around the globe, while B. rossi is confined to only Africa (Irwin, 2009).

The dog responded well to the treatment and recovered completely within 3 weeks. Diminazine aceturate is known to be effective against babesiosis, caused particularly by large forms of *Babesia* spp (Adeyanju and Aliu, 1982). Doxycycline at the prescribed dose rate could clear both the two types of ehrlichial infection in this dog (Harrus *et al.*, 1997). Supportive therapy with multivitamins helped in fast recovery.

**Summary**

In this report the successful therapeutic management of concurrent Babesia and Ehrlichia infection in dog is described. Use of diminazine aceturate, doxycycline along with supportive therapy could bring complete recovery of concomitant infections of Babesia and Ehrlichia. Microscopy along with nested PCR was found to be most suitable for diagnosis and monitoring treatment effects.

**References**


**Treatment Against Paragonimiasis in a Common Palm Civet**

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*Paragonimus* spp., commonly known an lung flukes, inhabit in the lungs and more rarely in the brain, spinal cord and other organs of man, pig, goat, cattle, dog and wild carnivores in China and countries of South-East Asia (Rathore, 2005). Present paper deals with effective treatment against paragonimiasis in a common palm civet (*Paradoxurus hermaphrodites*).

**Case History and Observations**

An adult male common palm civet having body weight of 2.02 kg was seized from Puri town, by the Forest Department, Govt. of Odisha and was handed over to Nandankanan Zoo for rehabilitation. Fresh water crab collected from the nearby river were its regular food. As per standard

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procedure of the zoo, the seized civet was kept in the quarantine ward of the zoo hospital for observation. Inappetence, dullness, periodic cough with audible sneezing sounds were predominant clinical signs recorded during 48 hours of quarantine. Direct microscopic examination of the fecal sample of the civet revealed presence of *Paragonimus* sp. eggs having characteristic features of yellowish-brown coloration, ovoid shape, thick shell with operculum at one end (Soulsby, 1982).

**Treatment and Discussion**

The civet was administered orally with a combine therapy of praziquantel @ 25mg and albendazole @ 75 mg per kg bw (Praziplus*) daily for 3 consecutive days. In spite of illness, animal accepted tablet impregnated in banana. Faecal sample was examined both pre-treatment and continuously daily for seven days post-treatment through Stoll’s dilution method to calculate the eggs per gram (EPG) of faeces. Thereafter, faecal sample was examined through directly at weekly interval upto 2 months. Efficacy of the drug was assessed from the EPG count using the following formula. Efficacy (%) = (EPG before treatment – EPG after treatment)/EPG before treatment

Presence of characteristic eggs of *Paragonimus* sp. in the stool coupled with clinical signs suggestive of respiratory dysfunction and food habit of taking crabs confirmed Paragonimiasis in the common palm civet. The clinical signs exhibited by civet infected with paragonimiasis, either experimental or natural, were in accordance to the earlier observations made by Dubey *et al.* (1979), and Kirkpatrick and Shelly (1985). The diagnosis was further strengthened by the information that in Asia, an estimated 80 per cent of freshwater crabs carry *P. westermani*. (Pachuck, *et al.*, 1984). The seized civet was fed with banana and minced chevon, the regular feed of civets reared earlier in the Nandankanan zoo.

Results of the first study revealed that the pretreatment EPG count of 1270 was reduced to 210 and 16 on 1st and 2nd day of treatment. Subsequent examinations up to 2 months post-treatment revealed absence of *Paragonimus* sp. egg(s) in the faeces. Progressive improvement with respect to frequency and intensity of clinical signs was noticed two days after medication and civet became apparently normal by 10 days post-treatment.

Available literature indicates therapeutic efficacy of praziquantel, albendazole or fenbendazole alone against paragonimiasis in dogs and cats. Oral administration of praziquantel @ 25 mg of/kg bw 3 times a day for 2 consecutive days resulted in clinical parasitologic cure of paragonimiasis in a dog (Kirkpatrick and Shelly, *(loc.cit)*). Present study revealed that oral administration of praziquantel and albendazole at the dose rate of 25 and 75 mg per kg bw., respectively once daily for 3 consecutive days found efficacious against clinical paragonimiasis in a common palm civet.

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