SURGICAL REMOVAL OF INFECTED PHALANGES FROM AN ASIAN ELEPHANT (*Elephas maximus*)

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A forty year old female Asian elephant *(Elephas maximus)* developed a draining tract behind the lateral nail of her left front foot. There had been an infection in the pad in this area several months previously that had resolved. There had been a crack in that nail that had been present for several years. The day after the discovery of purulent material coming from the lesion in the pad, the left front limb became swollen. The cuticle was swollen around the left lateral nail. The foot was soaked in disinfectant solutions and epsom salts. An incision was made into the cuticle at the proximal-most portion of the nail, and a tract was found that measured 10 cm and extended distally and slightly medially. The distal region of the cracked nailbed was blocked with 2% lidocaine and a 6 cm diameter hole was cut. A tract was found that communicated with the previously discovered tract. The lesion was treated by aggressive irrigation using a variety of standard disinfectant solutions. The elephant was placed on 100 cc benzathine penicillin i.m. s.i.d. x 5 days, then 25 grams ampicillin i.m. s.i.d. x 10 days. Radiographs were taken and degeneration was evident in the third phalange (P-3) of the fifth digit, and there was evidence of osteomyelitis in P-2. The tract was flushed with a variety of disinfectant solutions for four months, however, radiographs indicated the infection was progressing. The infected portions of P-2 and P-3 were removed surgically.

Six months after surgery the incision had healed, but a fistulous tract remained behind the nailbed, exiting in the pad tissue below the lateral nail. There was radiographic evidence of osteomyelitis that had progressed to the distal portion of P-1. Aggressive irrigation and antibiotic therapy did not resolve the problem. A second surgery was performed, during which the remainder of P-2, and the distal portion of P-1 were removed. Aggressive aftercare included 16 grams gentomycin diluted in one liter lactated ringers i.v. s.i.d. x 10 days, sterile wrap changes s.i.d. x 13 days, and a 34-day around-the-clock training staff member present to ensure the elephant did not remove the wraps. The elephant was maintained on 67 grams trimethoprim-sulfa p.o. s.i.d, for two weeks after the i.v. gentomycin treatment was discontinued. Once a healthy layer of granulation tissue was covering the remainder of P-1, the night watch was discontinued., *Pseudomonas sp.* was cultured from the lesion two weeks post-surgery, and the lesion was then packed with sterile gentocin-soaked gauze sponges each day when the bandage was changed. Three weeks after this treatment had started, the cultures were negative for pseudomonas, however, this treatment was continued for a total of 12 weeks. The foot bandage was changed daily for a total of three months post-surgery. the elephant would occasionally remove the wraps when the elephant personnel were not present, however, the foot continued to heal without incident, and was completely healed four months post-surgery.