

F10 USED TO TREAT ABSCESSSES IN TWO AFRICAN ELEPHANTS

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Introduction

African elephants are exceptionally thick skinned animals that rely on this barrier of thick hide to prevent penetrating injuries in the often harsh environments they inhabit. The literal meaning of the name *Pachyderm* means thick skin. Their skin thickness varies from 1.0 – 3.2cm, with the skin over the triceps being about 2.5cm thick.

Once penetrated their skin forms a very thick capsule that often hinders drainage and rupture of abscesses. It allows purulent material to accumulate and dissect underneath the skin and these abscesses often take an extensive amount of time to drain spontaneously if at all. Trauma is a fairly commonly presented problem in elephants used for elephant back safari enterprises. Wound management in non-trained elephants or other large wild species is exceptionally challenging. Often abscesses in elephants are lanced and allowed to heal by second intention. The placement of surgical drains would be counter productive in animals trekking approximately 12km daily through thick vegetation. The late presentation of these cases also made primary closure an unsuitable method of treatment.

Case 1:

Joe an adult male elephant of approximately 26 years of age had a chronic non-healing draining abscess below the left shoulder, in the region of the triceps muscle. It was about ten by eight centimetres in size with thick encapsulation. It had been treated with oral trimethoprim sulphonamides on and off over six months. It had also been treated with various wound lavage solutions including diluted iodine and chlorhexidine for approximately two to three years prior to our involvement. Due to the elephant being a trained elephant the examination and treatment of the wound was greatly facilitated.

Examination of the wound didn't reveal any foreign matter but large amounts of thick pus were present. It was extensively flushed after breaking down the fibrous inner bands with artery forceps. F10SC Veterinary Disinfectant was diluted to a ratio of 1:250 with clean water. Twice daily the wound was flushed using a 50ml catheter tipped syringe and a feeding tube under pressure. It was flushed with 300ml diluted F10SC per session. It had a natural ventral facing opening that facilitated drainage. Once daily the entire cavity was filled with F10 Germicidal Barrier Ointment that remained inside until the afternoon flushing. Within seven days there was almost no discharge and flushing was decreased to once daily. F10 ointment was then only instilled once every two days for a week.

Thereafter the F10 ointment was discontinued and flushing was only carried out once every four to seven days. Within three months the abscess had become unnoticeable and was no longer producing any discharge.



Thokwe prior to surgery.

Case 2:

Thokwe an adult cow approximately 24 years of age had a chronic non-healing abscess that had ruptured at its dorsal border and started dissecting underneath the skin on the right shoulder, also in the region of the triceps muscle. It had been treated with oral trimethoprim sulphonamides and with the same wound lavage solutions as Joe had been for approximately four months prior to our involvement. Due to its rapid spread and poor drainage it was decided to anaesthetize her with etorphine and azaperone.



Breaking up abscess compartments: With a long artery forceps the inside partitions of the abscess were bluntly broken down to facilitate drainage and flushing.

ABSCESSSES, FLUSHING, WOUND MANAGEMENT, WOUND IRRIGATION

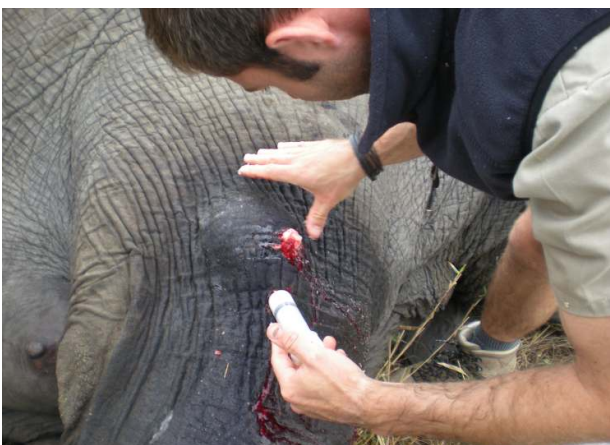
WILD LIFE

Under anaesthesia an incision was made at the most ventral aspect of the abscess and with artery forceps all the internal septae and compartments were broken down. It was vigorously flushed with F10SC, diluted 1:250 with clean water. Gentamycin antibiotic beads were prepared from a Demotec[®] hoof repair kit (similar to polymethylmethacrylate) and injectable gentamicin (50mg/ml) as a string on surgical nylon and were then subsequently sterilized with formalin gas.



Flush F10SC: F10SC diluted 1:250 with clean water is used to flush the lanced abscess under pressure with a 50ml catheter-tipped syringe.

The string was sutured into the draining tract. Otherwise the abscess was treated the same as the other case. Within two days the drainage from the abscess had dramatically decreased. Within a week of placing the beads, combined with the flushing and F10 ointment, the abscess was only discharging small volumes intermittently. The beads were removed after seven days. By two months after treatment the abscess had nearly resolved completely.



Instilling the ointment: A 50ml catheter-tipped syringe is filled with F10 Germicidal Barrier Ointment and then injected into the abscess cavity.



Products used during Thokwe's treatment.

In both these cases the original inciting cause of the abscesses is unknown. Both these elephants were trained elephants that were accustomed to daily handling and this allowed for easy administration of the F10 products. The failure of the earlier treatments might have been due to retained foreign material or necrotic sequestra, possibly inactivation of the compounds by means of purulent material and lack of adequate drainage.

No bacterial cultures or antibiograms were ever conducted. The most common bacteria isolated from abscesses in elephants tend to be *Staphylococcus* sp and *Streptococcus* sp. Other bacteria such as *Corynebacterium pyogenes* and *Pasteurella multocida* have also been isolated from African elephants. Even so, the efficacy of F10 products in these two cases cannot be contested.

The combination of F10SC flushes and the instillation of F10 ointment into two properly drained elephant abscesses delivered both excellent and affordable results.

We would like to sincerely thank Mr Paul Coetsee for his exceptional skill at handling elephants and for sharing his knowledge with us. Without his assistance the treatment of these elephants wouldn't have been possible.

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