

CHANGES IN SOME HEMATOLOGY PARAMETERS IN A GROUP OF CATS DURING THE LAST THIRD OF PREGNANCY AND THE EARLY POSTPARTUM PERIOD

Plamen Georgiev *, Petko Petkov**, Krasimir Stojanchev**, Anton Antonov*

** Department of obstetrics, gynaecology and andrology, Faculty of Veterinary Medicine, Trakia University, Stara Zagora, Bulgaria*

*** Department of internal disease and clinical toxicology, Faculty of Veterinary Medicine, Trakia University, Stara Zagora, Bulgaria*



INTRODUCTION

- LATE PREGNANCY, PARTURITION AND POSTPARTUM PERIOD
 - HORMONAL CHANGES
 - UTERUS↔ PLACENTA, disconnection; metritis
 - DYSTOCIA
 - MAMMARY GLAND → onset of lactation (production of colostrum), mastitis
 - OTHER CHANGES – behavioral, metabolic.....

- THE POSTPARTUM PERIOD IN THE CAT – paucity of information in the literature


UTERINE CONDITIONS - INFLAMMATORY DISEASE



INTRODUCTION

- MOST COMMON CLINICAL APPROACHES TO DIAGNOSING FEMALE REPRODUCTIVE SYSTEM DISORDERS ARE :
 - Palpation
 - Radiographic
 - Vaginal discharge, cytology
 - Ultrasonographic
 - Hematological examination – routine study

- THERE IS ONLY TWO STUDIES INVESTIGATED THE NORMAL HEMOGRAM OF THE CAT DURING PREGNANCY AND LACTATION AND AFTER LACTATION - MIELKE (1961); BERMAN, E. (1974)



THE AIM OF PRESENT STUDY WAS TO INVESTIGATE THE DYNAMIC OF HEMATOLOGY PARAMETERS IN A GROUP OF CATS THROUGHOUT THE LATE PREGNANCY AND THE EARLY POSTPARTUM PERIOD



MATERIALS AND METHODS

- ANIMALS – 12 CLINICALLY HEALTHY FEMALE AND 3 MALE CATS

Determination of the groups

Female - two groups

group I - examined (n=6)

on day 25 after mating – pregnancy diagnosis
ultrasound scanning of the uterus-Aloka SSD 500,
linear transducer, 5 MHz

Blood samples on days: 45, 50, 55, 60, 65, 70 after
mating

group II - control (n=6), non-pregnant, blood samples only
once

Blood collection from vena jugularis, tubes containing Na₂EDTA



MATERIALS AND METHODS

- MEASURED PARAMETERS

Erythrocytes count (RBC; T/L),
Leucocytes count (WBC; G/L),
Hemoglobin (HGB; g/L),
hematocrit (HCT; g/l),
Mean cell volume (MCV; fl)

automatic analyzer SERONO 150 (Bio Chem ImmunoSystems
(GmbH, Deutschland)

percentage of neutrophils (Mm, St, SG), lymphocytes (L),
monocytes (Mo), eosinophils (Eo)

Statistical analysis:

- Statistical software- Microsoft Office Excel 2003, ANOVA
- T – test
- The level of significance was set at $P < 0.05$

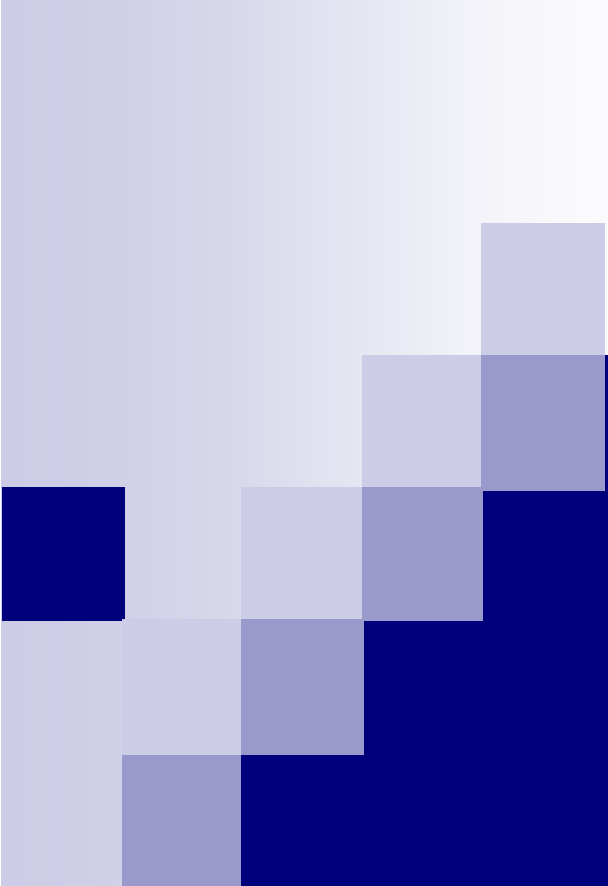
Hematology parameters in the cats – examined and control groups

Parameter Referent values	Day 45	Day 50	Day 55	Day 60	DELIVERY		Group II	P
					Day 65	Day 70		
RBC (5-10x10 ¹² /l)	7,8 ± 1	7,3 ± 0,5	6,2 ± 1,3	6,1 ± 1	6,2 ± 0,6	6,3 ± 0,4	9,2 ± 1,6	p<0,01
HGB (90-150 g/l)	115,5 ± 8,5	108,8 ± 12,9	94,7 ± 11,2	100,8 ± 29,6	94,3 ± 11,1	101 ± 8,7	120 ± 10	p<0,01
HCT (0,25-0,45 l/l)	0,34 ± 0,03	0,33 ± 0,04	0,32 ± 0,03	0,29 ± 0,05	0,31 ± 0,04	0,31 ± 0,02	0,38 ± 0,03	p<0,01
MCV (39-55 fl)	44,3 ± 2,4	42,8 ± 9,8	51,4 ± 7,2	47,5 ± 2,2	50,4 ± 6,4	48,3 ± 2,3	41,3 ± 3,8	p<0,01
WBC (6-11x 10 ⁹ /l)	17,1 ± 8,9	14,6 ± 4,0	17,8 ± 6,5	18,1 ± 4,4	18,9 ± 7,3	20,1 ± 6,9	18 ± 5,9	n.s.
Eo (0-4 %)	3,8 ± 1,6	3,3 ± 2,6	4,2 ± 2,9	3,3 ± 2,0	3,2 ± 1,6	2,7 ± 2,2	9,7 ± 2,9	p<0,05
Mm 0 %	0,7 ± 1,1	0,5 ± 0,9	1 ± 2,4	1,2 ± 1	2 ± 1,5	1,3 ± 1	-	n.s.
St (0-4 %)	7,5 ± 2,3	7,7 ± 2,6	9 ± 4,5	6,2 ± 2,6	7,3 ± 2,3	10,5 ± 6,1	4,5 ± 3	p<0,05
Sg (60-78 %)	48,3 ± 10,4	55,2 ± 15,5	51,5 ± 12,1	50,5 ± 11	55,7 ± 11,5	52 ± 8,5	45,8 ± 10,5	n.s.
L (15-30 %)	40 ± 11	33,7 ± 13,6	35,3 ± 10,3	38,7 ± 9,3	30,8 ± 8,8	34 ± 7,1	38,3 ± 9,5	p<0,05
Mo (0-5 %)	0,7 ± 0,8	0,8 ± 0,4	1,2 ± 0,6	0,8 ± 0,4	1 ± 1	1,3 ± 0,8	1,6 ± 1,2	p<0,01



CONCLUSIONS

- In summary the results from this study
 - There are patterns of significant changes in kinetics of some hemtological parameters (RBC, HGB, HCT, MCV, Mo) in the cats during late pregnancy, delivery and in early postpartum period
 - The leukogram reveals a left shift of neutrophils during late pregnancy, delivery and in early postpartum period
 - There is difference in some hematological parameters between examenated (pregnant and postpartale) and control queens



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