



COMPANION ANIMAL

Research Award



Determination of hematological values of Cuban Amazon Parrots (*Amazona leucocephala* spp.)

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Introduction

The species Cuban Amazon parrot (*Amazona leucocephala* spp.) lives almost only in the Caribbean, mainly on the island Cuba. Many of these parrots live in captivity and are taken care of by humans. The risk to become ill is therefore higher. In avian medicine diagnostic tests are essential for the veterinarian to find a diagnosis(1). Previous clinical hematological studies of this species were incomplete(2,3). The determination of the hematological values are the aim of this study.

Material and Methods

From 51 clinically healthy parrots, selected from different aviaries with similar management and holding conditions, blood samples were taken. Total counts of erythrocytes and leukocytes were performed in the Neubauer chamber by the Natt-Herrick method. The differential leukocyte count was performed in blood smears. The values of hemoglobin, hematocrit and hematological indices were determined. The results obtained were compared between groups with the statistical package SPSS Statistics 22.0.0. The normality of the distribution of the data was determined with the Kolmogorov-Smirnov test. The parametric statistical method ANOVA was applied to the variables with normal distribution and the non-parametric method Kruskal-Wallis was applied to those with non-normal distribution.

Results

The statistical results found did not differ much from the reference values determined in other studies of the Amazonian species(1,3). Hemoglobin value is lower than previous studies have shown.

Table 1}

Discussion/Conclusion

These results can be very useful in diagnostic testing in avian medicine of the Cuban Amazon parrot. Altitude conditions, oxygen availability and flight distances influence the values of erythrocyte count, hematocrit and hemoglobin. Management of the aviaries, diet, season, age and stress are also factors to be taken into account when these hematological values are applied to other species(1).

{Illustration 1}

References

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Table 1 Results of the hemogram of Cuban parrots (author: Yohany A.A. Pérez)

Variables	Mean	SD
Red Blood Cell Count RBC ($10^{12}/l$)	2,37	0,60
Hematocrit Ht (l/l)	0,45	0,10
Hemoglobin (g/dl)	12,97	2,20
Total white blood cell count WBC ($10^9/l$)	8,52	2,26
Heterophils % ($10^9/l$)	41,58 (3,47)	1,67
Eosinophils % ($10^9/l$)	0,78 (0,07)	0,08
Basophils % ($10^9/l$)	0,43 (0,04)	0,06
Lymphocytes % ($10^9/l$)	52,9 (4,43)	1,72
Monocytes % ($10^9/l$)	4,29 (0,38)	0,28

Illustration 1 Cuban Amazon parrots (photographer: Yariana Rubio)

