

PANCYTOPENIA IN A 5-MONTH-OLD EXCLUSIVELY BREASTFED INFANT SECONDARY TO VITAMIN B12 DEFICIENCY

Oussama Grari^{1,2}, Nisma Douzi^{1,2}, Mohammed Khalil Bouchid^{1,2}, Abdelilah Berhili², Nabiha Trougouty², Mounia Slaoui², Assya Khermach^{1,2}, Mohammed Bensalah^{1,2}, Rachid Seddik^{1,2}

1: Faculty of Medicine and Pharmacy, Mohammed I University, Oujda, Morocco 2: Hematology Department, Mohammed VI University Hospital, Oujda, Morocco

Introduction: Pancytopenia in children secondary to vitamin B12 deficiency represents a rare medical condition with various hematological and neurological manifestations. Here, we report a 5-month-old exclusively breastfed full-term with pancytopenia secondary to vitamin B12 deficiency.

Case description: A previously healthy 5-month-old full-term male with normal psychomotor development presented with a history of 1 month of vomiting, repeated infections, lethargy, and weight loss. Upon examination, the patient appeared pale and hypotonic. Laboratory investigations revealed severe pancytopenia, with a hemoglobin level of 6 g/dL, MCHC of 36%, mean corpuscular volume of 90 fL, neutrophil count of 550/ μ L, and platelet count at 52000/ μ L. The peripheral blood smear examination showed anisocytosis, poikilocytosis, and hypochromia. Further biochemical analysis revealed markedly low serum vitamin B12 levels (< 148 pg/mL) and elevated homocysteine levels (145.36 μ mol/L), which confirmed the diagnosis of vitamin B12 deficiency. A bone marrow examination demonstrated the presence of megaloblasts, which provided additional confirmation of the diagnosis. The infant received intramuscular B12 injections, leading to rapid resolution of lethargy and subsequent improvement of pancytopenia. Despite normal maternal B12 levels, maternal nutritional assessments were performed to ensure optimal B12 levels during exclusive breastfeeding.

Conclusion: In conclusion, vitamin B12 deficiency in exclusively breastfed infants can manifest as pancytopenia, emphasizing the critical role of maternal nutrition in infant health. Healthcare providers should be vigilant in considering vitamin B12 deficiency as a potential cause when infants present with pancytopenia, as early detection and intervention are crucial in preventing severe complications, including irreversible neurological damage.