A Case of a Lacerated Wound in an Asian Elephant (*Elephas maximus*) and its Cognitive Aptitude in Self Healing

N.S. Manoharan¹, K. Senthil Kumar², Boon Allwin³ and M.G. Jayathangaraj⁴

Abstract
Lacerated wound treatment in an Asian elephant in Mettupalayam range, Coimbatore Forest Division is documented here. Clinical symptoms and treatment given are provided briefly.

Asian elephants are members of class Mammalia belonging to order Proboscidea. Asian elephants are huge gray animals inhabiting Asian tropical forests. Since 1986, *Elephas maximus* has been listed as Endangered (EN) because of a population size reduction inferred to be at least 50% over the last three generations, based on a reduction in its area of occupancy and the quality of its habitat (Choudhury et al., 2008).

Elephants are long-lived, traverse a broad range of habitats over a lifetime, and possess a proportionally large and complex brain that goes through the majority of its development after birth (Fowler and Mikota, 2008). All are qualities often associated with the ability to solve problems. The area over which an elephant travels depends on the availability of resources, notably water, food and mates. Because resources vary seasonally, so do the extent of elephant movements. Tool use and manufacture may be associated with higher cognitive aptitude and the ability to solve problems creatively. Elephants use a wide variety of tools in wild and captive settings and apply their knowledge and experiences in combating real life scenarios (Hart et al., 2001). This paper deals with the case of a lacerated wound in elephant which was identified subsequently.

Case History
While making daily rounds in the Mettupalayam range, Coimbatore Forest Division, a forest guard reported the Forest Veterinary Officer that a lone female elephant around 22-25 years old was standing in a small pond for a prolonged period in the middle of the forest area (Fig 1). The observation of the elephant revealed that the elephant was alone, presented in a pool of water. Initial attempts to clinically examine the animal were futile as the animal refused to move out of the water. However after repeated attempts the animal was lured out of the water loading and on instant examination a lacerated wound on the left hind leg posterior at the level of thigh, was noticed (Fig 2). As the elephant’s skin is very sensitive and wounds only heal very slowly, this wound might have been 15 days old.

Treatment and discussion
The reason for standing in water might be that the fishes in the pond might have fed on the dead tissues of the wound and giving a marked natural debridement of the affected tissue. In addition to this, the elephant tried to reduce its body weight by sinking in the water for a long period of time. For the treatment of lacerated wound, the wound might be flushed with normal saline or clean tap water (Fernandez and Griffiths, 2008). Similarly the elephant throw water towards its back through its trunk. This incident is a state of high intelligence and is a cognitive application of knowledge.

1Forest Veterinary Officer, Forest Department, Tamil Nadu.
2Assistant Professor, 3Research Scholar, 4Professor and Head, Department of Wildlife Sciences, Madras Veterinary College, Chennai. Email: 1manoharan.coimbatore@gmail.com (Corresponding author)
In general, the wound healing process is a complex continuum of the inflammatory, proliferation, and remodeling phases of healing. Understanding the mechanism of wound healing and staging the wound accurately will help determine the appropriate management of the injury and will also allow practitioners to incorporate newly developed wound medications into their treatment regimen (Phuangkum et al., 2005).

It was observed that the animal visited the water holding area everyday and decided to provide oral medication in addition to its traditional technology to heal the wound. Enrofloxacin liquid @ 2.5 mg/kg was mixed with Jaggery (Sanchez et al. 2005) and placed few metres away from the animal. The animal took the medicated Jaggery completely without any hesitation continuously for 10 days. The forest guard provided this medication daily for 10 days and monitored the animal.

The elephant showed an uneventful recovery after 10 days of treatment (Fig 3). The understanding of these abilities strongly indicated that the safest way to interact with elephants would be to appreciate their potential for highly cognitive responses and their capability to resolve problems.

References


Announcement


Pressures on wild populations of elephants and rhinos are increasing at an alarming rate, with poachers killing both species at unsustainable levels. Wildlife habitat continues to shrink while human-elephant conflict increases. Conservationists and researchers around the world are committed to protecting the remaining animals and habitat.

The fourth joint International Elephant and Rhino Conservation and Research Symposium is a forum for elephant and rhino conservationists and researchers from around the world to present conservation projects and research outcomes, new technologies in field conservation and conflict mitigation, studies in disease, reproduction and behaviour, and other issues that impact the long term survival of elephants and rhinos.

Come join us at the Singapore Zoo to share your experiences and best practices, make friends, and expand your professional network. Visit www.elephantconservation.org for more information, abstract submission, and registration. Registration will be limited to 200.