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Scientific Name: ELEPHAS MAXIMUS (no subsp)           Accession #: 109171
Common Name: ASIATIC ELEPHANT                         Female
Name: Toni                                           Birth: 31.Oct.1965 (Estimated)
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Clinical Note: 23.Apr.2005

Proc: marked increase in swelling of right sulcus and trunk
 Hx: yesterday right sulcus appeared as it has in past week, very mild swelling, minimal discharge, not warm. This am area was warm, swollen, sensitive to touch and has been increasing, swelling and heat now extending further down trunk. She has been blowing into area all am.

S/O: check at 12:00 with curator TB; front on-view: right sulcus area noticeably more distended than left side. Area is quite warm to touch and firm swelling present around sulcus and extending rostrally down right lateroventral trunk area. Area of erythematous firm stretched skin with central pallor cranial to sulcus on lateroventral trunk, appears to be ready to open and discharge pus. She was seen blowing sand into sulcus during exam, and blinking right eye as if in some discomfort. However, she let EB palpate area thoroughly. Sulcus itself is dry with sand.

She has been eating well and acting otherwise completely normally today and past days.

A: locally expanding inflammation, r/o abscess ready to burst, stemming originally from sulcus, but appears to be surfacing on trunk cranial to sulcus.

P: continue novalsan soaks and hydrotherapy with hose daily. Keepers requested to collect next discharge from sulcus, as well as any pus from area of trunk which looks like it will soon open and drain. Given culturettes for collection, they will also collect discharge in vial for cytology. Start abx today, cephalixin BID. (EB)

Prescription Data >> Starting date: 23.Apr.2005
 Drug: CEPHALEXIN MONOHYDRATE 50000 mg PO BID for 6 days
 Formulation: 500 mg capsule
 Prescribed by: EB (23.Apr.2005) Filled by: VA (23.Apr.2005)
Treatment weight: 2889 kg

Comments >>

 Dispensing Note: Dispense 14 doses. Each dose: 100 capsules. Total to dispense: 1400 capsules. Use 500 mg capsules.

Originally prescribed for 7 days.
 Discontinued on 28.Apr.2005 after 6 days.

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Scientific Name: *ELEPHAS MAXIMUS* (no subsp)
Common Name: ASIATIC ELEPHANT
Name: Toni

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Accession #: 109171
Female
Birth: 31.Oct.1965 (Estimated)
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Clinical Note:

24.Apr.2005

Proc: no change in swelling

S/O: BAR, acting well otherwise, eating well. Front front-on, area around right sulcus and upper trunk are slightly more swollen than yesterday, more diffuse. On closer inspection, overall similar swelling than yesterday, extends rostrally down trunk approx. 1 ft, similar to yesterday. Entire area is warm and very firm, esp. right lateroventral trunk near sulcus. Area just cranial to sulcus, which appeared to be where abscess was surfacing yesterday, now appears flatter and less pink. Now area lateral to sulcus appears redder and very firm. When finger extended into sulcus, no discharge or tooth felt, dry, warm, with sand. No discharge seen yet today by keepers. Keepers able to medicate with Cephalexin yesterday pm and this am without problems.

A: overall similar amount of swelling as yesterday, although slightly different distribution and no discharge as of yet.

P: keepers will collect discharge as soon as any is noted with culturette and in container for possible cytology. (EB)

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Scientific Name: *ELEPHAS MAXIMUS* (no subsp) Accession #: 109171
Common Name: ASIATIC ELEPHANT Female
Name: Toni Birth: 31.Oct.1965 (Estimated)
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Clinical Note:

26.Apr.2001

Problem: abscess - right tusk sulcus (Suspected)
Proc: Exam and xrya as FU for abscess around right sulcus.
Hx: Keepers reported that Toni took 75% of the a.m meds. She is reported as eating and acting fine.

S/O: BAR, on visual exam the area of trunk adjacent to right sulcus is slightly less swollen than yesterday. The area is significantly less warm than yesterday (note: Keeper just had flushed with nolvasan and this may have altered the local temperature). Area around sulcus is swollen, and skin caudal and lateral to sulcus shows erythema and moderate inflammation. During flushing a moderate amount of white/greenish thick, malodorous material was expelled. Toni continues blowing air and water on affected area. Toni allowed CSD to place finger inside sulcus. On digital palpation the track opens to a 3-5cm cavity located craneo/dorsally (R/O real sulcus). The cavity presents a large amount of purulent malodorous exudate and Toni reacted painfully at digital exam.

Exudate sample from sulcus submitted for cytology (Incl AFB):
Results: No AFB seen, few gram positive rods.

Radiographs: affected area: AP and oblique. Results - Underexposed.

Rx: Naxcel 6 g IM in left rear leg at 3:00 pm as Toni didn't take p.m meds.

A: Abscess of R sulcus with extensive associated cellulitis.

P: Continue offering oral abx (cephalexin), if Toni doesn't take meds give injectable meds (ceftiofur).
Continue Novalsan flushes with a syringe with attached plastic tube to be able to penetrate in cavity found today.
Cont with hydrotherapy, and warm compresses of area. (CSD)

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Name: Toni                                             Birth: 31.Oct.1965 (Estimated)
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Clinical Note: 27.Apr.200

Problem: abscess - right tusk sulcus (Suspected)
 Proc: Result from culture (4/25) showed organisms resistant to most cephalosporins.
 Results from culture of discharge of R sulcus yielded *Klebsiella pulmoniae* + Strep Sp not group D not enterococcus, not hemolytic (ID to follow). *Klebsiella* organism is resistant to most abx and only susceptible to TMS, ceftazidime and amox/clav.
 A: Currently elephant is receiving oral and injectible cephalosporins and organism is resistant to both.

P: Switch to oral TMS. (CSD)

Clinical Note: 28.Apr.200!

Problem: abscess - right tusk sulcus (Suspected)
 Rx: SULFAMETHOXAZOLE/TRIMETHOPRIM (5:1) 50000 mg PO SID for 7 days. (CS)

Purpose: abscess - right tusk sulcus (Suspected)

Prescription Data >> Starting date: 28.Apr.2005
 Drug: SULFAMETHOXAZOLE/TRIMETHOPRIM (5:1) 50000 mg PO SID for 7 days
 Formulation: 960 mg tablet
 Prescribed by: CS (28.Apr.2005) Filled by: JLK (28.Apr.2005)
 Drug dosage: 17.31 mg/kg Treatment weight: 2889 kg

Comments >>

 Dispensing Note: Dispense 7 doses. Each dose: 52.00 tablets?!?.
 Total to dispense: 365 tablets. Use 960 mg tablets.

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Scientific Name: *ELEPHAS MAXIMUS* (no subsp) Accession #: 109171
Common Name: ASIATIC ELEPHANT Female
Name: Toni Birth: 31.Oct.1965 (Estimated)
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Clinical Note: 29.Apr.2005

Problem: abscess - right tusk sulcus (Suspected)
Update: elephant took all the TMS pills. Proc: Visual exam today.
Hx: Keeper reported that Toni ate all the TMS pills this a.m.

S/O: Toni is BAR, the inflammation continues decreasing as well as the previously warmer temp on affected area.

Results: 2nd organisms isolated from initial culture from R sulcus was ID as Streptococcus species, not Group D, not enterococcus, non hemolytic susceptible to TMS amongst several abx.

A: Sulcus abscess seem resolving with local and systemic tx.
P: Continue with local and systemic tx with tms
Visual week 5/02. (CSD)

Clinical Note: 2.May.2005

Problem: abscess - right tusk sulcus (Suspected)
EPH result blood from 4/25.
Although no electrophoretic pattern has been established for captive Asian elephants. The EPH on this elephant suggest only mod increase in B2 and gamma portions.
A: Elevation on both fractions could suggest acute inflammation; which correlates with this case
P: Cont with medication and possibly run an EPH when case has resolved (CSD)

Clinical Note: 2.May.2005

Problem: abscess - right tusk sulcus (Suspected)
Bloodwork (differential) results from 4/25/05:
Segs 38% (5.8), Lymphs 16% (2.5), Monos 45% (6885).
TP 9.9, Alb 2.6, Glb 7.3. Hyperglobulinemia evident. Monocytosis as on many past samples. (EB)

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Scientific Name: *ELEPHAS MAXIMUS* (no subsp) Accession #: 109171
Common Name: ASIATIC ELEPHANT Female
Name: Toni Birth: 31.Oct.1965 (Estimated)
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Clinical Note: 4.May.2005

Problem: abscess - right tusk sulcus (Suspected)
Proc: Visual exam. A: Inflammation is resolving.
Hx: This elephant has been eating and acting normally. Keeper (SH) reports that she is not flushing water or throwing sand into the affected area as many times as she was doing it before. Taking meds uneventfully.

Visual:

S/O: Elephants is BAR, no ocular, nasal or oral discharge. The inflammation on R side of trunk in sulcus area continues to decrease. Temperature is not elevated when compared with the other side of the trunk. There is small amount of white/greenish mucoud exudate on the track of the abscess just next to the sulcus. On palpation a new tooth is erupting on R sulcus. The abscess fistula is smaller and elephant didn't react to digital palpation.

A: Abscess is favorably responding to treatment

P: Extend TMS x 7 more days and repeat visual (CSD)

Clinical Note: 5.May.2005

Problem: abscess - right tusk sulcus (Suspected)
Rx: SULFAMETHOXAZOLE/TRIMETHOPRIM (5:1) 50000 mg PO SID for 7 days. (CS)

Purpose: abscess - right tusk sulcus (Suspected)

Prescription Data >>

Starting date: 5.May.2005
Drug: SULFAMETHOXAZOLE/TRIMETHOPRIM (5:1) 50000 mg PO SID for 7 days
Formulation: 960 mg tablet
Prescribed by: CS (4.May.2005) Filled by: JLK (4.May.2005)
Drug dosage: 17.31 mg/kg Treatment weight: 2889 kg

Comments >>

Dispensing Note: Dispense 7 doses. Each dose: 52.00 tablets?!?.
Total to dispense: 365 tablets. Use 960 mg tablets.

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Scientific Name: *ELEPHAS MAXIMUS* (no subsp) Accession #: 109171
Common Name: ASIATIC ELEPHANT Female
Name: Toni Birth: 31.Oct.1965 (Estimated)
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Clinical Note: 11.May.2005

Problem: abscess - right tusk sulcus (Suspected)
S/O: (SLD first visual) - Localized swelling around right tusk. One area is very firm and size of golf ball. Purulent material present in sulcus during visual. Palpation - was able to extend up and feel fractured tusk. Sole thinning / subsolar abscess noted on left hind (lateral aspect) and left fore large amount of pad.

Culture - collected for aerobic C/S.

Cytology - collected for ASAP visual.

A: Possible tusk is growing in in improper position and causing tissue trauma. Concern of tract of infection. Foot lesions indicate abnormal weight distribution.

P: Pending results (and will collect an anaerobe tomorrow) will consider changing ABs. CWPT of nolvasan flushes. Monitor feet and consider treatment if progresses.

Addendum: SLD corrected left to right tusk in above text on 5/16 after review of records. It is the right tusk that has pathology. (SLD)

Clinical Note: 12.May.2005

Problem: abscess - right tusk sulcus (Suspected)
S/O: Tip of tusk is difficult to visualize due to inflamed tissue surrounding and deep sulcus. Possible tip has black spot that may indicate pulp exposure. Swelling is reduced from yesterday visual. No pain elicited on palpation.

Culture - anaerobic sample collected from sulcus.

Rx: SULFAMETHOXAZOLE/TRIMETHOPRIM (5:1) 50000 mg PO SID for 3 days.

A/P: Improvement clinically from yesterday. Blood work NR from yesterday. Check culture results tomorrow about possible AB switch. (SLD)

Purpose: abscess - right tusk sulcus (Suspected)

Prescription Data >> Starting date: 12.May.2005
Drug: SULFAMETHOXAZOLE/TRIMETHOPRIM (5:1) 50000 mg PO SID for 3 days
Formulation: 960 mg tablet
Prescribed by: SLD (11.May.2005) Filled by: JLK (11.May.2005)
Drug dosage: 17.31 mg/kg Treatment weight: 2889 kg

Comments >>

Medical History Report - Individual Specimen
NATIONAL ZOOLOGICAL PARK

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Common Name: ASIATIC ELEPHANT                           Female
Name: Toni                                               Birth: 31.Oct.1965 (Estimated)
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Prescription Record (continued):

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Dispensing Note: Dispense 3 doses. Each dose: 52.00 tablets?!?.
Total to dispense: 156 tablets. Use 960 mg tablets.

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Clinical Note: 13.May.2005

Problem: abscess - right tusk sulcus (Suspected)
Comment: Culture results from tusk - *Klebsiella pneumonia* and *E. coli* that are resistant to SXT but sensitive to enrofloxacin.

A/P: Based on this finding, will switch to oral enrofloxacin. SLD emailed Boyd Welsh (UF dentist with great deal of elephant dentistry experience) for advice on tusk extraction vs medical treatment in these long-standing cases. (SLD)

Clinical Note: 13.May.2005

Problem: abscess - right tusk sulcus (Suspected)
Rx: METRONIDAZOLE 45.00 gm rectally SID for 7 days. (SZM)

Purpose: abscess - right tusk sulcus (Suspected)
pustules - right tusk sulcus (Confirmed)

Prescription Data >> Starting date: 13.May.2005
Drug: METRONIDAZOLE 45.00 gm rectally SID for 7 days
Formulation: 500 mg tablet
Prescribed by: SZM (13.May.2005) Filled by: VA (13.May.2005)
Drug dosage: 15 mg/kg Treatment weight: 2937 kg

Comments >>

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Dispensing Note: Dispense 5 doses. Each dose: 90 tablets. Total to
dispense: 450 tablets. Use 500 mg tablets. 1-500 tab bottle given

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Common Name: ASIATIC ELEPHANT                           Female
Name: Toni                                               Birth: 31.Oct.1965 (Estimated)
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Clinical Note: 14.May.2005

Problem: abscess - right tusk sulcus (Suspected)
Proc: recheck exam of inflamed right tusk sulcus
S/O: BAR, keeper (MG) reports she is less bothered than several days ago from pain in area or right sulcus. They continue to flush mod. amounts of purulent material from sulcus.
Swelling of trunk and tissue surrounding sulcus is greatly reduced compared to last EB visual 4/25/05. Still round 3 cm diameter firm swelling ventral to sulcus, as seen at that time. Mild amount of stringy thick yellow, slightly malodorous purulent material in sulcus. 2 tracts, one is craniolateral and is where the pus broke through originally. The other tract at center of sulcus is where the tooth can be palpated. 2 parts of the tooth, both similar in size (appears 2 be halved), with fissure between them, can be palpated, but not easily visualized due to purulent discharge and swelling. One quick visual revealed that the tusk tip is irregularly dark brown, but appears very similar to other tusk, appears to be staining, cannot tell if it is pulp cavity, but no obvious central darker area could be seen today by EB.
A: overall, swelling has greatly reduced, mild flare reported in last week has also improved again by today. But inflammation and discharge remain and may continue due to fractured tusk.
P: start enro SID today due to Cx results from this past week. Consulting with dentists, etc. to determine if tooth may have to be removed. (EB)

Clinical Note: 14.May.2005

Problem: abscess - right tusk sulcus (Suspected)
Rx: ENROFLOXACIN (BAYTRIL) 9000 mg PO SID for 14 days. (SLD)

Purpose: abscess - right tusk sulcus (Suspected)

Prescription Data >> Starting date: 14.May.2005
Drug: ENROFLOXACIN 9000 mg PO SID for 14 days
Formulation: 68.00 mg tablet
Prescribed by: SLD (13.May.2005) Filled by: VA (14.May.2005)
Treatment weight: 2889 kg

Comments >>

Dispensing Note: Dispense 14 doses. Each dose: 132 tablets. Total to dispense: 1848 tablets needed TOTAL, 1000 given-WE STILL OWE 848. Use 68.00 mg tablets.

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Scientific Name: *ELEPHAS MAXIMUS (no subsp)* Accession #: 109171
Common Name: ASIATIC ELEPHANT Female
Name: Toni Birth: 31.Oct.1965 (Estimated)
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Clinical Note: 15.May.200

Problem: abscess - right tusk sulcus (Suspected)
Comment: Toni only took 1/2 of enro meds today. Took 100% yesterday.
Otherwise reported as no change. (EB)

Clinical Note: 16.May.200

Problem: abscess - right tusk sulcus (Suspected)
Comment: CP results from May 11

TP 9.3; Alb 2.5; BUN 11; Crea 1.5; Glucose 89; SGOT 12; SGPT 2; TB
0.2; Alk Phos 45; CPK 159; Ca 9.6; Phos 3.9; Na 129; K 4.2; cl 92.

A: NR results.

P: CWPT of sulcus/tusk inflammation / infection. (SLD)

Clinical Note: 17.May.200

Problem: abscess - right tusk sulcus (Suspected)
S/O: Trunk much less swollen. Medial aspect hard golf ball size tissue
is now soft and less swollen. Purulent material still present at site
of tusk.

A/P: EH keepers are having a hard time getting the enrofloxacin into
Tony. They will continue to figure ways of doing this. Flushing of
site may in itself be the effective therapeutic agent/method at this
time. Dentist visit planned for 5/20. (SLD)

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Accession #: 109171

Common Name: ASIATIC ELEPHANT

Female

Name: Toni

Birth: 31.Oct.1965 (Estimated)

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Clinical Note:

20.May.200

Problem: abscess - right tusk sulcus (Suspected)

Proc: dental consult with Dr. Chuck Williams

S/O: Right sulcus palpated after flushing with water and novalsan. Swelling now minimal, including the golf-ball sized, firm swelling on the ventral part of the sulcus where it meets the trunk, which has softened in the past few days and is less obvious. Dr. Williams is also unable to determine if the pulp cavity is exposed due to the limited access, but suggested trying to place endoscope up sulcus to get a better visualization and possibly later for procedures (pulpectomy or pulp capping). He also felt we should consider more anaerobic coverage in abx.

She has been taking enro well po past few days.

A/P: try to desensitize Toni to endoscope equipment for possible future procedure. Tissue swelling is slowly but surely decreasing. Anaerobic culture still pending.

Addendum added by SZM on 5/20. Discussed risks/benefits of sedating for more immediate exam vs continuing with current medications. All agreed that given the recent improvement in Toni's condition we would like to avoid anesthesia/sedation at this point (if she went down she might not get back up) - but continue with medical therapy (oral baytril) - consider metronidazole per rectum - and pursue more advanced diagnostics (possible repeat x-rays with more powerful machine if possible, and attempt greater visualization with bronchoscope and maybe endoscope) For the scoping procedures Toni would require some time to get used to the equipment - keepers to visit DAH and view equipment. (EB)

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Scientific Name: *ELEPHAS MAXIMUS* (no subsp)

Accession #: 109171

Common Name: ASIATIC ELEPHANT

Female

Name: Toni

Birth: 31.Oct.1965 (Estimated)

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Clinical Note:

22.May.2001

Problem: abscess - right tusk sulcus (Suspected); pustules - right tusk sulcus (Confirmed)

Proc: check for multiple pustules in and around right sulcus

S/O: BAR, overall doing well, eating normally. She has taken her complete enro dose for the past 4-5 days, and took 80% yesterday. Today she is becoming finicky again, but took around 30% by 11am visit. Keepers have been flushing sulcus BID with dilute novalsan 1:10, approx, 5-6 60 ml syringes full.

On exam, right sulcus has multiple (>20) pinpoint to 3 mm diameter slightly raised fluid- or pus-filled pustules on the caudolat. edge of the sulcus. Keeper DF reports she saw similar pustules this am further up into the sulcus around the tip of the tusk. A small amount of thick yellow purulent discharge present up in the sulcus at the distal tip of the tusk. The tissue around the sulcus is all now soft and appears otherwise normal, no swollen or overly inflamed. The small pustules do not open when palpated lightly with fingernail, but appear fluctuant and may open with more pressure or with time. Keepers report that they appeared ulcerated this am first thing, which they do not appear to be now, and keepers agree. Oral exam is normal, no ulcerations or any other abnormality seen.

A: pustules, r/o bacterial vs. reaction to medication/novalsan vs other (viral, allergic)

P: discontinue novalsan flushes and replace same volume and frequency with saline BID. continue enro if she will take it for a few more days and consider d/c based on clinical course and appearance of pustules, swelling at that time. Consider sampling of pustule content tomorrow for cytology/culture. (EB)

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Common Name: ASIATIC ELEPHANT	Female
Name: Toni	Birth: 31.Oct.1965 (Estimated)

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Clinical Note: 23.May.200

Problem: abscess - right tusk sulcus (Suspected); pustules - right tusk sulcus (Confirmed)

Comt: Recheck Toni today for possible pustules along the sulcus - Toni would not allow in depth visualization or probing of this area. Multiple small white foci noted, but it was not possible to obtain skin scraping or collect samples.

Obs: Although Toni's trunk is much less swollen than it was, it still remains slightly swollen along the base of the sulcus

Exam: Toni would not permit much probing or manipulation of the area, but the tip of the tusk feels very similar to the tip of the normal tusk (i.e. it was not possible to discern if there was a fracture or if the pulp cavity is exposed.

A: Soft tissue swelling around base of the sulcus.

P: Flush with nolvasan. Have same vet come down 7 days in a row to acclimate toni to manipulation. Once Toni will allow manipulation attempt for skin scrape or cytology of possible pustules. Work on contacting other institutions for radiographic technique of tusk/sulcus to determine if pulp cavity is exposed. Bring down bronchoscope to acclimate toni to this in hopes of better visualizing tusk. Investigate rectal metronidazole dosing. (SZM)

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Scientific Name: *ELEPHAS MAXIMUS (no subsp)* Accession #: 109171
Common Name: ASIATIC ELEPHANT Female
Name: Toni Birth: 31.Oct.1965 (Estimated)
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Clinical Note: 24.May.2005

Problem: abscess - right tusk sulcus (Suspected); pustules - right tusk
sulcus (Confirmed)

Comt; Recheck. Keepers feel the base of sulcus may be slightly more
swollen.

Proc: Exam: toni would not permit in depth palpation, but it was
possible to reach the tip of the sulcus. It was not possible to
discern whether the trunk was more or less swollen.

Proc: Acclimatization to the bronchoscope: Walked up to toni with the
scope, she did not seem to mind it - attempt again tomorrow along with
the light source.

Proc: Enema/MTZ admin. Sean was able to remove some boluses of fecal
matter rectally and then insert metronidazole paste. There was a
previous report of achieving plasma levels via rectal administration
of mtz at 15 mg/kg. Plan to start slowly with 10 mg/kg and see how it
goes and consider increasing.

a: no change from yesterday.

P: visit tomorrow with light source from bronchoscope and continue mtz
suppositories. (SZM)

Purpose: abscess - right tusk sulcus (Suspected)
pustules - right tusk sulcus (Confirmed)

Prescription Data >> Starting date: 24.May.2005
Drug: METRONIDAZOLE 30000 mg rectally SID for 5 days
Formulation: 500 mg tablet
Prescribed by: SZM (23.May.2005) Filled by: JLK (23.May.2005)
Drug dosage: 10.38 mg/kg Treatment weight: 2889 kg

Comments >>

Dispensing Note: Dispense 10 doses. Each dose: 60 tablets. Total to
dispense: 600 tablets. Use 500 mg tablets.

Originally prescribed for 10 days.
Discontinued on 28.May.2005 after 5 days, increased dose.

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Common Name: ASIATIC ELEPHANT Female
Name: Toni Birth: 31.Oct.1965 (Estimated)
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Clinical Note: 27.May.200

Problem: abscess - right tusk sulcus (Suspected); pustules - right tusk
sulcus (Confirmed)

Proc: new culture of sulcus discharge today

S/O: BAR, overall she remains bright and eating well. Swimming in pool
at arrival during pm visit. Overall swelling appears similar to EB
compared to last week, but areas of swelling are now more obvious near
the dorsal side of the trunk, at the level of the tusk, and in the
rounded soft area at the base of the sulcus, but less swollen in the
tissues directly surrounding the sides and dorsal edges of the tusk.
Still mod. amount of discharge present.

In am: sulcus edges spread and culturette and swab placed high into
sulcus into white-yellow thick discharge until contact felt with tip
of tusk.

In pm 14:30: 60 mg MTZ as paste placed with long gastric tube into
rectum. none appeared to leak in next 10 min.

Cytology: many degenerate neutrophils and gram-pos. diplococci with
mod. number of epithelial cells. No AFS. Dx: Abscess, bacteria are
significant.

A/P: awaiting Cx results. Enro is likely not covering the gram-pos.
cocci seen on cytology and will likely need to be changed. (EB)

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Common Name: ASIATIC ELEPHANT Female
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Clinical Note: 28.May.200

Problem: abscess - right tusk sulcus (Suspected); pustules - right tusk
sulcus (Confirmed)

Proc: recheck and MTZ rectally

S/O: swelling around right sulcus not increased today. On lateral and
cranial edges of sulcus swelling overall appears less than last week,
caudal edge still slightly swollen as well as adjacent area of trunk.
Tip of tusk easily palpated, much easier than EB was able to do last
week. Still mod. amount of discharge from sulcus.

MTZ 3000 mg given rectally with very good cooperation from Toni today
by MG and EB with no leakage. She is not taking enro well so far
today, and only 107/134 pills taken yesterday. Last several days before
that she took pills relatively well, but last few days less
interested.

A/P: overall swelling not worse today, slightly better to EB overall
in past week. Cytology from yesterday suggests staph, which may not be
well covered by enro. Awaiting culture results. Increase MTZ now to 15
mg/kg due to good tolerance so far. (EB)

Clinical Note: 29.May.200

Problem: abscess - right tusk sulcus (Suspected); pustules - right tusk
sulcus (Confirmed)

Proc: Visual exam today as FU.

Hx: Elephant reported as eating and acting normally, perhaps a little
upset with all the manipulations and drugs being administered (per
keeper MG).

S/O: Elephant is BAR, using trunk normally. There is minimally
inflammation on R tusk area. Area is no warm on palpation. On close
visual exam 2 threads of white purulent discharge are present directly
in the sulcus. Only mod inflammation and redness noted in sulcus. Tusk
palpated, no change from last CSD visit, elephant didn't seem to mind
palpation of tusk.

A: Inflammation seems to be resolving on MTZ/Abx but small amount of
discharge suggest persistant infection. Keepers have been able to give
the MTZ rectally uneventfull but had harder time administering the
enrofloxacin PO.

P: MTZ extended for another 5 days.

Keepers to cont flushing the area

Cont with visuals and conditioning for scoping affected area (CSD)

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Common Name: ASIATIC ELEPHANT Female
Name: Toni Birth: 31.Oct.1965 (Estimated)
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Clinical Note: 29.May.2005
Problem: abscess - right tusk sulcus (Suspected); pustules - right tusk
sulcus (Confirmed)
Rx: METRONIDAZOLE 45.00 gm rectally SID for 5 days. (EB)

Purpose: abscess - right tusk sulcus (Suspected)
pustules - right tusk sulcus (Confirmed)

Prescription Data >> Starting date: 29.May.2005
Drug: METRONIDAZOLE 45.00 gm rectally SID for 5 days
Formulation: 500 mg tablet
Prescribed by: EB (28.May.2005) Filled by: VA (28.May.2005)
Drug dosage: 15 mg/kg Treatment weight: 2889 kg

Comments >>

Dispensing Note: Dispense 5 doses. Each dose: 90 tablets. Total to
dispense: 450 tablets. Use 500 mg tablets.

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Clinical Note: 30.May.2005
Problem: abscess - right tusk sulcus (Suspected); pustules - right tusk
sulcus (Confirmed)
Verbal update: Affected sulcus continues to slowly improve although
small amount of purulent discharge is present.
Keepers were not successful administering all the baytril PO today.
MTZ administration was uneventful. (CSD)

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Clinical Note: 1.Jun.2005

Problem: abscess - right tusk sulcus (Suspected); pustules - right tusk sulcus (Confirmed)

Comt: Most recent culture and sensitivity is not back yet on sulcus discharge. Although the swelling appears to be improving, it has not resolved. TV notes that from cytology it is not possible to differentiate between staph and strep - since baytril gets staph and not strep, it might be more appropriate to switch to cephalixin at this point (also, the lab reports that the gram negatives are much less predominant - baytril has most likely taken care of this)

P: Discussed with curator and we agreed to examine toni elephant tomorrow am, and depending upon her status and sensitivity - consider switching to cephelexin. (SZM)

Clinical Note: 2.Jun.2005

Problem: abscess - right tusk sulcus (Suspected); pustules - right tusk sulcus (Confirmed)

Comt: Recheck today - Keepers reported she accepted all medications this am

Proc: Exam: Toni's trunk looks slightly less swollen today and the skin over the right sulcus is not pulled as tight - there are a few wrinkles suggesting that the swelling is continuing to subside. There was no discharge at all during exam and keepers reported that they havent flushed the area yet and that this was the first day that there was no discharge.
The tip of the tusk is more palpable.

A: Resolving inflammation of sulcus

P: Continue AB therapy as it currently is - recheck on saturday.
(Baytril and MTZ) (SZM)

Clinical Note: 4.Jun.2005

Problem: abscess - right tusk sulcus (Suspected); pustules - right tusk sulcus (Confirmed)

Rx: ENROFLOXACIN (BAYTRIL) 9000 mg PO SID for 4 days.
Rx: METRONIDAZOLE 45.00 gm rectally SID for 5 days. (SZM)

Medical History Report - Individual Specimen
NATIONAL ZOOLOGICAL PARK

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=====
Scientific Name: ELEPHAS MAXIMUS (no subsp)           Accession #: 109171
Common Name: ASIATIC ELEPHANT                         Female
Name: Toni                                             Birth: 31.Oct.1965 (Estimated)
=====

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Purpose: abscess - right tusk sulcus (Suspected)

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Prescription Data >>                               Starting date: 4.Jun.2005
Drug: ENROFLOXACIN 9000 mg PO SID for 4 days
Formulation: 68.00 mg tablet
Prescribed by: SZM (4.Jun.2005)                     Filled by: VA (4.Jun.2005)
                                                    Treatment weight: 2889 kg

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Comments >>

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Dispensing Note: Dispense 4 doses. Each dose: 132 tablets. Total to
dispense: 660 tablets. Use 68.00 mg tablets.

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Purpose: abscess - right tusk sulcus (Suspected)
pustules - right tusk sulcus (Confirmed)

```

Prescription Data >>                               Starting date: 4.Jun.2005
Drug: METRONIDAZOLE 45.00 gm rectally SID for 5 days
Formulation: 500 mg tablet
Prescribed by: SZM (4.Jun.2005)                     Filled by: VA (4.Jun.2005)
Drug dosage: 15 mg/kg                               Treatment weight: 2889 kg

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Comments >>

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Dispensing Note: Dispense 5 doses. Each dose: 90 tablets. Total to
dispense: 450 tablets. Use 500 mg tablets.

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Clinical Note: 5.Jun.2005
 Problem: abscess - right tusk sulcus (Suspected); pustules - right tusk
 sulcus (Confirmed)

Proc: verbal recheck
 Keeper SR reports no obvious swelling visible in past few days. Today
 very small piece of discharge and yesterday no discharge at all per
 SZM. Taking enro fine today and MTZ rectally also going well. (EB)

=====
Scientific Name: *ELEPHAS MAXIMUS* (no subsp) Accession #: 109171
Common Name: ASIATIC ELEPHANT Female
Name: Toni Birth: 31.Oct.1965 (Estimated)
=====

Clinical Note: 8.Jun.2005

Problem: abscess - right tusk sulcus (Suspected)
Comt: Vet visit with Dr. Bush. Dr. Bush was not impressed by the size of the swelling but noted that medially both tusks press against soft tissue. He felt that providing some separation in the form of an inert object around the tusk (like a small washer perhaps or a cut off endotracheal tube) may help this tissue to heal. He also suggested that we consider flushing with 10 % bleach solution.

Proc: Exam: Toni's tusk swelling is barely noticeable - although within the right sulcus the tissue still feels tight. Very little discharge present.

A: Resolving inflammation around tusk

P: Discuss Dr. Bush's suggestions with vet, curatorial and keeper staff
- continue MTZ - look for objects to try around tusk.

Comt: Blood submitted for Herpes testing. (SZM)

Clinical Note: 9.Jun.2005

Problem: abscess - right tusk sulcus (Suspected)
Rx: METRONIDAZOLE 45.00 gm rectally SID for 7 days. (SZM)

Purpose: abscess - right tusk sulcus (Suspected)
pustules - right tusk sulcus (Confirmed)

Prescription Data >> Starting date: 9.Jun.2005
Drug: METRONIDAZOLE 45.00 gm rectally SID for 7 days
Formulation: 500 mg tablet
Prescribed by: SZM (4.Jun.2005) Filled by: VA (6.Jun.2005)
Drug dosage: 15 mg/kg Treatment weight: 2889 kg

Comments >>

Dispensing Note: Dispense 5 doses. Each dose: 90 tablets. Total to dispense: 450 tablets. Use 500 mg tablets. 1-500 tab bottle given

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=====
Scientific Name: ELEPHAS MAXIMUS (no subsp)           Accession #: 109171
Common Name: ASIATIC ELEPHANT                         Female
Name: Toni                                           Birth: 31.Oct.1965 (Estimated)
=====

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Clinical Note: 13.Jun.200

Problem: abscess - right tusk sulcus (Suspected)
Hx: Routine trunk wash. Day 1/3.
Proc: Trunk wash: 60 ml saline instilled in trunk by keepers. Trunk raised then lowered as animal blew contents of trunk into plastic bag. Wash fluid transferred to sterile centrifuge tube.
A: Routine 3 day trunk wash, day 1/3
R/O tuberculosis
P: Next trunk wash 6/14. (EB)

Clinical Note: 13.Jun.200

Problem: abscess - right tusk sulcus (Suspected)
Comt: Radiographs today to image tusk/sulcus. Eventhough Toni appears to be doing much better, we would like to work with keepers to develop a radiographic technique to better image the tusk. Also, keepers noted very little discharge.

Proc: Manual restraint - Keepers moved Toni into position which worked very well.

Proc: Radiographs/right tusk imaged with several different techniques

A: Toni continues to improve despite discontinuation of baytril. MTZ treatment continues to go well. Radiographically, the images taken without the grid work better than with the grid.

P: Extend for 7 more days. Techs to work to develop improved techniques and will work directly with Tony B and Marie G to schedule another x-ray procedure.

Rx: METRONIDAZOLE 45.00 gm rectally SID for 7 days. (SZM)

Purpose: abscess - right tusk sulcus (Suspected)
pustules - right tusk sulcus (Confirmed)

Prescription Data >>	Starting date: 13.Jun.2005
Drug: METRONIDAZOLE 45.00 gm rectally SID for 7 days	
Formulation: 500 mg tablet	
Prescribed by: SZM (4.Jun.2005)	Filled by: VA (13.Jun.2005)
Drug dosage: 15 mg/kg	Treatment weight: 2889 kg

Comments >>

Medical History Report - Individual Specimen
NATIONAL ZOOLOGICAL PARK

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=====
Scientific Name: ELEPHAS MAXIMUS (no subsp)           Accession #: 109171
Common Name: ASIATIC ELEPHANT                           Female
Name: Toni                                               Birth: 31.Oct.1965 (Estimated)
=====

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Prescription Record (continued):

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Dispensing Note: Dispense 5 doses. Each dose: 90 tablets. Total to
dispense: 450 tablets. Use 500 mg tablets. 1-500 tab bottle given↓

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Clinical Note:

14.Jun.2001

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Problem: abscess - right tusk sulcus (Suspected)
Hx: Routine trunk wash. Day 2/3.
Proc: Trunk wash: 60 ml saline instilled in trunk by keepers. Trunk
raised then lowered as animal blew contents of trunk into plastic bag.
Wash fluid transferred to sterile centrifuge tube.
A: Routine 3 day trunk wash, day 2/3
   R/O tuberculosis
P: Next trunk wash 6/15. (CSD)

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Clinical Note:

15.Jun.2001

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Problem: abscess - right tusk sulcus (Suspected)
Hx: Routine trunk wash. Day 3/3.
Proc: Trunk wash: 60 ml saline instilled in trunk by keepers. Trunk
raised then lowered as animal blew contents of trunk into plastic bag.
Wash fluid transferred to sterile centrifuge tube.
A: Routine 3 day trunk wash, day 3/3
   R/O tuberculosis
P: Trunk wash completed, culture results pending. (EB)

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=====
Scientific Name: *ELEPHAS MAXIMUS* (no subsp) Accession #: 109171
Common Name: ASIATIC ELEPHANT Female
Name: Toni Birth: 31.Oct.1965 (Estimated)
=====

Clinical Note: 19.Jun.2005

Problem: abscess - right tusk sulcus (Suspected); lameness - right front limb (Confirmed)

Proc: visual exam of lameness and sulcus

S/O: BAR, keepers (SR and MG) report she is less lame today than yesterday, more willing to move, and eating well.

She continues to take weight off of the right front leg when standing, as seen on arrival today and reported by keepers, with cranial tip of foot touching the ground. When walking backwards, no lameness now detectable. When walking forward sometimes slightly hesitant, but very mild lameness only now present, very hard to see. She is still more stiff on left front foot than normally, may be indication of her putting more weight than normal on this chronically affected foot.

Right sulcus: No swelling apparant now around sulcus and on adjacent trunk. Tip of tusk easily palpable. Had been cleaned before visual, and no purulent discharge present, but keepers report still mild discharge removed daily, but much less than previously.

A: Large improvement in right front lameness since last EB visual 2 days ago, barely noticeable at this point.
Right sulcus also improving slowly, no swelling and minimal discharge. Continue with MTZ for now if lameness continues to improve. (EB)

Clinical Note: 20.Jun.2005

Problem: abscess - right tusk sulcus (Suspected); lameness - right front limb (Confirmed)

Rx: METRONIDAZOLE 45.00 gm rectally SID for 7 days. (SZM)

Purpose: abscess - right tusk sulcus (Suspected)
 pustules - right tusk sulcus (Confirmed)

Prescription Data >>

Starting date: 20.Jun.2005

Drug: METRONIDAZOLE 45.00 gm rectally SID for 7 days

Formulation: 500 mg tablet

Prescribed by: SZM (4.Jun.2005)

Filled by: VA (21.Jun.2005)

Drug dosage: 15 mg/kg

Treatment weight: 2889 kg

Comments >>

Dispensing Note: Dispense 5 doses. Each dose: 90 tablets. Total to dispense: 450 tablets. Use 500 mg tablets. 1-500 tab bottle given

=====
Scientific Name: *ELEPHAS MAXIMUS* (no subsp)
Common Name: ASIATIC ELEPHANT
Name: Toni
=====

Accession #: 109171
Female
Birth: 31.Oct.1965 (Estimated)
=====

Clinical Note:

3.Jul.2005

Problem: abscess - right tusk sulcus (Suspected); lameness - right front limb (Confirmed)

Proc: visual exam for abnormal movement/stance

S/O: BAR, eating well, following all commands and behaviors per keeper SR except hesitant to go down into sternal on cement, but she will outside in sand and on padded floor.

Inside, she is leaning against bars with rear, this is unusual and hasn't been seen before.

She walks forward slowly, and it is very difficult to see which leg she is favoring, but she appears very slow and slightly hesitant when moving right front leg forward, while standing on left front leg (leg with historical arthritic changes). She has no problems moving backward and does so quickly.

All 4 pads examined. Front left is smoother than other pads (normally is so in this animal), but several areas of increased redness seen.

Other pads WNL.

Calloused swelling on lateral lower right rear leg, not warm, likely just callus and not significant, but keeper did not previous note this, although appears chronic.

Right sulcus is clean, not swollen, and tip of tusk easily palpable and visible in sulcus. Very small plug of purulent material reported to be removed by keepers daily when flushing.

No other abnormalities seen. Keeper reports urine and feces appear normal.

A: suspect subacute/chronic arthritis at least in front left, and likely in other joints. 1 month ago several day short episode of acute lameness in right front leg, which resolved quickly with time, although keeper reports she has been very slightly slow since then. She may have arthritic changes in right front from taking weight off of left front over time, or also in rear legs.

P: consider cosequin and at some point she may need NSAIDs longterm, although due to previous kidney disease, these will need to be used cautiously. Monitor over next days closely. (EB)

=====
Scientific Name: *ELEPHAS MAXIMUS* (no subsp)

Accession #: 109171

Common Name: ASIATIC ELEPHANT

Female

Name: Toni

Birth: 31.Oct.1965 (Estimated)
=====

Clinical Note:

4.Jul.2005

Problem: abscess - right tusk sulcus (Suspected); lameness - right front limb (Confirmed)

Proc: visual exam for lameness

S/O: BAR, eating well, no large change from yesterday in lameness.

Still very slow to move forward, taking weight off front right and putting increased weight on front left. Often holding up front right and toe touching while standing with weight on front left. No swelling on any legs. Rear right also turned laterally slightly while walking.

At rest, also seen leaning on rear legs

Spoke with curator TB at home on telephone and discussed options, including starting NSAID with possible risks of renal damage.

A/P: appears musculoskeletal and not abdominal, but have requested UA tomorrow. Very difficult to assess which leg and where on leg problems are stemming from. Vets and curator to discuss tomorrow, but all are more or less in agreement that we should start pain meds due to her discomfort and also to prevent further damage or breakdown. Also consider chondroprotectants. (EB)

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=====
Scientific Name: ELEPHAS MAXIMUS (no subsp)           Accession #: 109171
Common Name: ASIATIC ELEPHANT                         Female
Name: Toni                                             Birth: 31.Oct.1965 (Estimated)
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Clinical Note: 5.Jul.2005
 Problem: abscess - right tusk sulcus (Suspected); lameness - right front limb (Confirmed)
 Proc: Exam today as FU for RF lameness.

S/O: BAR, the sulcus inflammation is resolved. This elephant is holding RF foot up most of the time while standing still. When she walks she places the external aspect of the foot first and then the sole of the RF. She was observed leaning her rear end against the wall as if trying to relieve some weight from the rear legs. No evident inflammation noticed. Elephant was ordered to move RF leg back and forward to evaluate for possible pain in R shoulder: Movement seems normal. All soles checked: The RF has an abnormal wearing (lateral and central pink spots).

Blood sample collected - EDTA and serum.
 Results:
 CBC 12.0, Hct 38, T.S 9.7 Fibr 500

A: RF lameness of unknown origin but possibly musculoskeletal. The fact that she is trying to relieve weight from her rear end suggest that this may be a generalized problem rather than localized (R/O DJD vs other).

P: Start ibuprofen and chondroprotectans
 Consider Xray of RF next week

Addendum: CP is WNL (Incl BUN and Creat) (CSD)

Clinical Note: 6.Jul.2005
 Problem: abscess - right tusk sulcus (Suspected); lameness - right front limb (Confirmed)
 Urinalysis result: SpG: 1.021 Neg for prot, blood, ketones, glucose and bilirubin. Amorphus crystals present.
 A: Pre-ibuprofen UA is WNL. (CSD)

Clinical Note: 7.Jul.2005
 Problem: abscess - right tusk sulcus (Suspected); lameness - right front limb (Confirmed)
 Rx: IBUPROFEN 3000 mg PO SID for 14 days.
 Rx: COSEQUIN POWDER 22 gm PO BID for 42 days. (EE)

Medical History Report - Individual Specimen
NATIONAL ZOOLOGICAL PARK

=====
Scientific Name: *ELEPHAS MAXIMUS* (no subsp) Accession #: 109171
Common Name: ASIATIC ELEPHANT Female
Name: Toni Birth: 31.Oct.1965 (Estimated)
=====

Purpose: lameness - right front limb (Confirmed)

Prescription Data >> Starting date: 7.Jul.2005
Drug: IBUPROFEN 3000 mg PO SID for 14 days
Formulation: 600.00 mg tablet
Prescribed by: EB (5.Jul.2005) Filled by: JLK (5.Jul.2005)
 Treatment weight: 2889 kg

Comments >>

Dispensing Note: Dispense 14 doses. Each dose: 5 tablets. Total to
dispense: 70 tablets. Use 600.00 mg tablets.

Purpose: lameness - right front limb (Confirmed)

Prescription Data >> Starting date: 7.Jul.2005
Drug: COSEQUIN 22 gm PO BID for 42 days
Formulation: powder
Prescribed by: EB (5.Jul.2005) Filled by: JLK (5.Jul.2005)
 Treatment weight: 2889 kg

Comments >>

Dispensing Note: Dispense 84 doses. Each scoop is 3.3 grams.
Give 22 gm (6 scoops) orally twice a day as a loading dose for 6
weeks, then once daily until further notice.

=====
Scientific Name: *ELEPHAS MAXIMUS* (no subsp) Accession #: 109171
Common Name: ASIATIC ELEPHANT Female
Name: Toni Birth: 31.Oct.1965 (Estimated)
=====

Clinical Note:

9.Jul.2005

Problem: abscess - right tusk sulcus (Suspected); lameness - right front
limb (Confirmed)
Update: Slightly better after ibuprofen started.

Keeper reported that Toni improved and was using more the R foot after
the 1st ibuprofen administration.

A/P: Cont with ibuprofen as prescribed
Visual week 7/11 (CSD)

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=====
Scientific Name: ELEPHAS MAXIMUS (no subsp)           Accession #: 109171
Common Name: ASIATIC ELEPHANT                         Female
Name: Toni                                           Birth: 31.Oct.1965 (Estimated)
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Clinical Note: 22.Jul.2005

Problem: abscess - right tusk sulcus (Suspected); lameness - right front limb (Confirmed)

Proc: R limb xrays today.

Hx: Tony is eating fine but she is still leaning against walls and favouring RF foot.

Radiographs: Extremity (RF), AP and lateral. Elbow and carpal area taken Results -Underexposed for the most part. Some bone is visible on AP of elbow but radiographs are not diagnostic.

A: RFront lameness, R/O DJD vs other

P: Increase ibup dose to 4.2 grams (TB OK) x 14 D
Cont trying Xrays to come up with a diagnostic Xrays. (CSD)

Clinical Note: 23.Jul.2005

Problem: abscess - right tusk sulcus (Suspected); lameness - right front limb (Confirmed)

Rx: IBUPROFEN 4200 mg PO SID for 14 days. (SM)

Purpose: lameness - right front limb (Confirmed)

Prescription Data >>

Starting date: 23.Jul.2005

Drug: IBUPROFEN 4200 mg PO SID for 14 days

Formulation: 600.00 mg tablet

Prescribed by: SM (23.Jul.2005)

Filled by: VA (23.Jul.2005)

Treatment weight: 2889 kg

Comments >>

Dispensing Note: Dispense 14 doses. Each dose: 7 tablets. Total to dispense: 70 tablets. Use 600.00 mg tablets.

Scientific Name: *ELEPHAS MAXIMUS* (no subsp) Accession #: 109171
Common Name: ASIATIC ELEPHANT Female
Name: Toni Birth: 31.Oct.1965 (Estimated)

Clinical Note: 5.Aug.2005

Problem: abscess - right tusk sulcus (Suspected); lameness - right front limb (Confirmed)

Radiograph: Right front carpus, R shoulder, L front carpus.

Hx: This elephant continues to show abnormal gait on RFront and continues to lay against wall with the rear end as if trying to release some weight.

For several weeks technicians have been working in order to get diagnostic radiographs. This is complicated as elephant is only partially cooperating.

Radiographs: AP- R carpus: Good technique although only the lateral bones of carpus are visible due to animal movement. Front left carpus not successful as animal moved. R shoulder; Underexposed.

A/P: Vet techs to work next week to get complete carpus on radiograph (bilateral). (CSD)

Clinical Note: 15.Aug.2005

Problem: abscess - right tusk sulcus (Suspected); lameness - right front limb (Confirmed)

Proc: visual exam by SZM/EB

S/O: keeper SR reports Toni seems worse to him in past week, curator TB feels she is stable but shifting more weight to rear legs. During visit she stood with weight shifted to rear legs, and mostly put weight on left front, although once during exam she put most of the front weight on the front right, which has not been seen in past weeks very often.

Keepers SR and DF report very small amount of mucoid "pus" from right sulcus still present in am and pm when cleaned; unchanged. No swelling present in area of right tusk.

Toni is eating well and listening fine to commands that are still being used. She has entered the pool several times in past week.

A: concern of overall condition and weight-bearing on front legs has increased among keepers in past week; reported to vets today for first time.

P: SZM discussed options of increasing ibuprofen dose or trying pred. Plan is to double the ibuprofen dose to BID at 1 mg/kg (is presently SID), and monitor closely for response. (EB)

=====
Scientific Name: *ELEPHAS MAXIMUS* (no subsp) Accession #: 109171
Common Name: ASIATIC ELEPHANT Female
Name: Toni Birth: 31.Oct.1965 (Estimated)
=====

Clinical Note: 16.Aug.200

Problem: abscess - right tusk sulcus (Suspected); lameness - right front limb (Confirmed)

Proc: Visual by SLD to follow up on SZM and EB visual yesterday.

S/O: Sulcus view see small part of tusk and not discharge (just after keeper had flushed); no real difference in stance to me during 10 min visual. Palpation of right front leg NR. Keeper (SR) reports that last week he feels her condition has been worse, especially during the 2 really hot days (105) last week.

Blood sample collected - EDTA and serum for CBC and CP (collected while SLD there).

A: Toni's condition is still poor for MSK system. SLD did not note a major change in Toni since her last visual on August 3.

P: CWPT that SZM prescribed - increased ibuprofen - and monitor blood parameters and kidneys closely. (SLD)

Purpose: abscess - right tusk sulcus (Suspected)
lameness - right front limb (Confirmed)

Prescription Data >>

Starting date: 16.Aug.2005

Drug: IBUPROFEN 6000 mg PO BID for 5 days

Formulation: 600.00 mg tablet

Prescribed by: SZM (16.Aug.2005)

Filled by: JLK (16.Aug.2005)

Drug dosage: 2.08 mg/kg

Treatment weight: 2889 kg

Comments >>

Dispensing Note: Dispense 10 doses. Each dose: 10 tablets. Total to dispense: 100 tablets. Use 600.00 mg tablets.

=====
Scientific Name: *ELEPHAS MAXIMUS (no subsp)* Accession #: 109171
Common Name: ASIATIC ELEPHANT Female
Name: Toni Birth: 31.Oct.1965 (Estimated)
=====

Clinical Note: 17.Aug.2005

Problem: abscess - right tusk sulcus (Suspected); lameness - right front limb (Confirmed)

Proc: Urine sample submitted today. Hx: Sample submitted today as part of monitoring kidney function on this animal as ibuprofen was increased.

Results: SpG: 1.019, ne for prot, gluc, ketone, bili and blod. No crystals, casts or bacteria seen.

A: Urine is WNL (CSD)

Clinical Note: 17.Aug.2005

Problem: abscess - right tusk sulcus (Suspected); lameness - right front limb (Confirmed)

Comt: Following conversations with curators, keeper and vets - Ibuprofen will be increased to 6000 mg PO BID. Her condition and response to treatment will be monitored as well as her kidney function to determine if this is causing an adverse reaction. (SZM)

Clinical Note: 19.Aug.2005

Problem: abscess - right tusk sulcus (Suspected); lameness - right front limb (Confirmed)

Rx: COSEQUIN POWDER 22 gm PO SID until further notice. (EB)

Purpose: lameness - right front limb (Confirmed)

Prescription Data >> Starting date: 19.Aug.2005

Drug: COSEQUIN 22 gm PO SID until further notice

Formulation: powder

Prescribed by: EB (5.Jul.2005)

Filled by: JLK (5.Jul.2005)

Treatment weight: 2889 kg

=====
Scientific Name: *ELEPHAS MAXIMUS* (no subsp) Accession #: 109171
Common Name: ASIATIC ELEPHANT Female
Name: Toni Birth: 31.Oct.1965 (Estimated)
=====

Clinical Note: 20.Aug.200

Problem: abscess - right tusk sulcus (Suspected); lameness - right front limb (Confirmed)

Proc: Visual exam today with keepers and curator

Hx: Tony is reported to be doing slightly better. Keepers reported she is eating and with normal demeanour and seems less "tired". Keeper MG said that improvement was noticed right after ibuprofen was started not until now that dose was increased. Keeper SH had diff opinion. This eleph had loose stool on Monday and Tuesday but this was not reported to DAH, nor a sample was submitted. Taking its meds uneventfully.

S/O: Toni is BAR, still slightly stiff on rear legs during movement. She was outside so no opportunity to evaluate if she is leaning against wall. No oral, ocular or nasal discharge noticed. Toni accepted treats eagerly.

A: Subjective improvement on ibuprofen.

P: Cont monitoring closely, bloodwork and UA has been requested weekly now that higher dose of ibuprofen are being used.

Asked keepers to submit fecal sample if loose again (CSD)

Clinical Note: 22.Aug.200

Problem: abscess - right tusk sulcus (Suspected); lameness - right front limb (Confirmed)

Proc: Visual exam today with keepers. Toni appears to be doing slightly better. She is still shifting weight off of her front legs onto her hind legs, but she does not lean nearly as much as she did. also, keepers report that she is less reluctant to move forward than she had been, and she leans on structures less.

A: R/O slight improvement in condition - probably related to increased ibuprofen dose. although her condition has improved, she does not yet look very comfortable. Discussed pros and cons of increasing dose further (to 9000 mg PO BID) - this is still below the target dosage of 6 mg/kg.

All agree that if this has a chance of making her more comfortable, we should proceed.

P: Increase ibuprofen to 9000 mg PO BID, monitor urine and blood weekly for any change in kidney function. Keepers to observe closely for any behavioral changes. (SZM)

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=====
Scientific Name: ELEPHAS MAXIMUS (no subsp)           Accession #: 109171
Common Name: ASIATIC ELEPHANT                         Female
Name: Toni                                           Birth: 31.Oct.1965 (Estimated)
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Clinical Note:                                         24.Aug.2005
Problem: abscess - right tusk sulcus (Suspected); lameness - right front
          limb (Confirmed)
Rx: IBUPROFEN 9000 mg PO BID for 30 days. (SZM)

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Purpose: abscess - right tusk sulcus (Suspected)
lameness - right front limb (Confirmed)

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Prescription Data >>                               Starting date: 24.Aug.2005
Drug: IBUPROFEN 9000 mg PO BID for 30 days
Formulation: 600.00 mg tablet
Prescribed by: SZM (24.Aug.2005)                   Filled by: JLK (24.Aug.2005)
                                                    Treatment weight: 2889 kg

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Comments >>

Dispensing Note: Dispense 60 doses. Each dose: 15 tablets. Total to
dispense: 900 tablets. Use 600.00 mg tablets.

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Clinical Note:                                         27.Aug.2005
Problem: abscess - right tusk sulcus (Suspected); lameness - right front
          limb (Confirmed)

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Note: antibiotics started
Per SZM and vet discussion, decided to begin antibiotics. Lameness
seemed to have worsened in right front limb around the same time that
the right tusk was infected, and may have caused reactive arthritis.
In case this is the case, we will attempt long course of antibiotics,
based on culture of tusk and broad-spectrum of amoxi, as well as this
being a drug she has not recently taken.

Rx: AMOXICILLIN 500 MG 33600 mg PO BID for 14 days. (EB)

Purpose: abscess - right tusk sulcus (Suspected)
lameness - right front limb (Confirmed)

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Prescription Data >>                               Starting date: 27.Aug.2005
Drug: AMOXICILLIN 500 MG 33600 mg PO BID for 14 days
Formulation: 500.00 mg capsule
Prescribed by: EB (26.Aug.2005)                   Filled by: VA (26.Aug.2005)
Drug dosage: 8 mg/kg                               Treatment weight: 2889 kg

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Comments >>

Medical History Report - Individual Specimen
NATIONAL ZOOLOGICAL PARK

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=====
Scientific Name: ELEPHAS MAXIMUS (no subsp)           Accession #: 109171
Common Name: ASIATIC ELEPHANT                         Female
Name: Toni                                             Birth: 31.Oct.1965 (Estimated)
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Prescription Record (continued):

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Dispensing Note: Dispense 28 doses. Each dose: 67 capsules. Total to
dispense: 1882 capsules. Use 500.00 mg capsules.

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Clinical Note:

28.Aug.200

Problem: abscess - right tusk sulcus (Suspected); lameness - right front limb (Confirmed)

Proc: anorexia today

S/O: BAR, good attitude, but Toni not willing to eat anything in the am. She ate 1/2 # of Mazuri pellets and 3-4# of produce around noon, but has refused all food since then. She did not take amoxi or ibuprofen in am or pm. Keepers felt she has GI upset related to amoxi started yesterday pm (she received one dose total).

Visual check in yard: she is leaning slightly on rear legs and putting weight mostly on left front leg, but seems better than last EB visual last week. Keeper SR reports they have noticed a mild but definite difference since the last dose increase of ibu (from 6000 to 9000 mg BID). During visual she was hesitant to accept an apple as a treat, but took when placed in her mouth by EB.

At 2pm, keeper SR reports she is possibly slightly more lethargic than in am, but not as slow to move as few weeks ago before ibu was started. He requested injectable NSAID's due to her unwillingness to take PM ibuprofen. EB discussed with CSD and then curator TB, all agreed to hold off ibu today and not give additional NSAID injection due to GI upset, and all feel she should be fine o/n. If keeper SR is concerned at end of day, he will come in later tonight to check on her.

A/P: restart ibu at present dose as soon as anorexia resolves, hopefully tom. If her condition worsens, injectable can be considered. Anorexia likely related to mild GI upset due to amoxi, and also likely her refusing food due to her thinking it may be medicated.

Recheck tomorrow. (EB)

=====
Scientific Name: *ELEPHAS MAXIMUS* (no subsp)

Accession #: 109171

Common Name: ASIATIC ELEPHANT

Female

Name: Toni

Birth: 31.Oct.1965 (Estimated)
=====

Clinical Note:

29.Aug.200

Problem: abscess - right tusk sulcus (Suspected); lameness - right front limb (Confirmed)

Proc: recheck for improving anorexia

S/O: moving slower than yesterday, but was willing to move and listen to commands. Leaning at times during the long visit, but for the most part standing well on all 4, shifting weight in front legs occasionally from left to right.

She ate approx. 1/2 of grain offered in am then became uninterested.

In yard during visit she took biscuits eagerly, obvious change since yesterday. She took complete ibuprofen dose (9000 mg) this am. Stools reported by keeper MG to be smaller but otherwise normal.

A: improving appetite and food intake as expected with antibiotic-induced GI upset. She may also be refusing food out of suspicion that meds could be in it.

P: d/c amoxi for now, continue 9000 mg ibuprofen dose BID as before, and continue close monitoring. (EB)

Clinical Note:

30.Aug.200

Problem: abscess - right tusk sulcus (Suspected); lameness - right front limb (Confirmed)

Results of mycobacterium culture from trunk washes 6/13-15/05 are negative (NVSL).

Urine submitted today: SpG: 1.029, many crystals and some amorphous phosphate crystals., (EB)

Clinical Note:

6.Sep.2005

Problem: abscess - right tusk sulcus (Suspected); lameness - right front limb (Confirmed)

Urine sample: SpG: 1.022, neg for gluc, ketones, bili and blood. Many crystal present.

A: Urine is WNL (CSD)


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=====
Scientific Name: ELEPHAS MAXIMUS (no subsp)           Accession #: 109171
Common Name: ASIATIC ELEPHANT                         Female
Name: Toni                                             Birth: 31.Oct.1965 (Estimated)
=====

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Clinical Note: 24.Sep.200

Problem: abscess - right tusk sulcus (Suspected); lameness - right front limb (Confirmed)

Proc: Visual exam today.

Hx: Keepers informed that this morning Toni is doing much better than in past 2 days. One keeper (DF) mentioned that it seems that when the temps are higher this elephant seems to have a bad day and in days that it's cool (like today) Toni does better. Past bloods and urine samples have yielded normal results.

PEX:

S/O: Elephant is BAR, excellent appetite, feces boluses slightly dry. Rechecked four limbs: Pads on RL and FR show abnormal wear with red spots. RL spot is located on the caudal aspect of the pad and the FR area (linear spot) is located in the lateral aspect of pad. No cracks or evidence of abscess on feet. The lateral tarsal bone is markedly more pronounced on RR than in RL as evidenced by a bulge present in this area that is firm on palpation suggesting bone. Tusk area checked: Small amount of non-odorous white material present, no inflammation present.

A: Toni continues to have good and bad days; her bloodwork and urinalysis have been normal for the past 5 times (samples collected weekly).

P: Continue ibuprofen in current dose
Monitor blood/urine once a month as in other elephants
Cont with cosequin as prescribed (CSD)

Clinical Note: 24.Sep.200

Problem: abscess - right tusk sulcus (Suspected); lameness - right front limb (Confirmed)

Rx: IBUPROFEN 9000 mg PO BID for 30 days. (SZM)

Purpose: lameness - right front limb (Confirmed)

Prescription Data >>

Starting date: 24.Sep.2005

Drug: IBUPROFEN 9000 mg PO BID for 30 days

Formulation: 600.00 mg tablet

Prescribed by: SZM (24.Aug.2005)

Filled by: JLK (24.Sep.2005)

Treatment weight: 2889 kg

Comments >>

Medical History Report - Individual Specimen
NATIONAL ZOOLOGICAL PARK

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=====
Scientific Name: ELEPHAS MAXIMUS (no subsp)           Accession #: 109171
Common Name: ASIATIC ELEPHANT                         Female
Name: Toni                                             Birth: 31.Oct.1965 (Estimated)
=====

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Prescription Record (continued):

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Dispensing Note: Dispense 60 doses. Each dose: 15 tablets. Total to
dispense: 900 tablets. Use 600.00 mg tablets.

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Clinical Note:

25.Sep.200

Problem: abscess - right tusk sulcus (Suspected); lameness - right front limb (Confirmed)

Curator Tony reports no significant change in stiffness/lamesness since yesterday - Toni seems to be having a relatively good day. (NB)

Clinical Note:

4.Oct.2005

Problem: abscess - right tusk sulcus (Suspected); lameness - right front limb (Confirmed)

Proc: Monthly urine and blood sample submitted today.

Blood obtained by keepers: WNL (BUN 11, Creat 1.7)

Urine sample: SpG: 1.024 neg for prot, gluc, blood, bilirrubin. No RBC WBC, epith, cast or bacteria. Few amorphous crystals present.

A: Lab results are normal (CSD)

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=====
Scientific Name: ELEPHAS MAXIMUS (no subsp)           Accession #: 109171
Common Name: ASIATIC ELEPHANT                         Female
Name: Toni                                             Birth: 31.Oct.1965 (Estimated)
=====

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Clinical Note: 9.Oct.2005

Problem: abscess - right tusk sulcus (Suspected); lameness - right front limb (Confirmed)

Rx: SILVER SULFADIAZINE CREAM 1% topically SID for 10 days.

Visual exam with Paul Anikis, equine veterinary consultant. Toni continues to be quite stiff when walking and has had a couple of "bad" days in a row. The weather has been cold and rainy these last few days and could be contributing. She continues to lean back to relieve weight from her fore limbs. Red areas on pads of feet (pressure sores? abrasions?) are lighter in color, less distinct and slightly more diffuse than previously noted. The lateral nail on the left front foot appears to be close to completely separating, starting at the proximal aspect, likely due at least in part to her abnormal gait and weight distribution. This is a new lesion, noticed first today. No significant warmth or swelling associated with the nail bed. A/P: Suspect progression of arthritis. Strong concern that loss of lateral toenail of LF is likely. PA had several possible recommendations for treatment, including IV legend, IV adequan, and toludinate (not available in US) and offered to look into donations of these drugs and obtaining FDA approval if needed. Also recommended daily cleaning of nail on LF and packing the lesion with silvadene SID. Visual recheck 10/11 or 10/12. (NCB)

Purpose: left front lateral nail lesion

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Prescription Data >>                               Starting date: 9.Oct.2005
Drug: SILVER SULFADIAZINE CREAM 1% topically SID for 10 days
Formulation: cream
Prescribed by: NCB (9.Oct.2005)                     Filled by: NCB (9.Oct.2005)
                                                    Treatment weight: 2889 kg

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Comments >>
Topical treatment: Apply to lesion associated with lateral nail of left front foot after first cleaning lesion with hose.

Dispensing Note: Dispense 10 doses.

=====
Scientific Name: *ELEPHAS MAXIMUS (no subsp)* Accession #: 109171
Common Name: ASIATIC ELEPHANT Female
Name: Toni Birth: 31.Oct.1965 (Estimated)
=====

Clinical Note: 14.Oct.200

Problem: abscess - right tusk sulcus (Suspected); lameness - right front limb (Confirmed)

Blood collection to evaluate clotting profile prior to starting planned treatment with adequan and legend (HA) since these drugs may have heparinoid effects. Blood collected in blue top tubes and submitted to Friendship hospital for PT and PTT. Shanthi bled as control. Shanthi has not been on NSAIDs since 6/04. Toni is currently on oral ibuprofen and carprofen.

Results:

Toni: PT: 19.9 PTT: 19.5

Shanthi: PT: 17.5 PTT: 22.1

Both animals' PTs are higher than the lab's dog/cat references (6-12). Both animals' PTTs are within the lab's dog/cat reference ranges (10-25).

Plan: Consider treatment with IV legend, starting 10/17 and IV or IM adequan, starting 10/17. Recommended treatment protocol from Paul

Anikis is:

Adequan 7 vials (35 ml) IV q 4 d x 6 tx.

Legend 6 vials (24 ml) IV q 1 wk x 4 tx.

Have requested information from other elephant vets regarding the use of IV vs IM adequan. (NCB)

Clinical Note: 17.Oct.200

Problem: abscess - right tusk sulcus (Suspected); lameness - right front limb (Confirmed)

Rx: GLYCOSAMINOGLYCAN, POLYSULFATED 2000 mg IM q4d for 6 doses.

Rx: HYALURONATE SODIUM 120 mg IV q7d for 4 doses. (NB)

Clinical Note: 17.Oct.200

Problem: abscess - right tusk sulcus (Suspected); lameness - right front limb (Confirmed)

Started treatment today with Adequan (IM) and Legend (IV) for arthritis. Toni seemed to be moving somewhat more comfortably during the past 2 days (warmer, drier weather?), prior to starting these medications. Keepers are also treating the soles of her feet with the Durasole hoof hardener. (NCB)

=====
Scientific Name: *ELEPHAS MAXIMUS* (no subsp) Accession #: 109171
Common Name: ASIATIC ELEPHANT Female
Name: Toni Birth: 31.Oct.1965 (Estimated)
=====

Clinical Note: 24.Oct.2001

Problem: abscess - right tusk sulcus (Suspected); lameness - right front limb (Confirmed)

Proc: adequan and legend injections and recheck

S/O: BAR, doing well the past several days, although no obvious changes noticed that can be attributed to adequan/legend since beginning the treatment.

She walked in and around fairly well and quickly today, listening to all commands. She did lean onto her back legs during exam, but did not lean on any objects.

All 4 feet checked. Areas of "bubbling" are much less red and much less visible and obvious now since last EE visual several weeks ago on the 3 affected feet (FR, FL, LR). Front left lateral nailbed is still open and healing. Nailbed area on lateral wall of foot is fairly firm and not that sensitive except for a small central area (possible abscess may break through there). On sole of foot, this area is slightly red and raw in small area in center with mild exuberant granulation tissue, but keepers have been removing excess tissue and area is clean and only mildly sensitive to touch.

Adequan 20 ml in left hind distal thigh

Legend 12 ml IV in left auricular vein

Toni tolerated both injections very well.

A/P: CWPT and close monitoring. PT/PTT will be rechecked tomorrow and radiographs of elbow and right front leg to be continued on Wed. (EB)

=====
Scientific Name: *ELEPHAS MAXIMUS* (no subsp)

Accession #: 109171

Common Name: ASIATIC ELEPHANT

Female

Name: Toni

Birth: 31.Oct.1965 (Estimated)

=====

Clinical Note:

28.Oct.200

Problem: abscess - right tusk sulcus (Suspected); lameness - right front limb (Confirmed)

Adequan injection, 20 ml IM right distal thigh - well tolerated.

Keeper, Marie, feels that Toni has continued on the relatively good plane that she was on beginning about 2 days prior to receiving injections (adequan, legend) but that she has actually shown some improvement in her movement and lameness/stiffness since the medications were started. Keepers also continue to treat her feet with Durasole. Her foot pads have improved and the bruising/abrasions have almost resolved. She continues to lean back and bear most of her weight on her hind limbs, but leans against objects/walls to support her weight much less frequently. The suspected toenail abscess on the lateral toe of the left front has not ruptured and keepers have not been able to identify a track or purulent material. Keepers continue to trim back associated proliferative tissue. The area is sensitive to the touch, particularly proximally.

Assessment: Possible positive drug effect on lameness. Suspected toenail abscess is still a concern.

Plan: CWPT. Keepers to continue to trim LF lateral toenail - consider other treatment options (soaks, cryo??). Evaluate status at each injection. (NCB)

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Scientific Name: <i>ELEPHAS MAXIMUS (no subsp)</i>	Accession #: 109171
Common Name: ASIATIC ELEPHANT	Female
Name: Toni	Birth: 31.Oct.1965 (Estimated)

=====

Clinical Note: 31.Oct.2001

Problem: abscess - right tusk sulcus (Suspected); lameness - right front limb (Confirmed)

Proc: recheck nail bed left foot and neurtaceutical injections; bloodwork

S/O: BAR, keepers feel subjectively she is moving better past 2 weeks since GC and HA were started. She was standing more squarely than in past and only seen leaning on wall once during 30 min visit. Rocking and leaning back onto back legs much less today than previously, but she continues to take weight of front left and sometimes shifting on front feet.

Nail bed mostly unchanged since yesterday. Mild amount of granulation tissue on lateral nail bed, only very little on sole of foot. Slightly less painful to touch today around nail bed of lateral toe of left foot, but still quite tender and she pulls foot away. No obvious point to an abscess yet. Some warmth around nail bed, centered where nail bed meets the skin.

Adequan 20 ml IM left thigh, stood well for injection, but squatted some, seems to react more to each injection but is overall tolerating them very well. Legend 12 ml IV

Blood drawn from left ear vein in EDTA/Clot for CBC/Chem.

A/P: keepers will continue to soak the left foot in Novalsan 1-2x/day for 10-20 min (as long as she will tolerate it. Discussed pros and cons of starting systemic antibiotics with keepers and curator TB, decided to wait several days and monitor with topical treatments and add if necessary. D/c coppertox and SSD on left foot lateral nailbed for now and use only Novalsan soaks. She has lost a few more pounds, ME contacted and formulating new diet to provide more calories for her. (EB)

Clinical Note: 1.Nov.2005

Problem: abscess - right tusk sulcus (Suspected); lameness - right front limb (Confirmed)

Rx: IBUPROFEN 9000 mg PO BID for 30 days. (SZM)

Medical History Report - Individual Specimen
NATIONAL ZOOLOGICAL PARK

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=====
Scientific Name: ELEPHAS MAXIMUS (no subsp)           Accession #: 109171
Common Name: ASIATIC ELEPHANT                         Female
Name: Toni                                             Birth: 31.Oct.1965 (Estimated)
=====

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Prescription Record (continued):

Purpose: lameness - right front limb (Confirmed)

Prescription Data >>

Starting date: 1.Nov.2005

Drug: IBUPROFEN 9000 mg PO BID for 30 days

Formulation: 600.00 mg tablet

Prescribed by: SZM (24.Aug.2005)

Filled by: VA (31.Oct.2005)

Treatment weight: 2889 kg

Comments >>

Dispensing Note: Dispense 60 doses. Each dose: 15 tablets. Total to dispense: 900 tablets. Use 600.00 mg tablets.

Clinical Note:

4.Nov.2005

Problem: abscess - right tusk sulcus (Suspected); lameness - right front limb (Confirmed)

Proc: Recheck nail bed left foot and adequan injection.

S/O: BAR, keepers feel Toni is definitely feeling better, she spends more time in "square" position rather than leaning against things. Nail bed condition remains unchanged (trimmed this a.m). Soft tissue present in nail bed and in bottom aspect of nail. No obvious abscess. Some warmth around nail bed, centered where nail bed meets the skin.

Adequan 20 ml IM R cranial thigh, Moved during injection but all the adequan injected.

A/P: keepers will continue to soak the left foot in Novalsan. Discuss with vets chondroprotectant injectable tx as today was last scheduled adequan injection (CSD)

Clinical Note:

7.Nov.2005

Problem: abscess - right tusk sulcus (Suspected); lameness - right front limb (Confirmed)

Rx: NOLVASAN (DILUTED 1 OZ/GALLON) topically BID for 21 days. (SZM)

Medical History Report - Individual Specimen
NATIONAL ZOOLOGICAL PARK

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=====
Scientific Name: ELEPHAS MAXIMUS (no subsp)           Accession #: 109171
Common Name: ASIATIC ELEPHANT                         Female
Name: Toni                                             Birth: 31.Oct.1965 (Estimated)
=====

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Purpose: abscess - right tusk sulcus (Suspected)
lameness - right front limb (Confirmed)

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Prescription Data >>                               Starting date: 7.Nov.2005
Drug: NOLVASAN (DILUTED 1 OZ/GALLON) topically BID for 21 days
Formulation: liquid
Prescribed by: SZM (7.Nov.2005)                     Filled by: JLK (7.Nov.2005)
                                                    Treatment weight: 2604 kg

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Comments >>
 Topical treatment: Soak infected area twice daily.
 Dilute: 3 oz. per gallon of water.

 Dispensing Note: Dispense 42 doses.
 NOLVASAN (DILUTED 1 OZ/GALLON) = CHLORHEXIDINE DIACETATE + WATER

Clinical Note: 9.Nov.2005
 Problem; abscess - right tusk sulcus (Suspected); lameness - right front limb (Confirmed)
 Histopath results from proliferative tissue, lateral LF toenail: epithelial hyperplasia with mild epidermitis. Path requests repeat sample (deep section) to test for virus due to presence of vasculitis.
 Plan: Continue with weekly adequate injections IM - curator, TB, okay with this. Get deep tissue sample from toe lesion for path, ideally on M, W, or F of next week, during trimming by keepers. Pathologist, TV, may accompany to select appropriate sample. TB also okay with this plan. Continue oral ibuprofen and cosequin as prescribed. (NCB)

Clinical Pathology Records Report - ISIS/In-House Reference Values
 NATIONAL ZOOLOGICAL PARK

Scientific name: *ELEPHAS MAXIMUS*
 Common Name: ASIATIC ELEPHANT

		ISIS Values				
		Mean	S.D.	Min.	Max.	(N)
WBC	*10 ³ /UL	14.43 ±	4.409	5.800	33.30	(1779)
RBC	*10 ⁶ /UL	3.06 ±	0.51	1.78	5.15	(1501)
HGB	GM/DL	13.2 ±	2.2	6.6	24.9	(1568)
HCT	%	37.1 ±	6.0	20.3	68.0	(1890)
MCH	MG/DL	43.3 ±	4.8	16.6	63.2	(1464)
MCHC	uug	35.4 ±	3.6	16.9	68.6	(1536)
MCV	fL	122.3 ±	13.4	47.1	213.2	(1491)
SEGS	*10 ³ /UL	4.822 ±	2.925	0.291	23.90	(1502)
BANDS	*10 ³ /UL	1.402 ±	2.124	0.000	11.40	(307)
LYMPHOCYTES	*10 ³ /UL	5.243 ±	3.223	0.196	20.60	(1513)
MONOCYTES	*10 ³ /UL	3.677 ±	2.909	0.000	9.983	(1273)
EOSINOPHILS	*10 ³ /UL	0.465 ±	0.551	0.000	4.520	(1093)
BASOPHILS	*10 ³ /UL	0.173 ±	0.105	0.000	0.508	(119)
NRBC	/100 WBC	1 ±	1	0	3	(85)
PLATE. CNT.	*10 ³ /UL	469 ±	215	121	1394	(428)
RETICS	%	0.8 ±	1.6	0.0	4.4	(10)
GLUCOSE	MG/DL	91 ±	21	33	223	(1257)
BUN	MG/DL	13 ±	4	4	30	(1260)
CREAT.	MG/DL	1.6 ±	0.4	0.7	3.3	(1230)
URIC ACID	MG/DL	0.2 ±	0.3	0.0	3.4	(286)
CA	MG/DL	10.6 ±	0.8	7.8	14.8	(1184)
PHOS	MG/DL	5.0 ±	1.2	1.9	11.1	(724)
NA	MEQ/L	130 ±	6	99	181	(859)
K	MEQ/L	4.6 ±	0.5	3.2	6.6	(861)
CL	MEQ/L	89 ±	4	77	103	(731)
IRON	MCG/DL	65 ±	23	29	158	(82)
MG	MG/DL	2.10 ±	0.53	0.00	2.90	(68)
HCO3	MMOL/L	26.3 ±	3.0	19.0	32.3	(55)
CHOL	MG/DL	48 ±	19	0	189	(599)
TRIG	MG/DL	61 ±	42	10	329	(745)
T. PROT. (C)	GM/DL	8.1 ±	0.8	5.8	11.3	(1227)
T. PROT. (R)	GM/DL	8.4 ±	0.4	7.8	9.2	(23)
ALBUMIN (C)	GM/DL	3.2 ±	0.5	1.9	4.7	(648)
GLOBULIN (C)	GM/DL	5.0 ±	1.0	2.7	8.6	(639)
AST (SGOT)	IU/L	22 ±	11	4	97	(1227)
ALT (SGPT)	IU/L	7 ±	8	0	72	(781)
T. BILI.	MG/DL	0.2 ±	0.2	0.0	1.2	(765)
D. BILI	MG/DL	0.1 ±	0.1	0.0	1.3	(233)
I. BILI.	MG/DL	0.1 ±	0.1	0.0	0.6	(224)
AMYLASE	U/L	3017 ±	2492	0	9866	(170)
ALK. PHOS.	IU/L	143 ±	66	28	641	(1157)
LDH	IU/L	655 ±	703	46	4769	(495)

- page 131 -

Clinical Pathology Records Report - ISIS/In-House Reference Values
NATIONAL ZOOLOGICAL PARK

Scientific name: **ELEPHAS MAXIMUS**
 Common Name: **ASIATIC ELEPHANT**

ISIS Values

Mean S.D. Min. Max. (N)

		Mean	S.D.	Min.	Max.	(N)
CPK	IU/L	225 ±	170	23	1260	(486)
OSMOLARITY	MOSMOL/L	264 ±	29	0	325	(98)
ALPHA GLOB.	MG/DL	250.4 ±	353.1	0.7	500.0	(2)
ALPHA-1 GLOB	MG/DL	0.8 ±	0.1	0.7	1.0	(6)
ALPHA-2 GLOB	MG/DL	0.9 ±	0.2	0.7	1.1	(6)
BETA GLOB.	MG/DL	1.0 ±	0.6	0.6	1.4	(2)
Body Temperature:		36.3 ±	0.5	36.0	37.0	(4)
CO2	MMOL/L	24.8 ±	4.0	15.8	37.0	(230)
CORTISOL	UG/DL	2.0 ±	1.0	0.5	5.4	(35)
ESR	MM/HR	98 ±	32	53	130	(7)
FIBRINOGEN	MG/DL	371 ±	181	0	810	(238)
GGT	IU/L	7 ±	5	0	33	(314)
LIPASE	U/L	19 ±	30	0	127	(53)
PROGESTERONE	NG/DL	18.82 ±	62.45	0.020	346.0	(379)
TESTOSTERONE	NG/ML	20.34 ±	27.95	0.570	40.10	(2)
A-TOCOPHEROL	UG/DL	19 ±	15	0	42	(8)
TOT. T4 (RIA)	UG/DL	10.0 ±	2.7	4.2	12.6	(10)
T3 UPTAKE	%	28 ±	2	26	29	(2)
ALBUMIN (E)	GM/DL	4.1 ±	0.6	3.5	4.9	(4)
GAMMA GLOB	GM/DL	2.9 ±	2.9	0.0	9.0	(11)