Abstract

To describe the frequency and severity of anemia and the nutritional variables associated to hemoglobin levels (Hb) in children <5 years of age. Materials and methods. We studied 981 children measuring hemoglobin and serum concentrations of ferritin, soluble transferrin receptors (sTfR), C-reactive protein (CRP), zinc, iron, copper, magnesium, folate and vitamin B12. Ordinal logit or multiple regression models were constructed to assess the risk for anemia and the associations among nutritional variables. Results. The overall prevalence of anemia was 20.6%, of which 14% were mild cases and 6.38% moderate. Anemia was associated with iron deficiency (ID) in 42.17% of the cases, whereas ID coexisted with either folate or vitamin B12 deficiency in 9%. Only 2% of cases of anemia were associated with either folate or vitamin B12 deficiencies. CRP (coef: 0.17 g/dl) and third tertile of s-copper (coef: -0.85 g/dl) were associated to unexplained anemia (p<0.05). Conclusions. ID is the main cause of anemia in children <5 y. Folate and vitamin B12 concentrations were associated with anemia. CRP was associated to unexplained anemia. However, vitamin A deficiency, which is associated with anemia, was not studied.

Keywords

Anemia, child, preschool, iron deficiency, copper, Mexico.