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, Ciprofloaxcin, Chloromphenicol 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 parentral 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 medication in contact with the foot lesions for considerable time resulting in early healing of chronic foot lesions with less stress to the elephants.

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

*See images on web www.zoosprint.org
Fig: 1 - 3  Chronic Foot pad abscess

Before treatment  During treatment  After treatment

Fig: 4 - 6  Severe Foot rot

Before treatment  During treatment  After treatment

Fig: 7 - 9  Chronic necrotic wound

Before treatment  During treatment  After treatment