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Time course hematologic changes associated with anesthesia in Iberian lynx (*Lynx pardinus*)

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Introduction: The Iberian lynx is a critically endangered feline mammal (IUCN 3.1). Its critical status is mainly due to habitat loss and decreased genetic variability, amongst others. Accurate reference values of Iberian lynx are needed in order to know the health status of animals. **Objective:** The aim of this study is to describe the hematological changes during anesthesia and reproductive exam of breeding animals from the Iberian Lynx *Ex-situ* Conservation Program, during winter 2007. **Materials:** twenty four animals, eleven males and thirteen females, sixteen adult (> 2 years old) and eight subadults (between 1 and 2 years old) were studied. Animals were anesthetised using a medetomidine-ketamine combination (5 mg/Kg and 50 µg/Kg, respectively), and isoflurane. All the animals were intubed. Ringer Lactate solution was given at 20mL/kg/h. Two blood samples were collected from the cephalic vein at 20 (T1) and 60 (T2) minutes from the induction of anesthesia. The samples were transferred into 2,5 ml EDTA tubes and a complete blood cell count was performed using the autoanalyser ADVIA 120 (flow cytometer laser analyser, Siemens Medical Solutions Diagnostics) within 24 hours from extraction. Total plasma protein concentration (TPP) was measured by refractometry. Mean percentage of variation (PV) between T1 and T2 are showed in brackets. A paired t-test was used to study statistical significant differences ($p<0.05$) between T1 and T2 for all animals and for subgroups (age and sex). **Results:** RBCC (15%), hemoglobin (PV: 19%), PCV (PV: 15%) and TPP (PV: 9%) decreased with significant differences at T2 for all animals and for subgroups (age and sex). RDW (PV: 1%), HDW (PV: 4%), lymphocytes percentage (PV: 15%), PDW (PV: 5%) and large platelet count (PV: 21%) were statistical significant decreased at T2 for subadult, whereas percentage of neutrophils (PV: 6%) increased. **Conclusion:** The effect of medetomidine on the alfa-2 adrenoceptors and the fluid therapy could have caused hemodilution which in turn explains the drop of the main erythrocyte parameters and of the plasma protein concentration. The differences observed in the group of subadults could be due to the more stressful character of these animals.