

Medical History Report - Summary for Individual Specimen
LOS ANGELES ZOO

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ELEPHAS MAXIMUS INDICUS

Sex: Female

Acc. #: 00216

Indian elephant

Age: 47Y 2M Est.

Birth: 8.Jun.1958

Name: GITA

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.....2005....

20.May Clinical note recorded. (LG)
 Clinical note recorded. (SK)

24.May Clinical note recorded. (JW)
 Clinical note recorded. (LG)

26.May Blood sample: (EDTA) (11:00.0) Hematology/Chemistry/Serology results.
 WBC:16.50 *10³/UL; HCT: 42.0%; BUN:10 MG/DL;
 Clinical note recorded. (JW)

28.May Clinical note recorded. (RB)

30.May Clinical note recorded. (RB)

31.May Clinical note recorded. (LG)

4.Jun Clinical note recorded. (JW)

7.Jun Clinical note recorded. (JB)
 Clinical note recorded. (JW)

9.Jun Clinical note recorded. (JW)

10.Jun Clinical note recorded. (JW)

11.Jun Clinical note recorded. (RB)

12.Jun Clinical note recorded. (RB)

14.Jun Purpose/Problem: abscess - left front digit
 Rx: METRONIDAZOLE 56gm rectally SID for 30 days.
 Clinical note recorded. (JW)

15.Jun Clinical note recorded. (JB)

16.Jun Purpose/Problem: abscess - left front digit
 Rx: ENROFLOXACIN 35gm rectally SID for 30 days.
 Clinical note recorded. (JB)
 Clinical note recorded. (JW)

17.Jun Clinical note recorded. (JB)

18.Jun Clinical note recorded. (JW)

19.Jun Clinical note recorded. (JW)

20.Jun Clinical note recorded. (RB)

21.Jun Clinical note recorded. (JB)

22.Jun Blood sample: (7:35.1)
 Blood sample: (11:50.0)
 Blood sample: (14:15.0)
 Blood sample: (16:07.0)

23.Jun Clinical note recorded. (JB)

24.Jun Clinical note recorded. (JB)

25.Jun Clinical note recorded. (RB)

26.Jun Clinical note recorded. (JB)

28.Jun Clinical note recorded. (JW)

30.Jun Clinical note recorded. (JW)

1.Jul Clinical note recorded. (JB)

2.Jul Purpose/Problem: joint support

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Indian elephant

Age: 47Y 2M Est.

Birth: 8.Jun.1958

Name: GITA

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.....2005...

2.Jul Rx: POLYSULFATED GLYCOSAMINOGLYCAN 600mg IM q21d for 5 days. (.143
 mg/kg)
 Clinical note recorded. (JB)

3.Jul Clinical note recorded. (JB)

Weight: 3557 Kg (7840 Lb)

4.Jul Clinical note recorded. (LG)

5.Jul Clinical note recorded. (JB)

6.Jul Purpose/Problem: abscess - left front digit
 Rx: POLYSULFATED GLYCOSAMINOGLYCAN 3000mg IM q3wks until further
 notice.
 Clinical note recorded. (JW)

7.Jul Clinical note recorded. (JW)

8.Jul Clinical note recorded. (RB)

11.Jul Clinical note recorded. (RB)

13.Jul Blood sample: (7:30.0)
 Blood sample: (11:30.0)
 Blood sample: (13:30.1)
 Blood sample: (15:30.1)
 Clinical note recorded. (JW)

14.Jul Clinical note recorded. (JW)

15.Jul Blood sample: (15:00.0)
 Clinical note recorded. (JB)

16.Jul Clinical note recorded. (JB)

17.Jul Clinical note recorded. (RB)

18.Jul Clinical note recorded. (RB)

21.Jul Clinical note recorded. (JB)
 Clinical note recorded. (JW)

22.Jul Clinical note recorded. (JB)

23.Jul Clinical note recorded. (SK)

24.Jul Clinical note recorded. (RB)

25.Jul Clinical note recorded. (RB)

26.Jul Clinical note recorded. (RB)

27.Jul Clinical note recorded. (RB)

28.Jul Clinical note recorded. (JB)

30.Jul Clinical note recorded. (JB)

31.Jul Clinical note recorded. (JB)

1.Aug Clinical note recorded. (JB)

2.Aug Clinical note recorded. (RB)

4.Aug Clinical note recorded. (JW)

5.Aug Clinical note recorded. (JW)

6.Aug Blood sample: (EDTA) (10:30.0) Hematology/Chemistry/Serology results.
 WBC:14.50 *10³/UL; HCT: 36.0%; BUN:11 MG/DL;

8.Aug Purpose/Problem: abscess - left front digit

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ELEPHAS MAXIMUS INDICUS           Sex: Female           Acc. #: 00216
Indian elephant                   Age: 47Y 2M Est.     Birth: 8.Jun.1958
Name: GITA
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.....2005...

- 8.Aug Rx: KETOPROFEN 2000mg IM SID for 2 days.
Clinical note recorded. (JW)
Clinical note recorded. (RB)
- 9.Aug Clinical note recorded. (JW)

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ELEPHAS MAXIMUS INDICUS

Sex: Female

Acc. #: 00216

Indian elephant

Age: 47Y 2M Est.

Birth: 8.Jun.1958

Name: GITA

Clinical Note:

20.May.2005

Problem: abscess - left front digit (Suspected)

Vitamin E serum results = 1.68 ug/dl

A: Run at Lansing, MI. There are no absolute normal values for elephants, however, based on several hundred samples this lab has run, the estimated range is 0.75 -1.3 ug/ml (other domestic species range 2.0 - 4.0 ug/ml).

P: Appears to be in great range, no change in diet necessary. (LG)

Clinical Note:

20.May.2005

Problem: abscess - left front digit (Suspected)

Brief check: There appears to be no problems with the area that was biopsied yesterday by JW. SK (SK)

Clinical Note:

24.May.2005

Problem: abscess - left front digit (Suspected)

FOOT RECHECK: Left Fore D-5, swelling above the toe has decrease some and there is purulent drainage coming from the bottom of D-5. I cleaned, flushed & then probed the tract with my finger. The tract is 4-5cm deep, and I think I feel the edge of P2 in contact with the tract. (JW)

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ELEPHAS MAXIMUS INDICUS

Sex: Female

Acc. #: 00216

Indian elephant

Age: 47Y 2M Est.

Birth: 8.Jun.1958

Name: GITA

=====

Clinical Note:**24.May.2005**

Problem: abscess - left front digit (Suspected)

CC: review radiographs taken last week

S/O: There appears to no longer be a prominent view of P3 for digit 5 of the left front foot. The radiographs from 5/12 have two similar views of this area, will need to repeat radiographs with a different view to confirm if P3 is missing. Reviewing the older radiographs, P3 was there in 2003, appeared to be getting smaller in size starting March 2005, never any evidence of active bone infection or osteomyelitis as per radiographs.

A: Some time between march and now, P3 seems to have disipated. There are reports of the animal care staff trimming the nail heavily without Veterinary involvement since I was out of town. The side wall of the nail was removed and the plantar surface was opened up. The lesion has been soft and swelling at the coronary band has decreased since keepers report they performed this trimming. It is possible P3 has quietly eroded away with the soft tissue involvement in this area.

P: Repeat radiographs will be taken on May 26th, and sterile exploration with repeat cultures (aerobic, anaerobic, and fungal) and histopath this time of the tissue from the plantar surface will be planned for May 26th.

Overall assessment: Gita has never shown evidence of lameness or discomfort. All of teh above observations and care have been pro-active due to the diligent observation and care that she receives. (LG)

Clinical Note:**26.May.2005**

Problem: abscess - left front digit (Suspected)

RECHECK FOOT

Left front, swelling above D-5 is decreased 50%, bottom of D5 seems to be more open & draining. In trimming some of the necrotic tissue from the bottom of D-5, I removed a bone fragment in the necrotic tissue. Submitted for histopath. Scrubbed area with nolvasan, then infused renographin for contrast rads, then infused chloramphenicol, then placed cephalosporin antibiotic impregnated beads and repeated radiographs.

Discussed the potential for osteomyelitis with the keepers. Explained regional AB infusion and strongly recommended they start training tornequet behavior.

RADIOGRAPH REVIEW: Shows gradual fragmentation and dissolution of D5 P3. (JW)

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ELEPHAS MAXIMUS INDICUS
Indian elephant
 Name: GITA

Sex: Female Acc. #: 00216
 Age: 47Y 2M Est. Birth: 8.Jun.1958

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Collection Information >>

Health Status: Abnormal
 Fasting Time: < 8 hours
 Activity: Calm
 Weight: 4200 Kg on 29.Mar.2001
 Manual restraint used.

Date of Collection: **26.May.2005**
 Time of Collection: 11:00.0
 Collected by: JW
 Sample Collection Site: EAR VEIN

Hematology >>**Analysis Information >>**

Anticoagulant: EDTA
 Storage: Refrigerated (<48 hours)
 Sample Quality: No quality problems.

Laboratory: **ANT-EQUINE**
 Date of Analysis: **27.May.2005**
 Time of Analysis:
 Analysis by:
 Automated analysis.

Tests and Results >>

WHITE BLOOD CELL COUNT	16.5		*10 ³ /UL
RED BLOOD CELL COUNT	3.2		*10 ⁶ /UL
HEMOGLOBIN	14.3		GM/DL
HEMATOCRIT	42		%
MCV	131		fL
MCH	44.7		ug
MCHC	34.0		gm/dL
SEGMENTED NEUTROPHILS >>	71	(11.72)	% (*10 ³ /UL)
LYMPHOCYTES	23	(3.795)	% (*10 ³ /UL)
MONOCYTES <	3	(0.495)	% (*10 ³ /UL)
EOSINOPHILS	3	(0.495)	% (*10 ³ /UL)
ESTIMATED PLATELET COUNT	ADEQ		
PLATELET COUNT	673		*10 ³ /UL
FIBRINOGEN	400		MG/DL

Comments >>

HEMATOCRIT BY MANUAL METHOD.
 PLATELET CLUMPING.

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Sex: Female Acc. #: 00216
 Age: 47Y 2M Est. Birth: 8.Jun.1958

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Collection Information >>

Health Status: Abnormal
 Fasting Time: < 8 hours
 Activity: Calm
 Weight: 4200 Kg on 29.Mar.2001
 Manual restraint used.

Date of Collection: **26.May.2005**
 Time of Collection: 11:00.0
 Collected by: JW
 Sample Collection Site: EAR VEIN

Chemistry >>**Analysis Information >>**

Chemistry Sample: Serum
 Storage: Refrigerated (<48 hours)
 Sample Quality: No quality problems.

Laboratory: **ANT-EQUINE**
 Date of Analysis: **27.May.2005**
 Time of Analysis:
 Analysis by:
 Automated analysis.

Tests and Results >>

	GLUCOSE	73	MG/DL
	BLOOD UREA NITROGEN	10	MG/DL
	CREATININE	1.4	MG/DL
	BUN/creatinine ratio	7.14	
	CALCIUM	10.8	MG/DL
	PHOSPHORUS	4.6	MG/DL
	calcium/phosphorus ratio	2.35	
	SODIUM	132	MEQ/L
	POTASSIUM	4.7	MEQ/L
	sodium/potassium ratio	28.1	
	CHLORIDE	93	MEQ/L
	CHOLESTEROL	62	MG/DL
	TOTAL PROTEIN (COLORIMETRY)	8.3	GM/DL
	ALBUMIN (COLORIMETRY)	< 2.4	GM/DL
	GLOBULIN (COLORIMETRY)	5.9	GM/DL
	albumin/globulin ratio	0.407	
	ASPARTATE AMINOTRANSFERASE	21	IU/L
	TOTAL BILIRUBIN	0.1	MG/DL
	ALKALINE PHOSPHATASE	110	IU/L
	LACTATE DEHYDROGENASE	444	IU/L
	CREATINE PHOSPHOKINASE	387	IU/L
	ALBUMIN (ELECTROPHORESIS)	< 3.15	GM/DL
	ALBUMIN GLOBULIN RATIO	0.4	GM/DL
	ALPHA-1 GLOBULIN (ELECTROPHORESIS)	0.86	MG/DL
	ALPHA-2 GLOBULIN (ELECTROPHORESIS)	1.10	MG/DL
	BETA-1 GLOBULIN (ELECTROPHORESIS)	1.73	MG/DL
	BUN/CREATININE RATIO	7	MG/DL
	GAMMA GLOBULIN (ELECTROPHORESIS)	1.45	GM/DL
	GAMMA GLUTAMYLTRANSFERASE	12	IU/L
	GLOBULIN (ELECTROPHORESIS)	5.15	GM/DL
	SODIUM/POTASSIUM RATIO	28	RATIO

ISIS reference values are for ELEPHAS MAXIMUS
 Printed on: 11.Aug.2005

/ISIS/MedARKS/5.50

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ELEPHAS MAXIMUS INDICUS                Sex: Female                Acc. #: 00216
Indian elephant                        Age: 47Y 2M Est.          Birth: 8.Jun.1958
Name: GITA
=====

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Collection Information >>                Date of Collection: 26.May.2005
Health Status: Abnormal                  Time of Collection: 11:00.0
Fasting Time: < 8 hours                  Collected by: JW
Activity: Calm                            Sample Collection Site: EAR VEIN
Weight: 4200 Kg on 29.Mar.2001
Manual restraint used.

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Chemistry >>

Tests and Results >>

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TOTAL PROTEIN (ELECTROPHORESIS)        8.3

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ELEPHAS MAXIMUS INDICUS

Sex: Female

Acc. #: 00216

Indian elephant

Age: 47Y 2M Est.

Birth: 8.Jun.1958

Name: GITA

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Clinical Note:

28.May.2005

Problem: abscess - left front digit (Suspected)

RECHECK: DOING WELL

Kprs report Gita is eating well, walking well, and enjoying her walk over to the pool, in which she soaks for quite some time. Kprs had just trimmed feet before I got down there. Feet look good. Back feet look great! Left front lesion looking good - definitely not worse. Kprs are continuing to acclimate Gita to tourniquete on leg. (RB)

Clinical Note:

30.May.2005

Problem: abscess - left front digit (Suspected)

RECHECK: NO CHANGE

LF D5 Lesion looking about the same today. Maybe slightly smaller. There was hay and debris packed in bottom of lesion and when I removed it, there was small amount of mucoid purulent material within the debris. (RB)

Clinical Note:

31.May.2005

Problem: abscess - left front digit (Suspected)

Recheck:

Left front foot. Routine trimming and care to this foot when I arrived for her weekly check. Digit 3 front still has a soft spot at the underside of the nail, still never fully filled in. Don trimmed the sides of this nail. Digit 4 Don trimmed down to check the older soft spot this nail is known for -all looks fabulous and sturdy. Digit 5 cuticle area swelling down, the lateral wall of the nail is already keratinizing quickly at the level of the cuticle, the underside filling in with soft keratinaceous tissue, still no obvious of active draining abscess in this toe, despite radiographs indicating the marked remodeling, disappearance of P3.

A: Clinically Gita is still doing well. She has not shown any signs of discomfort, lameness or favoring of any of her feet. She continues to behave comfortable and enjoys the almost daily walks and swims the keepers have been taking her onin the mornings.

P: Continue monitoring, currently no exciting bacterial growth from cultures taken last week, waiting for histopath results. (LG)

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ELEPHAS MAXIMUS INDICUS           Sex: Female           Acc. #: 00216
Indian elephant                   Age: 47Y 2M Est.     Birth: 8.Jun.1958
Name: GITA
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Clinical Note:

4.Jun.2005

Problem: abscess - left front digit (Suspected)
 Recheck
 Left front foot, swelling above D5 is now almost completely resolved.
 Purulent drainage continues from the tract in D5. Scrubbed, cleaned,
 probed & cultured & then flushed with amikacin. (JW)

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ELEPHAS MAXIMUS INDICUS

Indian elephant

Name: GITA

Sex: Female

Acc. #: 00216

Age: 47Y 2M Est.

Birth: 8.Jun.1958

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Clinical Note:

7.Jun.2005

Problem: abscess - left front digit (Suspected)

Transferred information from National Zoo pedal osteomyelitis case mgmt to attending vet JW. This included:

1. photos and slides of the regional perfusion prep, special large pneumatic tourniquet, and perfusion procedure in an African elephant at the National Zoo (1999-2000)
2. journal articles concerning regional perfusion in cattle and equines, fluoroquinolone resistance in general, and review of available localized antibiotic therapies (JAVMA)
3. AAZV abstract (National Zoo African elephant) and JZWM article (Paris Zoo elephant with footpad FB-induced abscessation) concerning this technique
4. verbal information regarding the paucity of vasculature in the elephant phalangeal regions, thereby making systemic treatment less effective and difficult to assess therapeutic value of; necessity of excellent training techniques and compliance of the elephant for this intense therapy; outcome of case at National Zoo (euthanasia due to progressive osteomyelitis, severe lameness, pain, and lack of quality of life)
5. contact information for the National Zoo (murrays@nzp.si.edu, head vet) to obtain records and any additional recommendations, if desired
6. recommendation to perform weekly rads vs every 2 wks

Note: in my clinical opinion, the chronic, progressive nature of this elephant's abscesses and the recent occurrence of smoldering progressive osteomyelitis with bone sequestrum, *Pseudomonas* and anaerobes present indicate a guarded prognosis and need for extremely aggressive therapy and case management, which is the intent of the health center staff for this case. My own experience with a case very similar to this in an African elephant (who also had concurrent *M tuberculosis*, which could have contributed to the final poor outcome and lack of complete response to the regional medication in her case) is that regional IV perfusion can slow the progress of osteomyelitis, but *Pseudomonas* and anaerobes make treatment very difficult and prognosis highly guarded to poor, despite applied intensive therapeutic regimens. In the National Zoo case, IV perfusion was performed daily to every 3 days (as I recall), and eventually there was indication of scarring of the vessels we used in the craniodorsal surface of the forefoot. Recheck radiographs were done every 3-4 days and the osteomyelitis of the disappearing phalanges were tracked carefully. The training staff and the elephant made the treatments possible. Two important distinctions are that the African elephant at NZP was not eligible for surgical debridement (many different reasons) and had osteomyelitis of a central, more weight bearing digit, and

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ELEPHAS MAXIMUS INDICUS

Sex: Female

Acc. #: 00216

Indian elephant

Age: 47Y 2M Est.

Birth: 8.Jun.1958

Name: GITA

Clinical Note:

7.Jun.2005

this meant marked lameness in her case, which has not been reported in Gita's case thus far.

*In summary, in my opinion, based on the chronic nature of Gita's foot conditions, the recent progressive osteomyelitis represents a very serious medical condition that is an unfortunate advancement in her case. (JB)

Clinical Note:

7.Jun.2005

Problem: abscess - left front digit (Suspected)

Reviewed rads with keepers. D-5, P-3 is pretty much completely gone.

D-3, P-5 shows evidence of active osteomyelitis.

Recent cultures have grown anaerobes: bacteroides & prevotella,

aerobes: Pseudomonas, Proteus, Klebsiella

Recent bone fragment taken from the abscess involving D5 was colonized by multiple bacterial populations. Fungal cultures have been negative.

(JW)

Clinical Note:

9.Jun.2005

Problem: abscess - left front digit (Suspected)

Flushed tract involving D5 with gentocin and placed gentocin beads.

Some of the beads came out while we were still watching. Discussed

plans to start her on systemic antibiotics delivered via rectal

suppositories. (JW)

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ELEPHAS MAXIMUS INDICUS
Indian elephant
 Name: GITA

Sex: Female Acc. #: 00216
 Age: 47Y 2M Est. Birth: 8.Jun.1958

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Clinical Note:

10.Jun.2005

Problem: abscess - left front digit (Suspected)
 Plan: Rectal suppositories have been ordered. SK/JB did local tx today.
 Metronidazole (15mg/kg) 56 grams daily
 Enrofloxacin (10mg/kg) 35 grams daily
 Start as soon as metronidazole comes in. Enro will arrive 5-7 days later.
 She should be cleaned out as well as possible, denpeding on her tollerance. Hosing out is not a problem. Water in the rectum is OK. Ending with a couple of gallons of warm water enema will increase venous perfussion to the area and increase uptake. The suppositories need to stay in for 30-60 minutes and should dissolve completely. If anything is expelled, we need to change how we are cleaning her out and placing them.

After she has been on both medications for at least 3 days, we will do blood levels. We need to collect plasma. Sample at 0, 2,4, 8 hours. Papich will be able to run both metro & enro levels.

Local tx (JB, SK)- flushed D5 abscess pocket with chlorhex dilute copiously (JW)

Clinical Note:

11.Jun.2005

Problem: abscess - left front digit (Suspected)
 FOOT TREATMENT
 Kprs report that tampon and beads from yesterday all came out over course of the day.
 Proc:
 1. Cleaned debris off bottom of lesion.
 2. Swabbed for repeat aerobic and anaerobic C&S.
 3. Red rubber catheter used to flush copious amounts of dilute nolvasan flush into lesion.
 4. Gentocin flush instilled into lesion.
 5. Gentocin beads (approx 16) packed into wound.
 6. 1/2 tampon inserted behing beads into lesion and infused with dilute nolvasan flush to try and cause expansion.
 Assess:
 Don't think that this will retain any better than yesterday, so continue to have problems keeping beads in place. Lesion appears the same. C&Ss pending. (RB)

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ELEPHAS MAXIMUS INDICUS

Sex: Female

Acc. #: 00216

Indian elephant

Age: 47Y 2M Est.

Birth: 8.Jun.1958

Name: GITA

Clinical Note:**12.Jun.2005**

Problem: abscess - left front digit (Suspected)

FOOT TREATMENT

Kprs report that tampon and beads from yesterday all came out over course of the day.

Proc:

1. Cleaned debris off bottom of lesion and scrubbed with chlorhexidime.
2. Red rubber catheter used to flush copious amounts of dilute nolvasan flush into lesion.
3. Gentocin flush instilled into lesion.
4. Gentocin beads (approx 20) packed into wound.
5. Two 1/2 tampons inserted behind beads, but inserted sideways, into lesion and infused with dilute nolvasan flush to try and cause expansion.

Assess:

Don't know if putting packing/tampons in sideways will retain any better than yesterday. Lesion appears the same. C&Ss pending.

PM NOTE - Kpr (Vickie) reported that at approx 3PM, tampons had come out, but not the beads yet. (RB)

Clinical Note:**14.Jun.2005**

Problem: abscess - left front digit (Suspected)

Rx: METRONIDAZOLE 56 gm rectally SID for 30 days. (JW)

Purpose: abscess - left front digit**Prescription Data >>**

Starting date: 14.Jun.2005

Drug: METRONIDAZOLE 56 gm rectally SID for 30 days

Formulation: 56 gm other

Prescribed by: JW (14.Jun.2005)

Filled by: JW (14.Jun.2005)

Treatment weight: 4200 kg

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ELEPHAS MAXIMUS INDICUS

Sex: Female

Acc. #: 00216

Indian elephant

Age: 47Y 2M Est.

Birth: 8.Jun.1958

Name: GITA

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Clinical Note:**15.Jun.2005**

Problem: abscess - left front digit (Suspected)

P/R: FOOT TREATMENT and DAY 2 of METRONIDAZOLE SUPPOSITORIES

Proc:

1. flush- different technique, flushed with 4 x 60 ml dilute chlorhex, then 3 x 60 ml 0.9% saline only, some blood after this began to ooze out of the tract (which is still about 5-8 cm deep and generating spongy tissue within the main tract opening). Then applied OB-type tampon and injected it with amikacin solution (5g amikacin into 500 ml 0.9% saline, not pH'd) to try and expand it into the upper tract. It probably stayed in a little longer than usual, but only about an hour.

2. suppository placed- only did manual cleaning and then warm water inserted into rectum, 5 min wait, then suppository placed by AK up and over "brim". AK called later (approx 3 hrs) that only a little waxy debris was found in her fecal matter at that time. (vet student saving what they collect in order to check and analyze later)

A/P: cont'd tx for pedal osteomyelitis (JB)

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ELEPHAS MAXIMUS INDICUS

Sex: Female

Acc. #: 00216

Indian elephant

Age: 47Y 2M Est.

Birth: 8.Jun.1958

Name: GITA

=====

Clinical Note:

16.Jun.2005

Problem: abscess - left front digit (Suspected)

P/R: FOOT TREATMENT, DAY 3 of METRONIDAZOLE SUPPOSITORIES and Day 1 of Baytril suppositories

Proc:

1. suppository placed- only did manual cleaning and then warm water (temp 107) inserted into rectum (rectal temp:94) 2 min wait, then suppository placed by Jacky up and over "brim". Both suppositories were expelled as soon as flush treatment began.
2. flush- flushed with 5 x 60 ml dilute chlorhex, then 4 x 60 ml 0.9% saline only. Tract is still about 5-8 cm deep and generating spongy tissue within the main tract opening). Then applied OB-type tampon and injected it with amikacin solution (5g amikacin into 500 ml 0.9% saline, pH=6) to try and expand it into the upper tract.
3. suppository placed- re-inserted into rectum. Several hours later, several large peices of suppository were found and collected. The larger of the pieces appears to be the Baytril Suppository (more beige in color). (vet student saving what they collect in order to check and analyze later)

A/P: cont'd tx for pedal osteomyelitis. Contacted Ralph at Valley Drugs. Ralph recommended to keep suppositories at room temp to promote faster dissolve time. Also recommended re-inserting suppositories every time they are expelled and documenting every time/number of times expelled. Ralph mentioned that ideally this suppository dissolves at 98 degree and will consider making next batch with cocoa butter, which dissolves at lower temperature. Will also make suppository narrower and longer to increase surface area. Recommended to continue using small amount of hot water to increase temperature om rectum before administering suppository. (MN) (JB)

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Clinical Note:

16.Jun.2005

Problem; abscess - left front digit (Suspected)

Rx: ENROFLOXACIN 35 gm rectally SID for 30 days. (JW)

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Purpose: abscess - left front digit**Prescription Data >>**

Starting date: 16.Jun.2005

Drug: ENROFLOXACIN 35 gm rectally SID for 30 days

Formulation: 35 gm other

Prescribed by: JW (16.Jun.2005)

Filled by: JW (16.Jun.2005)

Treatment weight: 4200 kg

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ELEPHAS MAXIMUS INDICUS

Sex: Female

Acc. #: 00216

Indian elephant

Age: 47Y 2M Est.

Birth: 8.Jun.1958

Name: GITA

Clinical Note:

17.Jun.2005

Problem: abscess - left front digit (Suspected)

P/R: FOOT TREATMENT, DAY 4 of METRONIDAZOLE SUPPOSITORIES and Day 2 of Baytril suppositories

Proc:

1. flush- flushed with 5 x 60 ml dilute chlorhex, then 4 x 60 ml 0.9% saline only. Tract is still about 5-8 cm deep and generating spongy tissue within the main tract opening. Then applied dry gauze and injected it with amikacin solution (5g amikacin into 500 ml 0.9% saline, pH=6) to try and expand it into the upper tract (and provide barrier from below). Per AK, gauze works better than tampons and stays longer.

2. Radiographs taken- per SK, no major changes seen in the phalanges of D3, D5 compared with 7 days ago.

3. suppository placed- only did manual cleaning and then warm water (temp 105.9) inserted into rectum (rectal temp 95.1F) 2 min wait, then suppository placed by AK (arm length: 28.5 in) up and over "brim". Baytril was inserted first, then Metronidazole suppository.

Both suppositories were left at room temp overnight to promote faster dissolve time (per Ralph at Valley Drug) Also recommended re-inserting suppositories every time they are expelled and documenting every time/number of times expelled. Note: Spoke with Dr. Klaus about using a powder treatment locally into the abscess tract. Not recommended using a powder at this time, since he did not see radiographic changes this week compared to last week. (MN)

A: pedal osteomyelitis, no change from last week

P: cont flushes, suppositories

6/22- blood levels

rads every Friday

consider letting keepers flush D5 BID (they are willing) (JB)

Clinical Note:

18.Jun.2005

Problem: abscess - left front digit (Suspected)

Cleaned and flushed left front foot abscesses as per previous instructions. The D-5 abscess seems to be staying much cleaner. No debris or purulent material flushed out.

Rectal suppositories placed after cleaning and hot water. Stayed in place until about 2:30 when she passed some waxy remnants in feces.

(JW)

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ELEPHAS MAXIMUS INDICUS

Sex: Female

Acc. #: 00216

Indian elephant

Age: 47Y 2M Est.

Birth: 8.Jun.1958

Name: GITA

=====

Clinical Note:

19.Jun.2005

Problem: abscess - left front digit (Suspected)
Cleaned and flushed left front foot abscesses as per previous instructions. The D-5 abscess seems to be staying much cleaner. No debris or purulent material flushed out.
Rectal suppositories placed after cleaning and hot water. Stayed in place until about 2:30 when she passed some waxy remnants in feces.
(JW)

Clinical Note:

20.Jun.2005

Problem: abscess - left front digit (Suspected)
FOOT TREATMENT, SUPPOSITORIES
Proc:
1. Foot cleaned. D5 tract flushed with dilute nolvasan and saline.
2. Packed bottoms of D3 and D5 lesions with 1 gauze pad each soaked in amikacin.
3. Rectal temp = 97.8.
4. Cleaned out rectum, flushed with warm water and inserted baytril and metronidazole suppositories. (RB)

Clinical Note:

21.Jun.2005

Problem: abscess - left front digit (Suspected)
P/R: cont'd local D5 abscess flushing and rectal Rx suppositories
Trying more dilute chlorhex (0.5%) and saline flushes in D5 tract as precaution to protect delicate tissue, perhaps proximal to bone. (JB)

Clinical Pathology Records - Specimen Report
LOS ANGELES ZOO

=====

ELEPHAS MAXIMUS INDICUS

Indian elephant

Name: GITA

=====

Sex: Female

Acc. #: 00216

Age: 47Y 2M Est.

Birth: 8.Jun.1958

Collection Information >>

Health Status: Abnormal

Fasting Time: < 8 hours

Activity: Calm

Weight: 4200 Kg on 29.Mar.2001

Manual restraint used.

Date of Collection: 22.Jun.2005

Time of Collection: 7:35.1

Collected by: JW

Sample Collection Site: EAR VEIN

Chemistry >>

Analysis Information >>

Chemistry Sample: Plasma (Heparin)

Storage: Frozen at -80.0C (-112F)

Sample Quality: No quality problems.

Laboratory: PAPICH

Date of Analysis: 20.Jul.2005

Time of Analysis:

Analysis by:

Automated analysis.

Tests and Results >>

CIPROFLOXACIN	0.0085	UG/ML
ENROFLOXACIN	0.0677	UG/ML
METRONIDAZOLE	0.2396	UG/ML

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Clinical Pathology Records - Specimen Report
 LOS ANGELES ZOO

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ELEPHAS MAXIMUS INDICUS

Sex: Female

Acc. #: 00216

Indian elephant

Age: 47Y 2M Est.

Birth: 8.Jun.1958

Name: GITA
 =====**Collection Information >>**

Health Status: Abnormal

Fasting Time: < 8 hours

Activity: Calm

Weight: 4200 Kg on 29.Mar.2001

Manual restraint used.

Date of Collection: **22.Jun.2005**

Time of Collection: 11:50.0

Collected by: JW

Sample Collection Site: EAR VEIN

Chemistry >>**Analysis Information >>**

Chemistry Sample: Plasma (EDTA)

Storage: Frozen at -80.0C (-112F)

Sample Quality: No quality problems.

Laboratory: **PAPICH**Date of Analysis: **20.Jul.2005**

Time of Analysis:

Analysis by:

Automated analysis.

Tests and Results >>

CIPROFLOXACIN	0.0180	UG/ML
ENROFLOXACIN	0.3133	UG/ML
METRONIDAZOLE	0.8826	UG/ML

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Clinical Pathology Records - Specimen Report
 LOS ANGELES ZOO

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ELEPHAS MAXIMUS INDICUS
Indian elephant
 Name: GITA

Sex: Female Acc. #: 00216
 Age: 47Y 2M Est. Birth: 8.Jun.1958

=====

Collection Information >>

Health Status: Abnormal
 Fasting Time: < 8 hours
 Activity: Calm
 Weight: 4200 Kg on 29.Mar.2001
 Manual restraint used.

Date of Collection: **22.Jun.2005**
 Time of Collection: 16:07.0
 Collected by: JW
 Sample Collection Site: EAR VEIN

Chemistry >>**Analysis Information >>**

Chemistry Sample: Plasma (EDTA)
 Storage: Frozen at -80.0C (-112F)
 Sample Quality: No quality problems.

Laboratory: **PAPICH**
 Date of Analysis: **20.Jul.2005**
 Time of Analysis:
 Analysis by:
 Automated analysis.

Tests and Results >>

CIPROFLOXACIN	0.0675	UG/ML
ENROFLOXACIN	0.1680	UG/ML
METRONIDAZOLE	0.4856	UG/ML

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ELEPHAS MAXIMUS INDICUS

Sex: Female

Acc. #: 00216

Indian elephant

Age: 47Y 2M Est.

Birth: 8.Jun.1958

Name: GITA

=====

Clinical Note:

23.Jun.2005

Problem: abscess - left front digit (Suspected)

P/R: cont'd local foot flush and local rectal suppositories, rads, D5
C/S

1. C/S- using 3 cc syringe barrel in a sterile manner, pushed one large and one thin sterile culturesses as deep as possible into tract, can only go about 6-8, maybe 10 cm at most, tissue bled healthy amts after cultures, as if gran tissue bed is present in the upper tract, indicating healing; submitted for aerobic C/S (swab plus chunk of mucoid-consistency tissue that came with the swab when removed), asked for with MIC (to correlate with blood levels of Rx) and anaerobic culture

2. rads- slightly angled DV of D3 and D5

vets assessed together: D3- P3 is reactive and comparatively smaller overall than previous films, ie looks suspicious and different, D5- P3 is not present (as before), P2 has suspicious bony changes at the lower R corner (if viewed as a square), sl moth eaten, perhaps a little more loss vs previous films, but approx same as last week overall

3. local flushing technique (current)- BOTH D3 and D5

a. clean surfaces of D3 and D5 abscesses with chlorhex scrub to remove debris (AK usually use hose initially for the big chunks)

b. very dilute chlorhex (0.5%, 5 ml in 1000 ml saline, or less) in 60 ml cath tip syringes, approx 5-6 flushes with syringe filled to 60 ml, cath tip inserted into tract and only that far for D5, and superficial only flushing of D3 (less volume since small and not deep)

c. 0.9% saline, same as above using cath tip syringes, 6-7 flushes, varying intensity so can get saline as deep as possible

d. small gauze square gently laid into surface of opening, dampened with amikacin solution (0.5%, 5 mg/ml, 5000 mg per 500 ml saline back, pHd to 7.1-7.4 using sodium bicarb powder, as for an ophtho solution

4. rectal suppositories- enrofloxacin, metronidazole

a. manual removal of fecal balls from "lower" part of rectum

b. warm water flushed into upper part of rectum (called "portal" by AK, is like a shelf at far end of rectum that has a sphinctor-like area that must be pushed past to reach deeper rectum where water and suppositories go), use large stomach tube and pump to place about 5-6 pumps of warm water into upper rectum

(note- this step may be eliminated with different more "melty" base of suppository Rx)

c. suppositories placed over "shelf" or "portal" into deeper rectal region

d. AK call if they do not fall out, or they replace any large bits themselves (if they see them)

A: cont'd local flushing and systemic treatment of foot abscesses

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ELEPHAS MAXIMUS INDICUS
Indian elephant
Name: GITA

Sex: Female

Acc. #: 00216

Age: 47Y 2M Est.

Birth: 8.Jun.1958

=====

Clinical Note:

23.Jun.2005

P: per Head Vet, no trimming of D3 nails UFN
cont tx plan, incl C/S and rads weekly (should culture both D3 and D5)
adjust as needed
blood levels of Rx pending
await cultures (JB)

Clinical Note:

24.Jun.2005

Problem: abscess - left front digit (Suspected)
P/R: cont'd local flush and rectal suppositories, no major protocol changes
S: doing very well, tolerating procedures without a problem, no lameness or evidence of discomfort reported, often eats during foot flush, seems to be getting used to rectal suppository procedure
Exam: D3- cracks in nail distally, open region on footpad is approx 8 cm x 5 cm x 5-6 cm deep (estimated) and has spongy tissue along its walls, gentle but careful probing reveals that there may be a tract there, not clear and did not want to overprobe
D5- tract does seem to be filling in overall, alot of white to yellow and gray spongy tissue, still only going as far as catheter tip, not probing deeper, only flushing, approx 5 x 5 x 6-8 cm deep
No lameness or discomfort detected
A: D3 abscess
D5 abscess, possibly improving and closing in, from proximal to distal within tract (good)
P: cont as planned
consider C/S of D5 abscess (deeper)
monitor closely (as we have been) (JB)

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ELEPHAS MAXIMUS INDICUS

Sex: Female

Acc. #: 00216

Indian elephant

Age: 47Y 2M Est.

Birth: 8.Jun.1958

Name: GITA

=====

Clinical Note:

25.Jun.2005

Problem: abscess - left front digit (Suspected)

FOOT TREATMENT, SUPPOSITORIES

Could not find stomach pump today, so we were not able to flush rectum with warm water before putting suppositories in.

Proc:

1. LF Foot lesions cleaned. D5 tract flushed with dilute nolvasan and saline.
2. Packed bottoms of D3 and D5 lesions with 1 guaze pad each soaked in amikacin.
3. Cleaned out rectum, inserted baytril and metronidazole suppositories. (RB)

Clinical Note:

26.Jun.2005

Problem: abscess - left front digit (Suspected)

P/R: cont'd local foot flush LF D5 (and D3 cleanse), rectal suppositories

No warm water used in rectum prior to suppositories today (may be able to eliminate this step in future) (JB)

Clinical Note:

28.Jun.2005

Problem: abscess - left front digit (Suspected)

Today we start with the newly formulated suppositories. The carrier agent has been changed so it will melt more readily at the lower body temperature of an elephant. (JW)

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ELEPHAS MAXIMUS INDICUS**Indian elephant**

Name: GITA

Sex: Female

Acc. #: 00216

Age: 47Y 2M Est.

Birth: 8.Jun.1958

Clinical Note:**30.Jun.2005**

Problem: abscess - left front digit (Suspected)

Left front radiographs, LF D-5 culture and standard txs done.

CHRONOLOGY OF 2005 PROBLEMS: Right fore lameness developed in early March. Txed with chondroprotectives and NSAIDs. During the time period (weeks) she was favoring her right front, she was spending more time standing on her left front. Subsequent to this, she developed a large swelling above the cuticle of D5. This was biopsied, nonspecific finding of inflammation. This progressed to a abscess draining from the bottom of D5 with an extensive pocketted tract. This was cultured and biopsied. During the biopsy and unattached fragment of bone presumed to be part of P3 was removed and submitted. It was found to have osteomyelitis. At this point we started pursuing systemic antibiotic treatment, along with daily local flushing and cleaning. During most of this time there has also been a significant defect present in the sole of D3, likely associated with old abscess. We are also treating this area of D3 with daily cleaning.

SUMMARY OF RADIOGRAPHIC FINDINGS 2005: 3/10/05-D-3, P-3 looks good, D-5, P-3 is present, but with possible fragments or radio dense forien objects.

5/12/05-D-3, P-3 showing some lytic areas, D-5, P-3 is gone, some lysis of D2, large pocket visable lateral to D-5 (tract)

5/26/05-D-5, P-3 gone, gas pocket present, D-5, P-2 no further change. More aggressive medical management, with local antibiotic infusion (refer to previous entries).

6/10/05-D-3, P3 now looks like there is minimal further change.

More aggressive medical management, with systemic antibiotic administered rectally (refer to previous entries).

6/17, 6/23, 6/30-D-3 and D-5 are continuing to show minimal further change. The osteomyelitis seems to be responding well to the more aggressive tx and becoming more controlled.

CULTURE RESULTS: These are all cultures of the D-5 tract.

5/26- Aerobes-Proteus, Klebsiella, Pseudomonas. Anaerobes-Prevotella

6/5-Aerobes-E coli, Psuedomonas, Enterococcus. Anaerobes-Prevotella

6/12-Aerobes-Strep. Anaerobes-bacteroides

6/17-Aerobes-Strep, No anaerobes

6/24-Aerobes-4 colonies enterococcus, No anaerobes

We have been packing the toe abscesses with amikacin soaked gauze after tx. Keepers report it stays in overnight. 2 days ago we had the keepers start cleaning and packing the abscess before she gets walked so that we completely minimize and introduced debris or dirt. (JW)

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ELEPHAS MAXIMUS INDICUS

Sex: Female

Acc. #: 00216

Indian elephant

Age: 47Y 2M Est.

Birth: 8.Jun.1958

Name: GITA

Clinical Note:**1.Jul.2005**

Problem: abscess - left front digit (Suspected)

P/R: local flush and rectal suppositories cont'd, no lameness, doing well

Exam: D3 tract seems to closing in a little, D5 tract is still at least 6 cm deep but is closing in

A: healing well, comfortable, great for treatments

P: cont as planned (JB)

Clinical Note:**2.Jul.2005**

Problem: abscess - left front digit (Suspected)

P/R: cont'd flush/suppositories, did very well, AK gave adequan IM R hip

Rx: POLYSULFATED GLYCOSAMINOGLYCAN 600 mg IM q21d until further notice. (JB)

Purpose: joint support**Prescription Data >>**Starting date: **2.Jul.2005**

Drug: POLYSULFATED GLYCOSAMINOGLYCAN 600 mg IM q21d for 5 days

Formulation: 100.00 ml injectable

Prescribed by: JB (2.Jul.2005)

Filled by: JB (2.Jul.2005)

Drug dosage: .143 mg/kg

Treatment weight: 4200 kg

Comments >>

Tradename of drug used is ADEQUAN.

Originally prescribed until further notice.

Dose changed.

Clinical Note:**3.Jul.2005**

Problem: abscess - left front digit (Suspected)

P/R: routine flush and suppositories, C/S results of D5 tract culture

Obs: C/S of D5 tract grew B strep resistant to amikacin (change);

switching to tetracycline as flush agent (topical) (JB)

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ELEPHAS MAXIMUS INDICUS
Indian elephant
 Name: GITA

Sex: Female Acc. #: 00216
 Age: 47Y 2M Est. Birth: 8.Jun.1958

=====

Clinical Note:

4.Jul.2005

Problem: abscess - left front digit (Suspected)

Daily Vet care.

S/O: Left front foot D3 and D5 look very clean and quiet. Performed routine procedure of scrubbing with nolvasan scrub, followed by flush sequence. Don and I worked together to perform slight trimming on D3 on the palmer surface of the nail, only removing approximately 3 mm of rim of nail around the pocket, no trimming performed in the pocket. We also trimmed D5, palmar surface 2 mm, lateral wall of nail 2 mm in the area of the old cuticle lesion where it meets the nail bed. Light trim on palmer surface of D2 Left front, still have evidence of very old nail abscess, trim just revealed some tissue that is highly vascularize still in healing phase growing out. Also a light trim on Digit 2 Right front, similar to D2 on left front - cleaned scrubbed both D2 after light trim performed. This was followed with rectal antibiotic therapy.

A: Feet look stable and healing grossly.

P: Continue daily care and weekly radiographic checks. (LG)

Clinical Note:

5.Jul.2005

Problem: abscess - left front digit (Suspected)

CONT'D DAILY CARE, FLUSHING, SUPPOSITORIES, DOING WELL, BAR, NOT LAME (JB)

Clinical Note:

6.Jul.2005

Problem: abscess - left front digit (Suspected)

Rx: POLYSULFATED GLYCOSAMINOGLYCAN 3000 mg IM q3wks until further notice. (JW)

Purpose: abscess - left front digit

Prescription Data >>

Starting date: 6.Jul.2005

Drug: POLYSULFATED GLYCOSAMINOGLYCAN 3000 mg IM q3wks until further notice

Formulation: 100.00 ml injectable

Prescribed by: JW (6.Jul.2005)

Filled by: JW (6.Jul.2005)

Treatment weight: 3557 kg

Comments >>

Tradename of drug used is ADEQUAN.

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ELEPHAS MAXIMUS INDICUS

Sex: Female

Acc. #: 00216

Indian elephant

Age: 47Y 2M Est.

Birth: 8.Jun.1958

Name: GITA

=====

Clinical Note:

7.Jul.2005

Problem: abscess - left front digit (Suspected)
Continuing daily foot tx and rectal suppositories. Today we also did
recheck radiographs and cultures of the D5 tract. (JW)

Clinical Note:

8.Jul.2005

Problem: abscess - left front digit (Suspected)
DIALY FOOT TREATMENT, SUPPOSITORIES
Proc:
1. LF Foot lesions cleaned. D5 tract flushed with dilute nolvasan and
saline.
2. Packed bottoms of D3 and D5 lesions with 1 guaze pad each soaked in
tetracycline.
3. Cleaned out rectum, inserted baytril and metronidazole
suppositories. (RB)

Clinical Note:

11.Jul.2005

Problem: abscess - left front digit (Suspected)
DIALY FOOT TREATMENT, SUPPOSITORIES
Proc:
1. LF Foot lesions cleaned. D5 tract flushed with dilute nolvasan and
saline.
2. Packed bottoms of D3 and D5 lesions with 1 guaze pad each soaked in
tetracycline.
3. Cleaned out rectum, inserted baytril and metronidazole
suppositories. (RB)

Clinical Note:

13.Jul.2005

Problem: abscess - left front digit (Suspected)
Placed suppositories at 7:30AM. Defecated feces with suppository
residue at 11:30.
Collected serial bloods (plasma) for drug levels at 7:20, 11:30, 1:30,
3:30
There is new swelling present above D-5. It is warm to the touch, and
increased in size through the day. She is still walking fine. No
lameness. (JW)

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Clinical Pathology Records - Specimen Report
LOS ANGELES ZOO

=====

ELEPHAS MAXIMUS INDICUS
Indian elephant
 Name: GITA

Sex: Female Acc. #: 00216
 Age: 47Y 2M Est. Birth: 8.Jun.1958

=====

Collection Information >>

Health Status: Abnormal
 Fasting Time: < 8 hours
 Activity: Calm
 Weight: 3557 Kg on 3.Jul.2005
 Manual restraint used.

Date of Collection: **13.Jul.2005**
 Time of Collection: 7:30.0
 Collected by: JW
 Sample Collection Site: EAR VEIN

Chemistry >>**Analysis Information >>**

Chemistry Sample: Plasma (Heparin)
 Storage: Frozen at -80.0C (-112F)
 Sample Quality: No quality problems.

Laboratory: **PAPICH**
 Date of Analysis: **20.Jul.2005**
 Time of Analysis:
 Analysis by:
 Automated analysis.

Tests and Results >>

CIPROFLOXACIN	0.0533	UG/ML
ENROFLOXACIN	0.2959	UG/ML
METRONIDAZOLE	0.6266	UG/ML

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Clinical Pathology Records - Specimen Report
LOS ANGELES ZOO

=====

ELEPHAS MAXIMUS INDICUS

Sex: Female

Acc. #: 00216

Indian elephant

Age: 47Y 2M Est.

Birth: 8.Jun.1958

Name: GITA

Collection Information >>

Health Status: Abnormal

Fasting Time: < 8 hours

Activity: Calm

Weight: 3557 Kg on 3.Jul.2005

Manual restraint used.

Date of Collection: **13.Jul.2005**

Time of Collection: 11:30.0

Collected by: JW

Sample Collection Site: EAR VEIN

Chemistry >>**Analysis Information >>**

Chemistry Sample: Plasma (EDTA)

Storage: Frozen at -80.0C (-112F)

Sample Quality: No quality problems.

Laboratory: **PAPICH**Date of Analysis: **20.Jul.2005**

Time of Analysis:

Analysis by:

Automated analysis.

Tests and Results >>

CIPROFLOXACIN	0.0616	UG/ML
ENROFLOXACIN	0.8267	UG/ML
METRONIDAZOLE	5.0273	UG/ML

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Clinical Pathology Records - Specimen Report
LOS ANGELES ZOO

=====

ELEPHAS MAXIMUS INDICUS

Sex: Female

Acc. #: 00216

Indian elephant

Age: 47Y 2M Est.

Birth: 8.Jun.1958

Name: GITA

=====

Collection Information >>

Health Status: Abnormal

Fasting Time: < 8 hours

Activity: Calm

Weight: 3557 Kg on 3.Jul.2005

Manual restraint used.

Date of Collection: 13.Jul.2005

Time of Collection: 13:30.1

Collected by: JW

Sample Collection Site: EAR VEIN

Chemistry >>

Analysis Information >>

Chemistry Sample: Plasma (EDTA)

Storage: Frozen at -80.0C (-112F)

Sample Quality: No quality problems.

Laboratory: PAPICH

Date of Analysis: 20.Jul.2005

Time of Analysis:

Analysis by:

Automated analysis.

Tests and Results >>

CIPROFLOXACIN	0.0873	UG/ML
ENROFLOXACIN	0.7745	UG/ML
METRONIDAZOLE	3.7601	UG/ML

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ELEPHAS MAXIMUS INDICUS
Indian elephant
 Name: GITA

Sex: Female Acc. #: 00216
 Age: 47Y 2M Est. Birth: 8.Jun.1958

=====

Clinical Note:

14.Jul.2005

Problem: abscess - left front digit (Suspected)
 Radiographs taken yesterday and today. Significant soft tissue change associated with the D-5 tract. D-3 looks about the same. Swelling maybe slightly more diffuse. Some discharge from the tract when flushed. Most recent culture grew psuedomonas, res to enro, susc to amikacin. Start flushing tract with amikacin after cleansing.

Call from Papich: Metonidazole doses from the first sampling. 4hrs post-levels of 0.88ug/ml. Should aim for 2ug/ml. Suggest doubling dose and rechecking 4hr blood only. (JW)

Clinical Note:

15.Jul.2005

Problem: abscess - left front digit (Suspected)
 P/R: foot tx, suppositories, 4 hr post metronidazole plasma taken today
 1. Exam: large area 40x60 cm of sloughed skin over D5, raised, potentially causing shift in wt bearing at walk, D5 abscess tract closing with healthy bed of gran tissue present, D3 distal opening is closing well, appears clean and healthy
 2. Ear venipuncture of L ear for plasma sample at 3:45 pm
 3. foot flushes
 4. suppositories
 A: cont'd abscesses, improved
 sloughing over D5, r/o secondary to infection or remodeling tissues
 P: cont tx SID, consider AK performing flushes (JB)

Clinical Pathology Records - Specimen Report
LOS ANGELES ZOO

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ELEPHAS MAXIMUS INDICUS                Sex: Female                Acc. #: 00216
Indian elephant                          Age: 47Y 2M Est.         Birth: 8.Jun.1958
Name: GITA
=====

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Collection Information >>

Health Status: Abnormal
Fasting Time: < 8 hours
Activity: Calm
Weight: 3557 Kg on 3.Jul.2005
Manual restraint used.

Date of Collection: **15.Jul.2005**
Time of Collection: 15:00.0
Collected by: JW
Sample Collection Site: EAR VEIN

Chemistry >>

Analysis Information >>

Chemistry Sample: Plasma (Heparin)
Storage: Frozen at -80.0C (-112F)
Sample Quality: No quality problems.

Laboratory: **PAPICH**
Date of Analysis: **20.Jul.2005**
Time of Analysis:
Analysis by:
Automated analysis.

Tests and Results >>

CIPROFLOXACIN	0.0509	UG/ML
ENROFLOXACIN	0.7785	UG/ML
METRONIDAZOLE	7.6184	UG/ML

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ELEPHAS MAXIMUS INDICUS

Sex: Female

Acc. #: 00216

Indian elephant

Age: 47Y 2M Est.

Birth: 8.Jun.1958

Name: GITA

=====

Clinical Note:

16.Jul.2005

Problem: abscess - left front digit (Suspected)

P/R: cont'd flushes and suppository tx, doing well, walking WNL, BAR
(JB)

Clinical Note:

17.Jul.2005

Problem: abscess - left front digit (Suspected)

CONT DAILY TREATMENTS

Obs:

No change in large sloughed area compared to description from JB on
7/15. Overall area lost skin and is swollen but not hot and no
redness.

Proc:

1. LF lesions clean, flushed D5 tract with nolvasan and saline.
2. Packed bottoms/holes of D3 and D5 with guazed pad soaked with amikacin.
4. Rectum cleaned and suppositories inserted. (RB)

Clinical Note:

18.Jul.2005

Problem: abscess - left front digit (Suspected)

CONT DAILY TREATMENTS

Obs:

No change from yesterday.

Proc:

1. LF lesions clean, flushed D5 tract with nolvasan and saline.
2. Packed bottoms/holes of D3 and D5 with guazed pad soaked with amikacin.
4. Rectum cleaned and suppositories inserted. (RB)

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ELEPHAS MAXIMUS INDICUS

Sex: Female

Acc. #: 00216

Indian elephant

Age: 47Y 2M Est.

Birth: 8.Jun.1958

Name: GITA

=====

Clinical Note:

21.Jul.2005

Problem: abscess - left front digit (Suspected)
 P/R: D5 abscess tract C/S (deep into upper pocket) and rads of D3/D5 today, rad review with vets
 Exam: bled a great deal after gentle C/S taken from D5 tract, indicating good gran tissue bed, no signs of discomfort during procedures, not lame, large swelling above D5 with soft center (possible SQ fluid abscess pocket) and reactionary tissues above D5 region, loss of superficial epithelium, some honeycomb skin growth at level of coronary band and above
 A: D3- P3 mild remodeling but no obvious osteomyelitis, D5- possible bony loss of distal P2, not much change from last week reactive region of skin and foot above D5, LF
 P: cont as planned, per primary vet, based on results of cultures and antibiotics (JB)

Clinical Note:

21.Jul.2005

Problem: abscess - left front digit (Suspected)
 Plasma metronidazole results-
 First formulation-peak of 0.88ug/ml
 Cocoa butter formulation-peak of 5ug/ml, 2ug/ml at 8hrs post tx
 2 cocoa butter suppositories-peak of 7.6ug/ml
 A: 1 cocoa butter metronidazole suppository gives good blood levels (JW)

Clinical Note:

22.Jul.2005

Problem: abscess - left front digit (Suspected)
 P/R: foot flush (D5) and suppositories as usual, doing well (JB)

Clinical Note:

23.Jul.2005

Problem: abscess - left front digit (Suspected)
 Standard D3 and D5 treatments. Standard suppositories of 1 Baytril and 1 Flagyl. I have not seen the foot wounds in about 3 weeks. The soft tissues at each area seem much improved and the main tract on D5 is 50 % or less deep compared to before. SK (SK)

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ELEPHAS MAXIMUS INDICUS**Indian elephant**

Name: GITA

Sex: Female

Age: 47Y 2M Est.

Acc. #: 00216

Birth: 8.Jun.1958

Clinical Note:

24.Jul.2005

Problem: abscess - left front digit (Suspected)

CONT DAILY TREATMENTS

Obs: No change from last time I saw foot.

Proc:

1. LF lesions cleaned, flushed D5 tract with nolvasan and saline.
2. Packed bottoms/holes of D3 and D5 with guaze soaked with amikacin.
4. Rectum cleaned and suppositories inserted. (RB)

Clinical Note:

25.Jul.2005

Problem: abscess - left front digit (Suspected)

CONT DAILY TREATMENTS

Obs: No change.

Proc:

1. LF lesions cleaned, flushed D5 tract with nolvasan and saline.
2. Packed bottoms/holes of D3 and D5 with guaze soaked with amikacin.
4. Rectum cleaned and suppositories inserted. (RB)

Clinical Note:

26.Jul.2005

Problem: abscess - left front digit (Suspected)

CONT DAILY TREATMENTS

Obs: No change.

Proc:

1. LF lesions cleaned, flushed D5 tract with nolvasan and saline.
2. Packed bottoms/holes of D3 and D5 with guaze soaked with amikacin.
4. Rectum cleaned and suppositories inserted. (RB)

Clinical Note:

27.Jul.2005

Problem: abscess - left front digit (Suspected)

CONT DAILY TREATMENTS

Obs: No change.

Proc:

1. LF lesions cleaned, flushed D5 tract with nolvasan and saline.
2. Packed bottoms/holes of D3 and D5 with guaze soaked with amikacin.
4. Rectum cleaned and suppositories inserted. (RB)

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ELEPHAS MAXIMUS INDICUS**Indian elephant**

Name: GITA

Sex: Female

Acc. #: 00216

Age: 47Y 2M Est.

Birth: 8.Jun.1958

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Clinical Note:**28.Jul.2005**

Problem: abscess - left front digit (Suspected)

RAD REVIEW OF LF D3, D5

D3: little changes in P3, quiescent

D5: P2 has definite bony loss, esp of upper lateral corner of bone vs
1-3 weeks ago, tract is visible but dies seem to be closing in

A: proceed with regional perfusion plans

P: get IV perfusion doses

pursue enroflox PK data to see if need to adjust doses

tourniquet training to 10 psi (per maker of tourniquet)

consider weekly MIC on D5 tract to better adjust dosing (JB)

Clinical Note:**30.Jul.2005**

Problem: abscess - left front digit (Suspected)

P/R: per Papich data for enrofloxacin, will double current enro dose

(from 34 g to 68 g) per rectum SID. Cont'd daily flushes, abscess and
skin reaction over D5 has little change in a week visually. No
apparent lameness reported.Papich: aim for 10x MIC of organism (cipro + enro total) if persistent
orgs (JB)

Clinical Note:**31.Jul.2005**

Problem: abscess - left front digit (Suspected)

P/R: FOOT TREATMENT, 2X ENROFLOXACIN DOSE STARTED TODAY (68 G)

S- doing well, not lame, BAR, tolerating Tx sessions very well

Visual- the large area over LF D5 continues to have a central
fluctuant portion and loss of superficial skin

Rx- flushes, suppositories (metronidazole, enrofloxacin)

Returned repaired tourniquet to AC for training

A: cont'd LF D5 abscess treatment

start regional perfusion when ready (need Rx and doses) (JB)

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ELEPHAS MAXIMUS INDICUS

Sex: Female

Acc. #: 00216

Indian elephant

Age: 47Y 2M Est.

Birth: 8.Jun.1958

Name: GITA

=====

Clinical Note:**1.Aug.2005**

Problem: abscess - left front digit (Suspected)

FOOT TREATMENT AND REPEAT RADS OF LF D5

Obs: abscess tract culture from 7/28 negative

Local flush- very clean, tract seems quiet and is closing down from sole of foot

Rads- LF D5 P3, less bone density present vs 7/28/05 rads

A: osteomyelitis D5 P2

P: cont training for tourniquet

research drug doses for IV perfusion (JB)

Clinical Note:**2.Aug.2005**

Problem: abscess - left front digit (Suspected)

CONT DAILY TREATMENTS

Obs: Holes on bottom of both lesions are filling in a lot and getting much smaller.

Proc:

1. LF lesions cleaned, flushed D5 tract with nolvasan and saline.

2. Packed bottoms/holes of D3 and D5 with guaze soaked with amikacin.

4. Rectum cleaned and suppositories (2 baytril, 1 metronidazole) inserted. (RB)

Clinical Note:**4.Aug.2005**

Problem: abscess - left front digit (Suspected)

Cont Daily treatments

The swelling above D5 has gotten larger and thin walled. Scrubbed and then made a crosshatch incision. Lots of caceous exudate expressed. We also trimmed the 2 openings on the sole of the foot to prevent them closing before they are resolved. Cultured, both from the side and from the sole. Flushed with nolvasan and then saline. The flush did not communicate from the side to the sole lesion. Placed suppositories. (JW)

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ELEPHAS MAXIMUS INDICUS

Sex: Female

Acc. #: 00216

Indian elephant

Age: 47Y 2M Est.

Birth: 8.Jun.1958

Name: GITA
=====

Clinical Note:

5.Aug.2005

Problem: abscess - left front digit (Suspected)

Recheck radiographs

D3 seems to be healing well, no radiographic change and on it's way to resolving. D5 is showing progressive boney loss. P2 is now fragmenting and there is some errosion occurring on P1.

Collected blood for 4hr post enrofloxin levels (JW)

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Clinical Pathology Records - Specimen Report
LOS ANGELES ZOO

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ELEPHAS MAXIMUS INDICUS
Indian elephant
 Name: GITA

Sex: Female Acc. #: 00216
 Age: 47Y 2M Est. Birth: 8.Jun.1958

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Collection Information >>

Health Status: Abnormal
 Fasting Time: < 8 hours
 Activity: Calm
 Weight: 3557 Kg on 3.Jul.2005
 Manual restraint used.

Date of Collection: **6.Aug.2005**
 Time of Collection: 10:30.0
 Collected by: JW
 Sample Collection Site: EAR VEIN

Chemistry >>**Analysis Information >>**

Chemistry Sample: Serum
 Storage: Refrigerated (<48 hours)
 Sample Quality: No quality problems.

Laboratory: **ANT-EQUINE**
 Date of Analysis: **7.Aug.2005**
 Time of Analysis:
 Analysis by:
 Automated analysis.

Tests and Results >>

	GLUCOSE	82	MG/DL
	BLOOD UREA NITROGEN	11	MG/DL
	CREATININE	1.5	MG/DL
	BUN/creatinine ratio	7.33	
	CALCIUM	10.2	MG/DL
	PHOSPHORUS	< 3.1	MG/DL
	calcium/phosphorus ratio	3.29	
	SODIUM	129	MEQ/L
	POTASSIUM	5.1	MEQ/L
	sodium/potassium ratio	25.3	
	CHLORIDE	93	MEQ/L
	CHOLESTEROL	> 77	MG/DL
	TOTAL PROTEIN (COLORIMETRY)	8.3	GM/DL
	ALBUMIN (COLORIMETRY)	< 2.4	GM/DL
	GLOBULIN (COLORIMETRY)	5.9	GM/DL
	albumin/globulin ratio	0.407	
	ASPARTATE AMINOTRANSFERASE	19	IU/L
	TOTAL BILIRUBIN	0.1	MG/DL
	ALKALINE PHOSPHATASE	87	IU/L
	LACTATE DEHYDROGENASE	395	IU/L
	CREATINE PHOSPHOKINASE	357	IU/L
	ALBUMIN GLOBULIN RATIO	0.4	GM/DL
	BUN/CREATININE RATIO	7	MG/DL
	GAMMA GLUTAMYLTRANSFERASE	12	IU/L
	SODIUM/POTASSIUM RATIO	25	RATIO

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ELEPHAS MAXIMUS INDICUS                               Sex: Female           Acc. #: 00216
Indian elephant                                       Age: 47Y 2M Est.      Birth: 8.Jun.1958
Name: GITA
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Clinical Note: 8.Aug.2005
  Problem: abscess - left front digit (Suspected)
  Rx: KETOPROFEN 2000 mg IM SID for 2 days. (JW)

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Clinical Note: 8.Aug.2005
  Problem: abscess - left front digit (Suspected)
  CONT DAILY TREATMENTS
  Worked a little bit with her, pressure cuff and keeping leg up. Went
  well other than air tank out of air, so could not inflate cuff. Kept
  leg on side bar or stool for basically 20min.
  Proc:
  1. LF lesions cleaned, flushed D3 lesion, D5 tract and D5 cuticle hole
  made by JW last week with dilute nolvasan and saline.
  2. Packed bottoms/holes of D3 and D5 with guaze soaked with amikacin.
  4. Rectum cleaned and suppositories (2 baytril, 1 metronidazole)
  inserted. (RB)

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Purpose: abscess - left front digit

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Prescription Data >> Starting date: 8.Aug.2005
  Drug: KETOPROFEN 2000 mg IM SID for 2 days
  Formulation: 100mg ml injectable
  Prescribed by: JW (7.Aug.2005) Filled by: JW (7.Aug.2005)
Treatment weight: 3557 kg

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ELEPHAS MAXIMUS INDICUS

Sex: Female

Acc. #: 00216

Indian elephant

Age: 47Y 2M Est.

Birth: 8.Jun.1958

Name: GITA
=====

Clinical Note:

9.Aug.2005

Problem: abscess - left front digit (Suspected)

O: Routine health screening CBC & chem: WBC-14,500, PCV-36%,

Glob-5.9, Fibrinogen-600

A: Mostly WNL. Fibrinogen is high. We certainly know she has ongoing inflammation.

First attempt at RLP. Placed tourniquet. Inflated to 10lbs. Placed 19g butterfly catheter. Got in the vein on the first 2 trys, but did not stay. The third try worked better. I used one of the vertical midline veins and got much better flow. It still required pressure and time to push the fluids in. We spent about 15-20 minutes administering and then had her hold the foot up for an additional 10-15 minutes. (JW)