PHOTOSENSITIZATION AND IT'S TREATMENT IN AN ASIAN ELEPHANT - A CASE REPORT.

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INTRODUCTION

Photosensitization is hypersensitivity of thinly haired skin to direct sunlight. It May be due to the abnormal presence of a photo dynamic agent (pigment) in the peripheral blood. This condition occurs following acquisition of photo sensitizing substances in the body (or) failure of the body to excrete photosensitizing substance that are normally metabolised by the liver and excreted in bile. Though it is common in domestic animals, very rarely reported in wild animals. Among the wild animals, Elephants are more prone to this problem due to their mode of transport i.e., they are exposed to sunlight for prolonged duration when they are translocated to long distance by walk under mild sedation.

CASE HISTORY

A fifty years old, male Asian Elephant (*Elephas maximus*) weighing approximately 5 tonnes was tranquilised using Acepromazine HCl (90mg) and Xylazine HCl (300 mg) intramuscularly to translocate from Srirangam to Madras, within that week, the animal was tranquilised twice earlier using Acepromazine HCl. After mild sedation sets in, the animal was made to walk during hottest peak of summer. While doing so, the animal developed photosensitization reaction due to prolonged exposure to sunlight in addition to transquilisation using phenothiazine derivative - Acepromazine HCl.

CLINICAL SIGNS AND TREATMENT

While transport, the animal became dull all of the sudden and the skin on the dorsal aspect of the abdomen, forehead, and ears showed hyperemic changes in addition to bilateral keratitis and also which in turn became edematous and necrosed, later formed the dry gangrene followed by sloughing of the epidermis of the skin.

As the condition was diagnosed as photo sensitization, immediately the animal was given rest under shade thereby further exposure to sunlight was avoided then the following treatment was adopted.

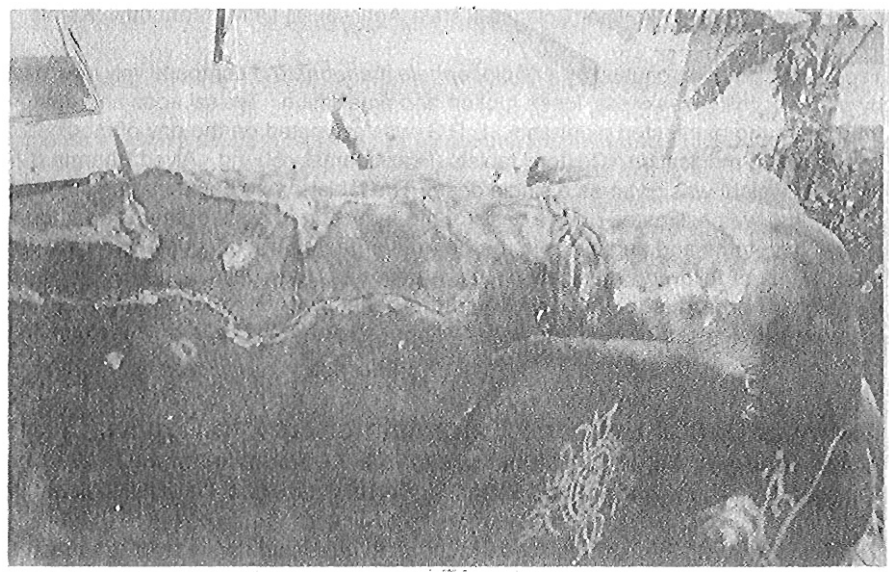

Fig. 1. A male Tusker Showing Lesions of Phenothiazine Induced Photo-Sensitization

1.	Inj. ringers lactate	-540 ml x 5 bottles-I/V
2.	Inj. Tetracycline	-30 ml - I/M
3.	Inj. Chloril	-20ml - I/M
4.	Inj. Beekom-L	-20ml - I/M
5.	Electral Powder	-500gms-orally

The above treatment was continued for 5 days. Simultaneously Himax ointment was applied over the skin lesions initially for a week followed by dressing with sulphanilaine and Absorb Powder. Cold water was sprinkled all over the body daily.

RESULTS AND DISCUSSION

On reaction to intense treatment and rest under shade, the animal responded on fourth day by started feeding and the skin lesions completely healed in 20 days. Various authors (Clarke, N.T.1947; Bijmal, G and Patnaik, B.1961) reported photosensitization reaction in cattle and sheep following the administration of phenothiazine derivatives. Since their administration in domestic animals has a direct (or) primary photosensitization effect i.e., without interfering the liver function tests, it was diagnosed and treated easily. Though photosensitization usually involves unpigmented skin, but in the present case it involved pigmented skin which supports the earlier finding by Gibbon W.J.(1953). Since phenothiazine induced photosensitization is limited to the ocular tissues, besides bilateral keratitis, it also involved pigmented skin which is in contrary to the earlier reports by clarke, N.T.(1947); Bijmal, G and Patnaik, B.(1961).

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Praziquantel - An Effecctive Drug Against Tape Worm in Elephants

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Tape worm infection caused by *Anoplocephala manubriata* is comparatively rare in Indian elephants. The disease is characterised by off feed, colic, weakness, loose motion and emaciation. Typical eggs and detached segments of the parasites were detected from the dung of infected elephants. E.P.G. was estimated on the day of medication and on the first, second, third and seventh day following medication. Cestonil tablets (Praziquantel - 50 mg - Alved Pharma & Food Pvt. Ltd.) at the dose rate of 2.5 mg per kg. body weight was given as a single dose. The tablets were powdered before administration and fed with jaggery. The efficacy of the drug was estimated on the basis of the reduction of eggs of the worm in dung after medication and disappearance of the typical symptoms and segments in the dung. Large number of segments of the worm were noticed in the dung of the elephant after 24 hours following medication upto a period of three days. The EPG was reduced to nil on the third day proving 100% efficacy. The drug is tolerated well and the general condition of all the seven treated elephants improved considerably and restored usual intake of feed and water without showing any colic or loose motion.

Decay of Dental Pulp and Extraction of Tusk in Captive Elephants

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The tusks in elephants are modified incisor teeth and have dental pulp extending about 2/3 its length. Accidental injury during work or mischevious activities or cutting the tusk short lead to infection and damage to the dental pulp. Three cases of decay and disintegration of dental pulp were treated and in all three cases, because of the damage to the root of the tusk, tusks were removed. The decay in dental pulp was bilateral in one animal and unilateral in other two. In all the three cases there was severe suppuration of the pulp with disintegration of the pulp leaving an infected tract to the full length of the tusk and the alveoli. The root of the tusk was shaky and the tusk lost its normal colour, was not growing in length and had a hollow sound in tapping. Cleaning with antiseptics and hydrogen peroxide and packing with ointment was done. Parenteral adminstration of antibiotics was also given. Since the tusks became shaky, removal of tusk was done by cutting it close to the alveoli and removing the root by cutting it longitudinally after tranquilising with xylazine. The tusks were hollow, had a dirty black inner lining and thin. The roots were soft, pliable and dark coloured. After removal of tusks, the alveoli was treated by cleaning with hydrogen peroxide and dressing with nitrofuran ointment. Healing was uneventful. In two elephants where it was unilateral, artifical tusks were prepared with soft wood and fixed.

A Prolonged case of Impaction of Colon in an Elephant and its Effective Line of Treatment

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Impaction of colon is a common ailment in captive elephants which are maintained under defective management practices. Irregular feeding with dry and wet fodder, sudden cooling of the body after a prolonged march during hot climate and improper scrub bath are attributed to be the important causes for this condition. As adult tusker which was reported to have fed with dry and very fibrous palm leaves showed the symptoms of impaction of colon, constipation, colic with frequent attempts of lying down and getting up, off feed and reluctance to drink water. The rectum was found to be empty on examination. Initially for two days the elephant was given intramuscular injections of Baralgan 90 ml, Calcium pantothenate 70 ml, and Perinorm 50 ml and the symptoms of colic were subsided. From third day onwards the animal was administered on alternate days, intramuscular injections of [1] Avil 70ml, [2] Prostigmin 31/2 mg and intravenous infusions of [3] Calcium pantothenate 70ml, [4] Perinorm 50ml, [5] Polybion 50 ml, [6] Calcium boro gluconate 900 ml, 5% Dextrose saline 5400 ml, Electrolyte 5400 ml and 10% Dextrose 5400 ml in order to control dehydration and to improve the peristaltic movements of the intestine. A course of antibiotic, Chloramphenicol succinate 10gm was also given intravenously for seven days. This line of treatment was continued up to the 54th day and during this period the elephant refused to feed and drink water. On 55th day a big dung bolus was located in the rectum and it was manually removed and the animal became normal.

1. Pheniramine Maleate - Hoechst India Limited
2. Neostigmine methyl sulphate 0.5 mg/ml
3. D. panthenol 50mg/ml Sigma Lab
4. Metaclopramide hydrochloride 5mg/ml IPCA Lab
5. Vitamin B complex with Vitamin B12- Merck
6. Calcium boroglucanate 25% Sarabhai Chemicals