

Abstract

Studies of haematological parameters were performed on 366 (177 male and 189 female) normal Malawian neonates with mean \pm s.d. birthweight of 2.99 \pm 0.37 (range 2.1-4.0) kg using a Nova Cell Track, Model Nova CT11. Cord anaemia (Cord Hb $<$ 13.5g dl⁻¹) was detected in 100 (27.3%) of the neonates. It was also shown that although the male babies had a significantly higher erythrocyte protoporphyrin level ($p < 0.001$) than the females, there were no significant differences ($p > 0.05$) in the red cell, white cell and platelet indices between the two sexes. When the haematological parameters of the 266 (72.7%) non-anaemic (Cord Hb $>$ 13.5g dl⁻¹) neonates were analysed, the mean \pm s.d. values which may serve as local reference standards were: Hb 16.0 \pm 1.7 (range 13.5-21.3) g dl⁻¹, Hct 47.0 \pm 6.0 (range 36.5-67.5) percent, MCV 112.6 \pm 8.9 (range 72.2-131.0) fl, MCH 31.9 \pm 5.5 (range 24.4-48.5) pg, MCHC 33.5 \pm 2.8 (range 29.1-48.9) g dl⁻¹ reticulocyte count 6.9 \pm 3.6 (range 1.2-25.0) percent, free erythrocyte protoporphyrin 3.3 \pm 0.9 (range 1.9-7.7) mgs ZPP gm⁻¹ Hb, platelet count 269.9 \pm 57.7 (range 134.0-454.0) $\times 10^9$ l⁻¹ and total leucocyte count 12.3 \pm 4.8 (range 5.5-35.3) $\times 10^9$ l⁻¹. Further analysis of the differential wbc count disclosed normal levels of eosinophils and neutrophils similar to those given in standard haematology textbooks for Caucasian neonates; thus strengthening the belief that eosinophilia and relative neutropenia previously reported in adult Africans is not of genetic origin, but rather an acquired phenomena.