DROPSY IN AN INDIAN ELEPHANT (*Elephas maximus*)

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Introduction

"Project Elephant" was initiated during the year 1991 to strengthen the conservation wearness in all Protected Areas of India (Anon, 1993). One of the major recommendations of project elephant is the establishment of Veterinary care for the sick animals in and around the park area to provide therapeutic and preventive facilities. The present study describes a case of dropsy in an old Indian elephant, its haematobiochemical observations and the line of treatment adopted.

Case History and Clinical Observations

Director, Corbett Tiger Reserve, Ram Nagar (Nainital), again more than 70 years Uttar Pradesh reported that a she-elephant named 'Gulabkali' belonging to Bijrani block of Corbett Park has been suffering from some my sterious disease for the last one month or more.

On enquiry, the mahout told us about the uneasines, oliguria, inappetance and a swelling in the ventral abdomen with almost normal water intake and defecation. clinical examination revealed a large oedematous swelling in the posterior half of ventral abdomen which was painless, soft, cold and pitted on pressure (Fig.1). A clear transparent watery fluid oozed out drop by drop on needle puncture. The animal skin coat was leathery with decreased subcutaneous fat. Body temperature, pulse and respiration rates were found to be within normal limits. Urine, faecal, blood and oedematous fluid samples were collected for laboratory investigations which were carried out by adopting standard techniques as described by Chauhan (1995).

Result and Discussion

Urine sample collected was turbid with an alkaline pH. It was negative for portein, sugar, blood and ketone bodies but was positive for bile pigments. A moderate number (++) of crystals of calcium oxalate and triple phoshate were observed on microscopic examination of urinary sediment. Culture examination of both urine and oedematous fluid failed to demonstrate any bacterial growth. Haematobiochemical observations are presented in the table. Coprological examination demonstrated a large number of Strongylid eggs.

The line of treatment suggested by us inclued parenteral administration of Frusemide (Lasix)*, streptopenicillin, Vitamin B complex with liver extract and oral administration of diuretic mixture consisting of potassium nitrate, Magnesium sulphate and Ammoniam chloride. The above treatment continued for a week. Fenbendazole boli (Panacur)* were also given once orally. A good nutritious diet consisting of sugarcane tops, wheat flour, gur and mineral mixture was also advocated for the sick elephant. There was a significant improvement in the body condition of the animal and the large oedematous swelling almost disappeared leaving thick skin cushion at the site within 15-20 days after institution of therapy.

It was evident from haematobio chemical values that the animal was having hypoprot einemia and hyper chromic microcytic anaemia (Serum protein 68 g/l, MCV 47.887 fl and MCHC

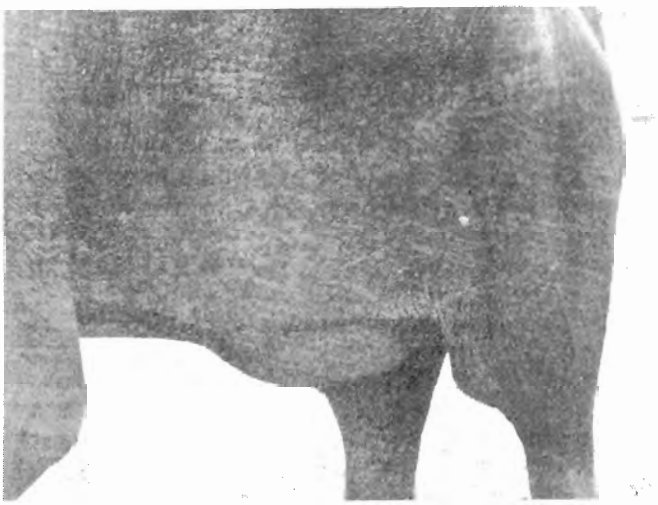

Fig. 1 Subcutaneous oedema (Dropsy) in Ventral abdomen of an elephant

54.117 g/dl). A significant high serum bilirubin level (25.65 u mol/l) in comparison to normal values ranging from 1.71-5.13 u mol/l was indicating a hepatic injury. The alterations in other haematobiochemical parameters observed here fall within normal limits reported for Asian elephants. According to Caple et al. (1978), the causes of dropsy varies but most often associated with hyproteinemia and anaemia. This confirms our observations in the present case. Hypoproteinemia and anaemia recorded here may be due to moderate to heavy

Table: Haematobiochemical changes in an Indian elephant with dropsy

Parameters Studied	Haematobiochemicals values
TEC	3.55x10 12/1
Haemoglobin	92 g/l
PCV	17%
TLC	$4.7x10^3$/1
MCV	47.887 fl
MCHC	54.117 g/dl
Differential leucocytic count:	
Neutrophil	47%
Lymphocyte	43%
Eosinophil	2%
Monocyte	8%
Blood Sugar	6.549 m mol/l
Blood urea nitrogen	1826 m mol/l
Serum Creatinine	53.04 u mol/l
Serum protein	68 g/l
Serum bilirubin	25.65 u mol/l

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ABSTRACTS OF Ph. D. THESIS

"A STUDY ON THE BIOLOGY OF A FRESHWATER FISH', *Puntius kolus* (SYKES)"

Dr. Shivaji Narayanrao Suryawanshi, Babasaheb Ambedkar Marathawada University, Aurangabad. 1996
Guide & Supervisor: Dr. S.B. Wagh

In the present work on the fish, following aspects have been studied in detail.

1) Classification and sexual dimorphism - The present position of the fish in animal kingdom and differences in two sexes of the fish have been studied, giving synonyms also.

2) The maturity and spawning of the fish was studied with the help of ova diameter measurements, which revealed that minimum size at first maturity. The fish has a prolonged spawning season with spent fishes. Occuring throughout the year.

3) Fecundity of the fish was studied which was found to show a curvilinear relationship with fish length, ovary length and body weight of the fish and a straight line relationship with the ovary weight.

4) The ponderal index was calculated separately for males and females. The 'K' values in both the sexes showed an inflection which was seen to be the minimum size at maturity.

5) Length frequency studies were carried out to determine the age and growth rate of the fish.

6) The length weight relationship when studied, revealed that the length of the fish was exponentially related to the weight of the fish.

7) In the morphometric studies, the various body parts of the fish were measured, to study the relationship between the total length of the fish with other body parts.

8) While studying food and feeding habits of the fish, the occurence/ numerical method was used to asses the percentage of food consumed in different months of the year. Preferance of the food items and intensity of feeding by the fish was recorded by analysing the stomach contents of the fish.

9) Biochemical composition of the muscles, liver and gonads of the fish was determined, on a monthly basis to show fluctuations in the composition.

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stronglid infection, poor quality of food consisting mainly of dry peepul leaves and some hepatic damage as reflected from the higher bilirubin values. Fowler (1986) indicated that large oedematous pockets can develop in any of the dependent areas of elephant's body which associated with general debility and stress.

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