

# Designing a Protective Cover for the Foot Lesions in Captive Asian Elephants. A Success Report

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Foot lesions are common in captive elephants (*Elephas maximus*) and foot problems constitute the single most important ailment of captive elephants (Fowler, 2006). Three captive elephants belonging to different temples of Tamilnadu suffering from chronic foot lesions were treated for a period of eight months. In addition to medication, a sandal type protective foot cover was designed individually and this paper reports its successful utility on facilitating the healing process of foot lesions in captive elephants.

Three captive Asian elephants belonging to different temples of Tamilnadu ailing from severe chronic foot lesions such as foot rot, foot abscess and necrotic wound in between the nails (Fig.1-9\*) were treated for a period of eight months from June 2008 to January 2009. The samples for microbiological examination were collected from the foot lesions using sterile swabs with transport medium at regular intervals. The samples were plated in both selective and differential media and the isolates were subjected to antibiogram by Kirby-bauer disk diffusion method. A sandal type protective foot cover was designed individually to the foot of the elephants according to the lesions using soft rubberized foam pad for the sole portion with holes at the bottom for proper drainage and aeration. Leather straps with central reinforcement were used (Fig.8\*) to keep the sandal in-situ around the foot of the elephant.

## Observations and Results

The culture examination of the samples collected from these foot lesions revealed the *Staphylococcus*, *Streptococcus*, *Bacillus*, *Klebsiella* and *Clostridium* sp of organisms which were found to be sensitive to Enrofloxacin, Ciprofloxacin, Chloramphenicol and Gentamycin. The foot lesions were cleaned and dressed with antiseptics and topical application of antibiotic ointments based on the culture and antibiogram as given above at regular intervals with out any parenteral injections. In addition to the regular treatment, a sandal type foot cover was applied over the affected foot (Fig.5) not only to prevent the contamination of the medication but also to keep the medicaments in contact with the lesions for some time. Fowler (2006) opined that boot or sandals had been constructed to keep the topical medication on the foot lesion and it should be accepted by the elephant. In this case, though there was initial hesitation evinced by the elephants during the first four or five days on application of the foot cover, it was well accepted and they were found to be compatible after one week of application. The foot cover was applied for 45 – 60 minutes after medication every day. Continuous medication and

application of foot cover resulted in complete healing of the foot pad abscess in one elephant in five months time (Fig.3\*) and remarkable improvement in the healing process of foot lesions in other two elephants (Fig.6 & 9\*).

## Conclusion

The above study revealed that the application of sandal type protective foot cover designed in this study was found to be a real therapeutic tool since it not only prevents contamination of the medication but also keep the medication in contact with the foot lesions for considerable time resulting in early healing of chronic foot lesions with less stress to the elephants.

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## Reference

**Fowler, M.E (2006).** Foot Disorders; Biology, medicine and surgery of elephants. Blackwell publishing Co, Ames, Iowa, USA. 271pp.

\*See images on web [www.zoosprint.org](http://www.zoosprint.org)

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**Fig; 1 - 3**

**Chronic Foot pad abscess**



**Fig; 4 - 6**

**Severe Foot rot**



**Fig; 7 - 9**

**Chronic necrotic wound**

