

Clinical Notes - Individual Specimen Report  
BURNET PARK ZOO

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Scientific Name: ELEPHAS MAXIMUS (no subsp)      Accession #: M95019
Common Name: Asiatic elephant                    Female
Name: KIRINA                                     Birth: 20.Jun.1995
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.....2000...

2.Mar.2000

Hx: No medical problems; first TB test of series performed today  
 Proc: 60 mL of saline instilled into trunk. Exhaled into 1 gallon plastic bag. Submitted for mycobacterial culture at NVSL.  
 Plan: Repeat sample collection on 3/7/00 and 3/9/00. On 3/5/00 collect blood for CBC, Chem panel, and serum banking. On 3/9/00 vaccinate for tetanus and rabies. Collect stool at convenience for culture and analysis. (NAM)

5.Mar.2000

Blood drawn for CBC and chemistry panel from ear vein for annual physical exam. CBC performed in-house. (RSC)

7.Mar.2000

Hx: annual physical including trunk washes for mycobacterium cultures.  
 Proc: 2nd trunk wash using 60 ml of saline. Send out to NVSL via DL for culture. (NAM)

9.Mar.2000

Hx: vaccination and TB test.  
 Proc: Third and last trunk wash using 60 ml of saline. Submitted to NVSL via Cornell's DL.  
 Both triceps area were surgically prepped with nolvasan scrub and sterile saline irrigation. Tx: 1ml tetanus toxoid IM in left triceps and 1ml rabies (ImRab) in right triceps. A small amount of DMSO was applied topically around the site of each injection.  
 Plan: monitor for swelling, pain, discharge at/around the injection sites.  
 Fecal pending for culture and parasite check. (NAM)

17.Apr.2000

Hx: Torn toenail  
 P/E: Right hindleg, 3rd toenail caudal edge partially torn off. Keeper trimmed. No lameness noted in the a.m., some favoring of leg noted around 1pm.  
 Plan: Flush with dilute Nolvasan (1:30). Monitor for infection and lameness. (NAM)

25.Apr.2000

Hx-Keepers report doing well.  
 Rechecked the fractured toenail-the nail bed is not infected, but there is soft tissue exposed. This part of the nail is expected to grow back slowly.  
 Plan-Continue to monitor, daily by staff. (SF)

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17.Aug.2000

Feces collected for parasite check. (NAM)

15.Oct.2000

Keepers report this animal as being stiff yesterday afternoon. Exam today revealed walking stiffly on both forelegs, scuffing feet as she walks. She appears unwilling/unable to bend at the carpus, especially on the right. No heat or swelling was noted on palpation. Blood was drawn for CBC. A white cell count of 23,300ery/uL was determined and is consistent with previous WBC (20,000, 20,900, 21,600) with a normal elephant differential, PCV, TP. Keepers plan to perform hydrotherapy throughout the day. DVM to assess tomorrow. (RSC)

16.Oct.2000

Hx-Keepers report this animal to be walking "stiffly" since Sat. pm-apparently, she was fine Sat am, suggesting a traumatic event during the day. She is eating well and otherwise acting normal. P/E-She is BAR, and seems unconcerned with her problem. She walks "post-legged" on both forelegs, reluctant to bend at the carpi. She is able to pick up her feet so they do not drag (as opposed to yest) and when commanded, will lift leg to present the sole of her feet. Both feet are normal. The region around the carpi on both legs appears mildly swollen. No significant heat could be palpated on either leg. The right rear leg also appears affected, but she is able to bend at the tarsus without much problem. The keepers report this leg appears improved.

Plan-Keepers to keep her in today to avoid further injury on wet surfaces outside. She will not be separated from the other elephants to keep her relaxed. She should neither be exercise limited (as she walks comfortably) nor pushed for extra exercise. If this is the result of a traumatic incident, be it myositis or joint pain, rest is best. We have administered 46, 75 mg tablets of Rimadyl (carprofen) to be given by mouth. Please administer with food and monitor for any signs of gastrointestinal upset (diarrhea, anorexia etc). (SF)

17.Oct.2000

Hx-Keepers report her to be much improved.

P/E-Visual in exhibit. Kirina is walking 90% better than yesterday. She is able to bend both carpi. There is some residual stiffness of her forelimbs, (she seems completely recovered on the right rear limb), but overall, when observed playing in yard, and stepping in and out of the swimming pool, her gait is much improved.

Plan-We will not treat her any further unless her condition worsens again. (SF)



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9.Oct.2001

Laura Richman, DVM  
John Hopkins School of Medicine  
1650 Orleans St  
Building CRB 316  
Baltimore, Maryland 21231  
410 955-8682 (NAM)

8.Nov.2001

Blood test results: Progesterone baseline <0.05ng/ml 11/05/01  
(GK)

.....2002...

22.Feb.2002

History: Beginning of annual physical and testing

Procedure: First trunk wash was performed using 60ml of sterile saline. Sample was submitted to NVSL for TB culture. (NAM)

26.Feb.2002

Proc: second trunk wash was performed today and submitted for TB culture at NVSL (NAM)

1.Mar.2002

Proc: third trunk wash was performed today and submitted for TB culture at NVSL; blood was collected for CBC/chem panel, vit. E, selenium and progesterone levels. (NAM)

12.Mar.2002

Final phase of annual physical examination: Rabies and tetanus toxoid vaccines  
The skin was surgically prepped and rabies (ImRab) 2cc was given IM in the right triceps, and tetanus toxoid 2cc on the Left triceps muscle. Both injections were followed by an application of DMSO to prevent swelling at the injection sites.  
Plan: monitor the sites for swelling and pain. (NAM)

7.May.2002

Trunk Wash TB culture results:  
Samples submitted 2/22/02, 2/26/02 and 3/1/02 all negative. (NAM)

5.Aug.2002

Progesterone baseline for sample collected on July 6th and submitted on July 9th: 0.59ng/ml.

Blood submitted on July 27th: 0.11 ng/ml (SEC)





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5.Mar.2003

Second trunk wash submitted for tuberculosis culture to NVSL.  
Blood sample collected on 3/01/03 showed normal CBC and chem panel.  
(NAM)

7.Mar.2003

Third trunk wash submitted for tuberculosis culture.  
Rabies vaccine (2 ml) in right triceps.  
Tetanus toxoid (1 ml) in left triceps. (GK)

4.Apr.2003

Baseline progesterone results: collected 3/01- 0.18ng/ml.  
Collected 3/22- < 0.05ng/ml (NAM)

18.Apr.2003

Baseline progesterone results from blood collected on 4/05/03 <0.05  
ng/ml  
Baseline progesterone results from blood collected on 4/12/03-<0.05  
ng/ml (SC)

23.Apr.2003

Note:  
Preya's heart tissues were unequivocally very positive for Elephant  
Herpesvirus with PCR. The serum submitted from Karina, Mali, Preya,  
Targa, and Romani yielded nebulous results on the ELISA. The cut off  
level is still unclear and the samples were all in the grey zone.  
According to Dr Richman, these results are low compared to other  
institutions which experienced an outbreak of this disease.  
- We will get serum samples from Siri and Indy today and submit them  
tomorrow.  
- Results from serum samples from March are still pending.  
- In 2 weeks we will collect samples from every one and submit for  
another ELISA  
- Once the ELISA is perfected, we can retrospectively study the  
elephants' serum around the time that Targa had her stillbirth.  
(SC)

26.Apr.2003

Baseline progesterone results from blood collected on 4/19/03 0.20  
ng/ml (RSC)

7.May.2003

Blood collected for 21 day post-herpes exposure ELISA. Test samples  
sent to Dr.Laura Richmond via the DL. Additional serum bank at RGZ.  
(GK)

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15.May.2003

HX: TB tested via trunk washes (#2 and 3) on 3/7/03, and 3/5/03 culture send to NSVL, were negative. (NAM)

2.Jun.2003

Progesterone baseline (collected 5/24): 0.46ng/ml (SC)

9.Jun.2003

Progesterone level for serum sample submitted on 5/31/03: 0.31 ng/ml. (GK)

23.Jun.2003

Hx: keepers noted dark spot about the size of a jelly bean on tongue yesterday. Suspected to be a bruise.  
Examination: the tongue is normal except for now a red pale area on the right side of the tongue. The color of the bruise has changed since yesterday from dark purple to fading red today. Keepers suspect bruise from newly given browse.  
P: keepers will monitor very closely. Talk to Chuck about buying one day supply of famcyclovir. (NAM)

26.Jun.2003

Hx: small lesion noted on the right side of the tongue, has been progressively healing and fading.  
Obs: the lesion is about the same size but is now pale pink. No ulceration was noted and no other lesion has developed. There was one small (< 1cm) superficial cut on the dorsal surface of the middle of the tongue. (NAM)

25.Aug.2003

Progesterone assay 8/16/2003 .60 ng/ml. (EMB)

3.Sep.2003

S/O: Keepers reported this animal was unusually lethargic this morning. Temperature and fecal output normal. A short time later, she was active and alert on visual exam, keepers reported she was eating well. P Keepers to monitor. (EMB)

4.Sep.2003

S/O: Oral exam: new molars erupting rostral to previous set. Two abrasions noted on the hard palate, keepers report she was chewing on a water barrel. Eating well, active and alert. (EMB)

8.Sep.2003

Bloodwork results (collected 9/3): CBC and chemistry panel within normal limits.

Progesterone baseline (collected 9/4): 0.87ng/ml (SC)



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8.Nov.2003

her trunk after getting it caught between mesh on F gate and door casing (while E gate was being opened). Did not administer any medical treatment to area. Using trunk tip normally afterwards and allowed keeper staff to look at the gash. Keepers involved would like to review management protocol when this situation arises.  
11/8: observed this morning, slightly pink area where she got pinched but does not bother her at this time, using trunk normally. (KWP)

10.Nov.2003

Progesterone baseline (collected 11/1): <0.05ng/ml (SC)

13.Nov.2003

Progesterone baseline (collected 11/08): < 0.05ng/ml (SC)

23.Nov.2003

Progesterone baseline (collected 11/16): 0.14ng/mL (RSC)

2.Dec.2003

Progesterone baseline (collected 11/22): < 0.05 ng/ml (SC)

4.Dec.2003

As per CD, we are reducing the vitamin E dose from 3IU/kg to 1 IU/kg as per Dr. Ellen Dierenfield's recommendation. (KWP)

5.Dec.2003

Progesterone baseline (taken 11/29): <0.05 ng/ml (SC)

12.Dec.2003

Progesterone (12/06/03): 0.08 ng/ml (NAM)

22.Dec.2003

Progesterone baseline (12/13/2003): 0.16ng/mL (RSC)

.....2004....

4.Jan.2004

Progesterone baseline (12/20/2003): 0.26ng/mL

Progesterone baseline (12/27/2003): 0.36ng/mL (RSC)

12.Jan.2004

Fecal collected on 1/6/04 was negative for ova and parasite. (NAM)

21.Jan.2004

progesterone baseline (collected 1/3): 0.57 ng/ml

progesterone baseline (collected 1/10): 0.45 ng/ml (SC)

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26.Jan.2004

progesterone baseline (collected 1/17): 0.44ng/ml (SC)

4.Feb.2004

Progesterone baseline (collected 1/24): 0.44 ng/ml (SC)

8.Feb.2004

Progesterone baseline (collected 1/31): 0.39 ng/ml (RSC)

12.Feb.2004

Height 6'10" (KWP)

15.Feb.2004

Progesterone baseline (collected 2/07): 0.08 ng/ml (RSC)

23.Feb.2004

Annual TB test: Water was withheld for 2 hours and she was lightly exercised prior to the procedure. 60cc of sterile saline was instilled into one nostril using a 60cc syringe and a 12Fr red rubber catheter. A rectal examination glove was then immediately placed over the end of the trunk and she blew the saline out of her nose. The resultant sample was transferred into a screw-top centrifuge tube. The sample was placed in the freezer.

P: collect sample again on Wednesday and Friday, and then submit all samples for Mycobacterium culture. (SC)

25.Feb.2004

Annual TB test #2: Water was withheld for 2 hours and she was lightly exercised prior to the procedure. 60cc of sterile saline was instilled into one nostril using a 60cc syringe and a 12Fr red rubber catheter. A rectal examination glove was then immediately placed over the end of the trunk and she blew the saline out of her nose. The resultant sample was transferred into a screw-top centrifuge tube. The sample was placed in the freezer.

P: collect sample again on Friday, and then submit all samples for Mycobacterium culture.

Baseline progesterone (collected 2/14/04): <0.05ng/ml (SC)

27.Feb.2004

Blood was submitted for CBC and chem panel, West Nile serology, Vitamin E submitted to both Cornell and Michigan using 2 separation techniques: in the first, the blood was centrifuged immediately and frozen at -20C. In the second, the blood was stored for 2 hours in the fridge and then centrifuged (old technique). Serum was banked for TB ELISA. (NAM)







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23.Nov.2004

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Supplement Update:
4.4 ml Vitamin E (1U/kg)
1 Scoop Elephant biotin (43 cc)
Salt/mineral block small handful
All supplement given daily. Vitamin E recalculated when weights
taken. (KWP)

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28.Nov.2004

Progesterone level (collected 11/22): 0.20ng/ml (RSC)

13.Dec.2004

Progesterone level (collected 11/27): 0.22 ng/ml (SEC)

20.Dec.2004

Progesterone level (collected 12/11): 0.71 ng/ml (SEC)

29.Dec.2004

Progesterone level (collected 12/18): 0.60 ng/ml (SEC)

.....2005....

3.Jan.2005

Progesterone level (collected 12/26): 0.59 ng/ml (SEC)

10.Jan.2005

Progesterone level (collected 1/2/05): 0.58 ng/ml (NAM)

17.Jan.2005

Progesterone level (collected 1/08): 0.28 ng/ml (SEC)

23.Jan.2005

Progesterone level (collected 1/15/05): 0.18ng/mL (RSC)

2.Feb.2005

Progesterone level collected 01/22/05: 0.18 ng/mL (NAM)

7.Feb.2005

Progesterone level (collected 1/29): <0.05ng/ml (SEC)

14.Feb.2005

Progesterone level (collected 2/4): <0.05 ng/ml (SEC)

23.Feb.2005

Progesterone level collected 2/12/05: <0.05 ng/ml (NAM)





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- 17.Aug.2005  
    Progesterone from 8/6/05: 0.69ng/ml (NAM)
  
- 29.Aug.2005  
    Progesterone values from 8/13/05 was 0.29 ng/ml  
    Progesterone values from 8/20/05 was 0.21 ng/ml (EMB)
  
- 14.Sep.2005  
    Progesterone level from 9/3/05 was 0.07 ng/ml. (SLB)
  
- 20.Sep.2005  
    Progesterone 9/11/05: less than 0.05ng/ml (EMB)
  
- 3.Oct.2005  
    Progesterone from 9/24/05 was less than 0.05ng/ml (NAM)
  
- 10.Oct.2005  
    Progesterone from 10-01-05 was less than 0.05 ng/ml (SLB)
  
- 31.Oct.2005  
    Progesterone from 10-22-05: 0.18ng/ml (RSC)
  
- 10.Nov.2005  
    Progesterone levels from 10/29/05: 0.35 ng/ml (SLB)
  
- 14.Nov.2005  
    Progesterone levels from 11/05/05: 0.52 ng/ml (RSC)
  
- 21.Nov.2005  
    Progesterone levels from 11/12/05: 0.42 ng/ml (EMB)
  
- 27.Nov.2005  
    Progesterone levels from 11/19/05: 0.37ng/ml (RSC)
  
- 5.Dec.2005  
    Baseline progesterone for 11/26/05: 0.41 ng/ml. (NAM)
  
- 12.Dec.2005  
    Progesterone from 12/3/05 0.11 ng/ml (RSC)