

## **HERPESTES AUROPUNCTATUS AS A NEW RESERVOIR HOST OF *TRICHINELLA SPIRALIS* IN IRAN**

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### **Abstract**

A new reservoir host of *Trichinella* was identified as: *Herpestes auropunctatus*, (Mongoose) in province of Khuzestan, south west of Iran. Wild swine, brown bear jackal and wild cat have been reported as natural host for *Trichinella* so far. The larvae obtained from the mongoose was infective for rat and white mouse, but the latter was more sensitive comparatively (This study was carried out in the Ahwaz Health Research Station).

### **Introduction**

*Trichinella spiralis*, a parasite of carnivores mammals, is especially common in rats and in swine fed uncooked garbage and slaughterhouse scraps (4). It may occur in humans who consume uncooked pork especially in hunters. It is cosmopolitan, but in Iran only one human case is reported using serological method (8), it is also reported from various animals in Iran, such as wild bear (1), brown bear, wild cat, jackal, wild swine and foxes (5,6).

Mongoose, especially the species, *Herpestes auropunctatus*, hasn't been previously reported in Iran as a reservoir host.

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### Materials and methods

A total of 10 mongooses were caught using live trap in Sosangerd, Bostan and Khoramshahr areas, in province of Khuzestan, south-west of Iran. Captured animals were autopsied and diaphragm tissue and muscles were studied by pressing small pieces of tissue between two glass slides, and also digestion of tissue in a polythene flask, containing digestive fluid (1% pepsin and 1% HCl).

In order to determine the parasite strain after identification and collection of the larvae, 10 rats and 20 white mouse were inoculated 30 and 15 larvae, respectively. They were autopsied on days 5,10 and 20 post infection.

### Results and discussion

The captured mongooses were identified as: *Herpestes auropunctatus*. It is the only species found in southern part of Iran (2). It's body is long, cylindrical with short legs and generally a long bushy tail (Fig. 1). Three out of 10 captured animals demonstrated *Trichinella* larvae in the striated muscles 33% (Fig. 2). Laboratory infection of rat and white mouse showed infection in both animals but white mice were much more susceptible to infection than the rats. This findings confirm that this isolate as reported previously (5,6), is *Trichinella spiralis nelsoni* which is prevalent in different carnivores from Khuzestan south west of Iran.

The previous studies done by other researchers (3,7) did not shown any case of presented reservoir (*Herpestes auropunctatus*) in the article, as a naturally infected animal in Iran.

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Fig. 1- *Herpestes auropunctatus*: the latest reservoir of *T. spiralis* recorded in southwest of Iran.



Fig. 2- Encapsulated larvae in the muscle of *H. aruopunctatus*

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