL, Intrinsic factor antibody >96. This suggests intramedullary hemolysis due to B12 deficiency against TTP. The patient received 3 units of packed RBCs, improving Hgb to 9 g/dL. Intramuscular B12 daily for 4 days significantly improved the symptoms. She was discharged with weekly intramuscular B12 for 4 weeks, MCV was 98fL, and Total Bilirubin was 1.5mg/dL.

DISCUSSION: This case highlights the importance of considering B12 deficiency in patients with atypical manifestations, such as concurrent hemolytic and megaloblastic anemia. It can be a significant differential for microangiopathic hemolytic anemias like HUS/TTP. Timely intervention including intramuscular B12 supplementation improved the clinical symptoms and hemoglobin levels. Severe B12 deficiency should be considered a cause of hemolytic anemia to optimize patient outcomes.