

## **Abstract:**

Regarding the importance of parasites of which render zoonoses, their capability to transfer some pathogenic agents alongside the increasing trend of keeping pets in Iran such as hedgehog which is a pet of interest in some cultures, this animal would matter considering the zoonotic parasites. This study was performed to assess the endoparasites and ectoparasites of long-eared hedgehogs. During this research (from March 2014 to March 2015) 50 long-eared hedgehogs were gathered from different locations of Zabol city, to detect their endoparasites and ectoparasites. Among 50 long-eared hedgehogs, 32% cases (n=16) were infected to the egg of *Physaloptera clausa* nematode which were diagnosed by feces examination and 52% cases (n=26) were infected to Anaplasma parasite in their red blood cells which were recognized by Giemsa staining. Among 10 dissected hedgehog, 20% (n=2) were infected to the cestode *Mathevotaenia erinacei*. Additionally, 40% (n=4) were infected to *Physaloptera clausa*, 20% (n=2) were infected to *Nephridiacanthus major* and 10% (n=1) were infected to *Moniliformis moniliformis*. Recognition of parasitic helminthes was accomplished by Carmine acid staining. The average worm burden was 1.8 helminthes per infected hedgehog. Statistical analysis represented that there is no significant correlation between sex and parasitic infection in hedgehogs ( $P>0.05$ ). Also a number of 31 (62%) hedgehogs from total 50 were infected to ticks. Altogether 235 ticks were isolated from these animals of which only 2 species of the genus *Rhipicephalus* were discerned by stereomicroscope. Species diversity and the prevalence of infection of detected hard ticks are as follow: *Rhipicephalus turanicus* (68.08%) and *Rhipicephalus sanguinus* (31.91%). The mean tick number per infected hedgehog was 7.85. The most tick infestation in hedgehogs was observed in spring and summer. So there's a remarkable statistical difference between sampling season and the presence of ticks ( $P<0.05$ ). Although there wasn't observed any significant difference between the genus of tick infected-hedgehogs ( $P>0.05$ ). Given the significance of these parasites from the zoonotic aspects and their potential to carry pathogenic agents, more studies are highly recommended to assess Anaplasma species and ectoparasites as well as to promote the people awareness in order to maintain animal health and individuals with direct contact with them.

**Keywords:** long-eared hedgehod, endoparasites, ectoparasites, Zabol, Iran.



University of Zabol  
Graduate school  
Faculty of Veterinary Medicine  
Department of Pathobiology

The Thesis Submitted for the the Degree of Doctor of  
professionals (in the field of Veterinary Medicine)

**Study on endoparasites and ectoparasites of  
Long-eared hedgehog (*Hemiechinus auritus*) in  
Zabol -Iran**

**Supervisors:**  
Dr. R. Nabavi

**Advisors:**  
Dr. M. Hajinezhad

**BY:**  
N. Zolfaghari

Sep 2015