Clinical Management of a Chronic Abscess in a Juvenile Asian Elephant

Arindam Kishore Pachoni[1], Samshul Ali[1]* and Samrendra Bahadur Shing[1]

[1]*Sanjay Gandhi Biological Park, Patna, Bihar, India*
**Corresponding author's e-mail: samsali21@gmail.com*

Introduction

Abscesses occur in all parts of the body in elephants and could become chronic, if not treated in time (Ollivet-Courtois *et al*. 2003). Latent period from initial wound to development of abscess may vary from a week to months (Schmidt 1986).

Here we describe the clinical management of a chronic abscess in an Asian elephant (*Elephas maximus*).

History

A juvenile captive female elephant of 5.5 feet shoulder height presented with a lump, at the Sanjay Gandhi Biological Park, Patna. On clinical examination an 8 x 7 cm lump was found on the medial side of the right forelimb, with signs of chronic inflammation and an opening of about 2 cm on the dependent part through which pus oozed out. The diagnosis of a chronic abscess was made based on the clinical signs (Fig. 1).

Clinical management

The pyogenic exudate was collected by sterile swab and culture and antibiotic sensitivity tests were conducted for selection of a suitable antibiotic (Table 1).

Treatment was initiated by surgical opening of the lump at the dependent part, under local anaesthesia with Lignocaine 2% (30 ml) injected around the lump. Drainage of pus was facilitated by flushing of the abscess with potassium permanganate (0.01%) solution made by diluting a 400 mg tablet in 4 l of water, and using a 100 ml syringe and exerting manual pressure on the lump.

The wound was irrigated regularly for three consecutive days with 0.01% potassium permanganate solution, to dissolve the pyogenic membrane. The wound was then painted with povidone iodine and left open for seven days.

Benzene hexacholride spray was used to avoid myiasis (maggot infestation). Amoxicillin and Clavulanic Acid 7.2 g was given parenterally daily for seven days to avoid secondary bacterial

Figure 1. Chronic abscess.

Manuscript Editor: Prithiviraj Fernando

Table 1. Culture and antibiotic sensitivity test result. Organism isolated was *Staphylococus* spp. and *Pseudomonas* spp.

Antibiotic	Sensitivity
Levofloxacin	++
Amikacin	-
Ciprofloxacin	-
Gentamicin	+++
Ceftriaxone	+++
Cefotaxime	-
Chloramphenicol	-
Cloxacillin	-
Amoxicillin & Clavulanic acid	++++
Enrofloxacin	++++
Moxiflox	-
Cefetrixone & Salbactum	-
Cobactan	++++

infection and Serratiopeptidase 3 boli was given orally once a day for 3 days . The animal recovered uneventfully after 2 weeks (Fig. 2).

Discussion

Wound healing can be prolonged in elephants due to their thick dermis and is dependent on several factors such as wound management, type of wound, environment, site of wound, and nutritional status of the animal (Sukklad *et al*. 2006). Due to the thick epidermis in elephants opening of wounds is very necessary for proper drainage.

Administration of antibiotics identified through culture and antibiotic sensitivity tests and proper surgical and medical management as in this case study, enables successful management of chronic abcesses in elephants.

References

Ollivet-Courtois F, Lecu A, Yates RA, Spelman LH (2003) Treatment of a sole abscess in an Asian elephant (*Elephas maximus*) using regional digital intravenous perfusion. *Journal of Zoo and Wildlife Medicine* **34:** 292-295.

Schmidt M (1986). Elephants In: *Zoo and Wild Animal Medicine. 2nd Edition*. Fowler ME (ed) WB Sounders Co., Philadelphia. pp 908.

Sukklad S, Sommanustweechai A, Pattanarangsan (2006) A retrospective study of elephant wound, wound management from Thai veterinarians. In: *Proceedings of AZWMP, October 26-29*. Bangkok, Thailand. pp 16.

Figure 2. Healed wound.