

Clinical Notes - Individual Specimen Report
BURNET PARK ZOO

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ELEPHAS MAXIMUS (no subsp)
Asiatic elephant
Name: INDY

Sex: Male
Age: 35Y 3M 3D

Acc. #: M85030
Birth: 1.Jan.1972

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.....2005...

6.Dec.2005

Discussed with Chuck recommendation from Charlie Grey to supplement Indy with Beta carotene (vit A) in order to improve semen collection/viability. Since vitamin A is liposoluble, there is a risk of accumulation in the body and possibly toxicity. Another factor to take into consideration, is the fact that excess supplementation of one liposoluble vitamin may interfere with the absorption of other liposoluble vitamin (i.e. E).
We will try to supplement as recommended and monitor for side effects.
(NAM)

.....2006...

20.Feb.2006

S/O:Annual 1st TB test (trunk) wash collected and frozen.A: normal apperaing fluid collected, however approximately 45 mins following the wash he passed about 20ml of thick,white clumping exudate/mucus passed from this trunk. Another bag was placed on his trunk and he was commanded to blow. No exudate was produced.P: 1) a sample of the exudate/mucus was collected from the floor and submitted for cytology.If a uniform population of bacteria or fungi are noted, then submit this for an acid fact stain aerobic culture 2nd trunk wash to be completed on 2/21. (GVK)

21.Feb.2006

S/O:Annual TB test: 2nd trunk wash collected and frozen. A: normal appearing fluid collected.P: 3rd trunk wash to be completed on 2/22.
(NAM)

22.Feb.2006

S/O: Annual TB test: 3rd trunk wash collected and submitted with the 2 previous ones. Blood was collected and submitted for CBC, chem panel and serum banking (samples to be send out for various research projects according to SSP recommendations).
Cytology of nasal discharge showed:
Moderate numbers of columnar epithelial cells. These cells contained discrete eosinophilic granules in their cytoplasm, which either represent a degenerative/necrotic change or may b ea normal finding in the respiratory epithelium of this species. The loss of a discrete chromatin pattern and poorly defined cellular margins of the epithelial cells was also consistent with necrosis. Only a few neutrophils were scattered throughout the preparations with a scant amount of mucus. However, long chains of extracellular cocci as well as individual cocci and rods were observed. Thus, the inflammation was minimal. Plant material, Alternaria spp, and pollen grain were seen and most likely represent environmental contamination.
Consult with SSP pathologist regarding the changes in the cells.
(NAM)

Printed on: 5.Apr.2007

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27.Feb.2006

Cytology from smear of discharge from right cheek collected on 2/22/06 showed few cells, moderate cellular debris, and many bacteria. Interpretation was necrosis (certain) with mixed bacterial population and rare fungal elements associated with the debris. They could not further define underlying process (septic lesion with necrosis is suspected due to bacteria and/or fungus) and cannot completely rule out an underlying neoplasm since no intact cells were found. Normal CBC and chem panel from blood collected 2/22/06. (SLB)

1.Mar.2006

Culture from the nasal discharge yielded moderate amounts of streptococcus agalactiae (see sensitivity). On gram stain, there were few gram positive cocci. The acid fast stain was negative. Culture from the cheek patch yielded moderate Streptococcus spp. Group B. Gram stain showed many gram positive cocci and rods and many gram negative rods. Based on sensitivity of both organisms, TMS would be a good choice. Talk with GVK, CD and JM regarding feasibility of PO treatment. (NAM)

2.Mar.2006

S/O: Keepers have not observed nasal discharge in 3-4 days. The cheek patch has not changed; each day a small plug of pus is removed from the area. The surrounding skin is thickened.
P: Since the nasal discharge has ceased, for now we will treat the cheek patch topically. Keepers will rinse the wound with hot water in the morning and apply chlorhex ointment once a day until further notice. If the wound becomes worse (deeper, more discharge) or if the nasal discharge recurs and persists, we can consider treatment with TMS. (SLB)

15.Mar.2006

Keepers report that the large patch is beginning to peel off. The area is a little sensitive to the touch, but keepers are not finding pus in the central area. Keepers are still flushing the area SID and applying chlorhex ointment. Continue to monitor. (SLB)

21.Mar.2006

Ultrasound examination of repro tract - visualization of BU glands, urethra, (prostate very quickly) and ampullae (to ductus deferens). Rectal massage in attempt to induce urination - failed. Will try again weekly or every other week. (NAM)

29.Mar.2006

Recheck of cheek patch. The defect is granulating in. The surrounding tissues are softening and appeared less thick.
P: Continue treatment with nolvasan cream. (SLB)

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13.Apr.2006

Attempted semen collection today, Indy is responding well to massage, no sperm could be identified in the collected fluid. (NAM)

27.Apr.2006

Wound on side of face is still active and not healing. The tissues surrounding the defect are softer than before and are continuing to peel off. John found some purulent material from pressing on surrounding areas.

Observed today: no pus noted, tissues dry with some dried blood. Nolvasan cream does not seem to have helped. Indiannapolis zoo has same problem and have used Panafil (an enzymatic ointment) with success. However this is a human product which costs about \$80.00 a tube. Ask Chuck about possibility of getting some and if not, then consider granulex for a short period of time. In the mean time an antimicrobial spray (used in for ulcer wounds in human) was dispensed. This product is to be sprayed on a clean wound then the excess is wiped off (NAM)

1.May.2006

Trunk washes from 2/20, 2/21 and 2/22/2006 negative for mycobacteria. (EMB)

22.May.2006

Recheck of cheek patch. The keepers were able to express some purulent exudate from the wound yesterday. Today there was no exudate present. The central part of the lesion was about 1cm diameter, very soft, and pink. The surrounding 4cm of tissue was stiff superficially (epidermis), but the dermis was compressable. Indy appeared sensitive (painful) when the lesion was palpated. Keepers are cleaning the wound daily and applying antimicrobial spray.

P: Continue with treatment. Consider switching to Granulex. (SLB)

2.Aug.2006

Recheck of cheek patch. The keepers have been applying allanfil to the cheek patch once a day since Friday (7/28). They have noted minimal change thus far. Occasional pus is removed from the wound. The central lesion is approximately 1/2 cm by 3 mm and is pink. The surrounding 4 cm is soft. The keepers will continue to apply the allanfil and monitor the lesion for changes. (SLB)

10.Aug.2006

S/O: wound on cheek patch; currently treated with panafil (generic form). The skin surrounding the central wound is healthy; the central wound is about 5mm wide by 3 cm long (larger than observed on August 2nd). The edges of the wound are well adhere to the underlying sq tissues which may encourage migration of epithelium. Keepers report presence of no or very little purulent material.

P: continue application of panafil once a day; monitor progress (NAM)

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23.Aug.2006

Recheck of cheek patch wound. Keepers are still treating with generic panafil. The wound does not have as much discharge as previously noted, but the wound has not decreased in size (about 2.5cm long by 1cm wide).

P: Keepers will continue to treat with panafil. If wound does not improve, consider collasate or biopsy. (SLB)

8.Sep.2006

Discussed with John possibility to biopsy and reactivate the edges of the cheek wound. Since Indy is scheduled to be have its tusk trimmed and banded, we should be able to schedule a first examination and biopsy at the time of the collection of the mold for the band and if further intervention is necessary, it could be done at the time of banding. (KWP)

14.Sep.2006

Attempts to collect semen today were mixed: Indy urinated during stimulation but there was some semen in the samples collected. The sperm was motile. (NAM)

25.Sep.2006

S/O:Indy continues to show signs of musth (dribbling urine,tusk driving).Subsequently, the keepers have not been able to do daily observations on his cheek patches. A:Musth and subseuent tusk driving and incontinence. P: Continue to observe daily and plan soon to sedate Indy and cut tusks and possibly biopsy the affected areas of the cheek patches. This may be in a week or two. (GVK)

11.Oct.2006

Hx: Right cheek patch lesion that has been slow healing; many topical products were used with minimal effect. Keepers have stopped treatment during the must period. Wound has been healing faster with no treatment.

Obs: in chute - the patch is thickened but less than before and the epidermis is rough but more regular than before. There appears to be a small space between the skin and the underlying tissues. In the center of the patch, there is a small 0.5cm in diameter lesion that appears to be filled in (no SQ tissues exposed). It is white and smooth. This may represent healing/fibrous material. There is no evidence of accumulation of material under the patch, but the patch can be pushed in a little (as if not tightly adhered to SQ).

A/P: the wound seems to be healing well. We can decide if biopsy is needed at time of sedation for tusks work. So far the healing process is good. Continue to observe and do not treat unless it changes. (NAM)

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31.Oct.2006

S/O: Sedated to obtain tusk measurements for tusk capping with 50 mg detomidine + 50 mg butorphanol IM, L gluteals. Minimal sedation achieved with this combination at 35 min. Administered additional 20 mg detomidine + 20 mg butorphanol IM L triceps m. Sedation achieved to obtain tusk measurements and molds. At 1 hr post second injection, Indy attempted to strike at staff while restrained in squeeze cage. Procedure completed at this time. Antagonism with 70 mg atipamezole IM (L triceps m.) and 700 mg naltrexone IM (R triceps m.)

A: Tusk measurements for cap molds obtained.

P: Apply tusk caps in 2-3 weeks when molds are finished under sedation. Consider increased dosage of detomidine/butorphanol or previous xylazine/butorphanol dosages. (TAG)

1.Dec.2006

Per keeper report 11/30, Indy possibly lost a large part of a molar on exhibit. Currently in musth. (KWP)

.....2007...

11.Jan.2007

Kirina is coming out of estrus and Indy should come out of musth. The person who is making the bands is almost done - we should be able to fit the bands on his tusks in a couple of weeks. (NAM)

24.Jan.2007

Proc: sedation for replacement of tusk bands.

Indy was walked into the chute and sedated with Xylazine (600mg) and Butorphanol (50mg) IM (left hind). Adequate level of sedation achieved after 30 minutes and was maintained for 35 minutes. He tolerated well handling and touching.

The left tusk was fitted with the new copper band and trimmed down to the level of the trunk. When the right tusk was fitted, increased awareness was noted and we were unable to complete the procedure. He was reversed with yohimbine (50mg) and naltrexone (450mg) IM in left triceps. The effect of the sedation were reversed progressively and he was well aware of keepers and environment after about 30 minutes post-injection. He continued to be lightly sedated throughout the afternoon but ate and drank some. At 3:30 John reported that although Indy is eating intermittently he tends to sleep in between. Also, he was dropping hay. His penis remained partially dropped and he rarely swayed. By 4pm he still had not defecated since before the procedure. A second dose of Yohimbine was given IM at 50mg (in the right hind leg). Within 15 minutes he was brighter and eating better and swaying as he normally does. His penis remained dropped.

P: Keepers will remain with him for 2 hours, then check on him twice tonight (around 9pm and 11pm) (NAM)

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25.Jan.2007

S/O: Indy was stable throughout the night and is bright this morning, though may still be recovering from the sedation. (He continues to rest his trunk on his tusk more often than usual.) He did not defecate during the night, and passed a moderate amount of gas this morning. He continued to eat and drink well. He defecated well around 9:30am and then again around 11am. He passed more feces in the afternoon, and some of the boli were watery. He tends to wet his hay prior to eating eat.

Per Chuck, Indy usually takes 3 days to fully recover after a sedation.

A: recovering from sedation. The butorphanol or the xylazine can cause changes in GI transit that would explain the decreased fecal output, increased gas, and watery stools in the afternoon.

P: continue to monitor. (SLB)

27.Jan.2007

Keepers report that Indy is acting normally and appears fully recovered from the sedation. However, in the early afternoon the band slipped off the left tusk. He gave it to the keepers.

P: Schedule time to sedate Indy again to attempt to replace the band. (SLB)

22.Feb.2007

Abscess erupted on dorsal surface of the lateral nail on the left foot last week. Keepers cut back the devitalized nail and are flushing the pus from the soft tissue once daily with dilute chlorhexidine and water (1:40 dilution) (SLB)

8.Mar.2007

Hx: foot lesion is resolving normally - no pus has been seen in past 10 days. Continued foot care.

Right cheek patch is devitalized and scabbed over and its center has peeled off and has some superficial purulent discharge. The area is sensitive to palpation. Keepers are cleaning it with warm water then applying the allanfil 405 ointment. A piece of scab exfoliated during the cleaning (with a small amount of thick tenacious purulent material) and was submitted for aerobic culture.

P: continue treatment with daily cleaning, warm water treatment and allanfil applications. Vets to check at visits. (NAM)

12.Mar.2007

Recheck cheek patch and foot abscess. The lower part of the cheek patch is healing; the cranial aspect of the wound is clean and dry. The skin surrounding the central area is still thickened and dry.

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12.Mar.2007

There is no warmth associated with the injured toe. The drainage tract located near the coronary band is sealed and not swollen; the nail area that drained distally is still soft and will be trimmed further.

P: continue treatment as indicated. (NAM)

15.Mar.2007

Blood will be collected at the next bleeding opportunity for serum banking to submit for rabies and tetanus titers. We will wait for the chembio test to become approved before testing our animals. (NAM)

19.Mar.2007

Culture from the right cheek patch taken on 3/9/2007: Many *Proteus mirabilis*, many *Actinomyces* spp, many beta-hemolytic *Strep* spp Group B and C. *Proteus* and *Strep* (both groups) sensitive to TMS and Clavamox. There was no sensitivity performed for *Actinomyces* (EMB)

2.Apr.2007

Rabies titer from 3/19/2007 was 1:180. This is well in excess of the human cutoff for immunity which is 1:5. The AAZV recommends biannual vaccination regardless of titer since there is "insufficient data to determine adequate protective vaccine doses and titers." (EMB)