

# IRON DEFICIENCY ANEMIA IN CAPTIVE MALAYAN TAPIR CALVES (*Tapirus indicus*)

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## Abstract

Subclinical iron deficiency anemia was diagnosed in a captive neonatal female Malayan tapir (*Tapirus indicus*) through blood samples obtained as part of an in-house training program for venipuncture. Routine blood testing performed at day 2 of age was within in-house and ISIS normal values for this species. Microcytic hypochromic anemia (HCT = 16 %; MCV = 38.4 fL; MCH = 13.3 µg; MCHC = 34.6 g/dL) with thrombocytosis (platelets =  $1018 \times 10^3/\mu\text{L}$ ) and poikilocytosis was diagnosed at day 38 of age. Iron dextran (10 mg/kg i.m.) was administered at day 40 and day 68 of age. Blood sampling at day 88 of age indicated improving hematocrit (32 %) and low serum iron (45 µg/dl; ISIS normal = 154 +/- 54 µg/dl). Total iron binding capacity (TIBC; 438 µg/dl), percent saturation (10%), ferritin (240 ng/ml), and haptoglobin (16 mg/dl) were also measured, but normal values are not established for this species. Repeat blood sampling through day 529 of age showed normalization of hematocrit and serum iron parameters between day 145 and day 173. Retrospective record review and iron testing on banked serum was performed for previous Malayan tapir calves born at the same institution. Serum iron parameters were decreased in two male calves that died at day 40 (iron = 40 µg/dl; TIBC = 482 mcg/dl; percent saturation = 4%; ferritin = 177 ng/ml; haptoglobin = 202 mg/dl) and day 72 (iron = 26 µg/dl; TIBC = 470 µg/dl; percent saturation = 6%; ferritin = 770 ng/ml; haptoglobin = 196 mg/dl), respectively. Cause of death in both calves was attributed to disseminated intravascular coagulation and bacterial septicemia. A link between iron deficiency anemia and increased susceptibility to infection has been examined in human infants.<sup>1</sup> Iron deficiency anemia may be a predisposing factor for neonatal septicemias in captive Malayan tapirs, especially in the first three months of life. Prophylactic iron dextran administration may be considered as part of a neonatal care program for captive tapirs. Early training to facilitate blood collection will better help characterize this concern in other tapir collections.

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## LITERATURE CITED

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