

Background and Objectives: Anemia is one of the most common health problems in the world and one of the important clinical markers of the underlying disorder. The aim of this study was to study causes of anemia in children aged 6 months to 6 years and to define its main morphologic types through the laboratory evaluation.

Materials and Methods: The study group included 325 patients with Hb levels less than 11.0 g/dl in Erbil city. The laboratory investigations included complete blood picture, ESR, reticulocyte count, iron profile, Hb electrophoresis, G6PD screening by methemoglobin reduction test, Coombs' test and bone marrow study.

Results: Anemia was more frequent in children up to 2 years age (54%) than in children of (2–6 years) age group. Anemia was commoner in male children (62.1%) than female children (37.9%). According to MCV; types of anemia were microcytic (60.7%), normocytic (26.7%) and macrocytic (12.6%). Anemia was mild (Hb: 9-10.9 g/dl), moderate (Hb: 7-8.9 g/dl) and severe (Hb: <7 g/dl) in 55.4%, 26.7% and 17.9% of cases respectively. The underlying causes of anemia were iron deficiency anemia (42.6%), hemolytic anemia (18.6%), thalassemia syndromes (16.6%), anemia of chronic disease (particularly respiratory and gastrointestinal infections) (15.5%), acute leukemia (2.7%), liver diseases (1%), megaloblastic anemia (0.6%), acute blood loss (0.6%), aplastic anemia (0.3%) and anemia of undetermined cause (1.5%).

Conclusions: The commonest type of anemia in children (6 months to 6 years) was microcytic anemia followed by normocytic and then macrocytic anemia. Iron deficiency was the commonest cause of anemia followed by hemolytic anemia, anemia of inflammation, thalassemia syndromes and then other causes.