Neonatal haematology in Zimbabwe. II: The red cell and white cell parameters.

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Abstract

Red cell and white cell parameters were determined in 600 (310 male and 290 female) normal Black Zimbabwean neonates with a mean +/- sd birth weight of 3.0 +/- 0.4 (range 2.04 to 4.50, median 3.0) kg using a Coulter Counter Model S Plus. Cord anaemia (cord Hb < 13.5 gdl-1) was detected in 60 (10 pc) of the neonates. Although the male babies were significantly heavier than the females (p = 0.004), there were no significant differences (p > 0.05) in the red cell and white cell indices between the two sexes. When the haematological parameters of the 540 (90 pc) non-anaemic (cord Hb > or = 13.5 gdl-1) neonates were analysed, the mean +/- sd values which may serve as local reference standards were: Hb 15.2 +/- 1.8 (range 13.5 to 19.4) gdl-1, Hct 47.3 4.9 (range 38.6 to 60.3) pc, MCV 107.8 +/- 9.4 (range 88.8 to 134.3) fl, MCH 31.9 +/- 3.4 (range 25.2 to 45.2) pg, MCHC 32.9 +/- 1.3 (range 30.0 to 38.3) gdl-1, nucleated red blood cells 6.1 +/- 5.9 (range 0 to 55) per 100 white blood cells, reticulocyte count 5.0 +/- 1.9 (range 0 to 24.0) pc, total leucocyte count 13.8 +/- 4.4 (range 4.6 to 132.8) x 10(9)l-1; differential count: neutrophils 7.30 +/- 2.90 (range 1.72 to 18.02) x 10(9) l-1, lymphocytes 5.67 +/- 2.47 (range 0.98 to 16.14) x 10(9) l-1, monocytes 0.81 +/- 0.83 (range 0 to 5.58) x 10(9) l-1, 1 and eosinophils 0.08 +/- 0.13 (range 0 to 0.72) x 10(9)l-1