

A CASE STUDY OF COLIC IN AN ASIAN ELEPHANT

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INTRODUCTION

Colic is defined as a name for severe paroxysmal gripping pain of the bowel or other parts. Though abdominal pain will occasionally arise from genito-urinary disturbances, most commonly colic is accepted as being of gastrointestinal in origin. A case of colic is encountered in an Asian elephant and successful treatment is documented in this paper.

HISTORY AND EXAMINATION

The history relates to the six year old female elephant weighing 2.2 tons, belonging to a temple in Madras. The call was made for the veterinary intervention since that elephant was highly restless and found to be frequently lying down and getting up. The authorities were annoyed over this restlessness.

During the clinical examination, the elephant was observed in a standing posture. The elephant had a normal rectal temperature. The respiration and heart rates were found to be elevated. However the contour of the abdomen on examination failed to reveal any abnormality. The oral cavities were apparently normal. Posture related examinations were carried out with the help of the mahout revealed difficulties to assume lateral recumbency position (mahout is the traditional name for the person who controls the captive elephants in South India). The history revealed that the elephant was offered bunch of bananas and coconuts in *ad libitum* amounts before the day of occurrence of such abnormal status. Dung was passed freely and the consistency was similar to dung from any other healthy captive elephant. The faecal examination revealed no evidence of helminthic presence. The animal was administered with 90 ml Baralgon - the smooth muscle spasmolytic drug by intramuscular route and oral administration of magnesium sulphate and sodium chloride was carried out each at the rate of 500 gm daily for

3 days. Restriction of the feed was also advised. On the sixth day, the second call was made for the same elephant that exhibited anorexia again. This time the history revealed that the animal was now able to assume lateral recumbency position on command and restlessness was not noticed unlike the earlier time but the elephant failed to take food since morning. The clinical examination revealed the presence of swelling at the right thigh region - the site at which the antispasmodic injection was given earlier. Deep palpation of this site revealed grunting sound from the elephant. The haemogram revealed 34 percent PCV and 5.01 million / Cmm RBC and 9000/ Cmm WBC. The biochemical examination revealed 3.7 mg percent BUN, 0.5 mg percent creatinine, 6.6 gm percent total protein, 3.3 gm percent albumin and 41.6 mg percent glucose. Ichthammol glycerine was advised for external application together with hot and cold fomentations in an alternative manner. Oral administration of trimethoprim - sulphamethoxazole powder was carried out at a rate of 22 mg per kg body weight twice daily for 4 days. After 4 days of treatment, the appetite resumed to the usual level and the elephant became active, moving its tail and trunk freely.

DISCUSSION

The literatures related to the medical management of colic in captive Asian elephants are generally remote. Most of the times, the documentations are not effectively carried out with regard to the medical management of colic in Asian elephants. The digestive tract ailments, indigestion and diarrhoea in particular account for nearly half of the treatment recorded in 31 years in forest department veterinary records in Tamil Nadu (Krishnamurthy & Wemmer, 1995). The oral examination was carried out as a first step of the clinical examination in this elephant, and Mikota *et al.* (1994) too quoted that elephants may show anorexia and reactions of pain in teeth disorders. The reduced alertness and slowed movements of the trunk and legs as noticed in this case during the visit in this case during the first visit are reflective of the sick status of the elephants (Fowler, 1986).

A similarity may be adapted in the therapeutic approach of colic in horses and elephants because of the presence of simple stomach in them. Elevated respiratory and cardiac rates together with the marked resistance to assume the lateral recumbency position reflected the pain status in this elephant. History and the intermittently exhibited abnormal postures related this to the gastric region in the elephant under inspection. Despite giving more amounts of bananas, astonishingly there was absence of change in the consistency of the dung or diarrhoea. The co-offering of the coconuts, the routine feedings and the impaired gastric motility might be the causes for suppressing the laxative effects of banana in this case. The oral administration of magnesium sulphate was preferred in this elephant in order to eliminate the possible food-borne unwanted metabolic products, in the gastric region.

Mikota *et al.* (1994) recommended usage of enemas using a garden hose together with the oral administration of mineral oil. Enemas were not administered in this case, since the animal defecated freely. Considering the specific nature of this elephant as

revealed by the mahout (this elephant prefers to take medicines mixed with preferred solid items than the liquid), the oral administration of mineral oil for laxative purpose was not selected and in spite of that, magnesium sulphate was chosen because this salt could be kept concealed with "Pongal" (the term used for the cooked rice with jaggery in South India) for which this elephant always had a liking. Oral drug administration always assumes an important aspect in hefty wild animals like elephants and in this case both magnesium sulphate and sodium chloride were mixed with Pongal and was given in an unexpected way during the serial offering of small amounts of Pongal.

The marked resistance to assume lateral recumbency on command by Mahout revealed the existence of pain in the gastric region. Such posture related abnormalities in elephants were mostly associated with clinical conditions. George *et al.* (1990) encountered a case of elephant which had more desire for standing, revealed osteoarthritis. Pushkaran (1987) stated that gastro-intestinal helminthiasis is a common problem in captive Asian elephants. However faecal examination did not reveal the evidence of any parasitic problem in this case.

Since there is no systematic pharmacokinetic studies with drugs like Baralgin in Asian captive elephants, the empirical dose rate was used in this elephant which helped the recovery as noticed by the resumption of "usual ability" of the elephant to assume freely the lateral recumbency after receiving command from the Mahout. Though drugs like Flunixin have been recommended at a rate of 1 mg per kg body weight during the medical management of colic (Fowler, 1993). This drug is not available in Tamil Nadu. The occurrence of anorexia after few days of the earlier treatment might be due to the pain from the swelling at site of infection. The reason for the swelling was analysed to find out whether the drug has caused irritative action in the intra muscular area or is there any other cause. At least the needle used earlier was found to be having inadequate length for use in elephants. The needle for elephant as quoted in Technical Report No. 2 of Wildlife Institute of India should have the length of 51-63mm. Since the needle used was found to be of shorter length, there was a probability of the spasmolytic drug for being deposited near the skin in the fatty area and this might have caused the tissue irritation.

The relatively long time taken for the swelling to get reduced might be correlated with the finding reported in an Asian elephant by George *et al.* (1989) that healing of skin related wounds generally takes more time than in other animals. Thus, the anorexia reported later may well be correlated with pain at the swelling. The elephant was administered with co-trimoxazole drug and many authors have quoted the synergistic effect of the sulfonamides in animals. The absence of rise in PCV and BUN ruled out the occurrence of dehydration in this elephant. The treatment approach coincided with the recommendations of treatment modalities in elephants as suggested by Mikota *et al.* (1994). The resumption of trunk, tail and legs together with resumption of normal appetite and absence of resistance to assume recumbency on command by mahout - all

indicated the successful response of the elephant to the therapeutic approach programmed. Though the practical experience gained may be little in each elephants, the documentation needs to be carried out on captive or free - ranging Asian elephant in order to understand the still - to be detailed clinical information related to the elephants. Likewise, till the wildlife veterinarians make use of MedArks or any other related treatment modules for elephants, every fact needs to be reported with regard to these elephants - gigantic animals which just on sight give happiness to both children and adult *Homo sapiens*.

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