Abstract:

Today, one of the main risks of human societies is the new emerging diseases, especially zoonosis. In many countries, tuberculosis is still a serious threat to the economy and public health in the international trade in animal and animal products. In the early 20th century, tuberculosis was prevalent in most countries in the world with a prevalence of 63% in herds and 45% in other animals, but it gradually declined with TB control programs in these countries. Meanwhile, mycobacterial infection in wildlife species can be an important source of infection for humans and animals.

In the present study, in order to identify possible reservoirs of tuberculosis disease in the wildlife, Sistan region's long-eared Hedgehogs (*Hemiechinus auritus*) were selected. According to numerous reports of human *tuberculosis* in Zabol over the past years, the areas with the highest number of reports were selected and hedgehogs were randomly sampled, the samples were then analyzed by universal primers (as screeners) and specific primers using PCR. The results of the present study show that about 19.35 % of the 62 blood samples (N=12) were infected with *Mycobacterium complex*, in addition, analysis of first stage positive samples using specific primers showed that 11.11 % (N=7) of the samples were infected with *Mycobacterium tuberculosis* and 4.8% (N=3) of the samples were infected with *Mycobacterium bovis*. The results of statistical analysis showed no statistically significant relationship between gender and geographic location variables ($p > 0.05$). The present study shows that Sistan region's long-eared Hedgehogs has a role in the epidemiology of tuberculosis in the region and should be considered in disease prevention and care programs.

Keywords: *Tuberculosis, Mycobacterium bovis, Mycobacterium tuberculosis*, Long-eared Hedgehog, Zabol, Polymerase chain reaction (PCR).

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Epidemiologic Investigation of *Mycobacterium bovis* and *Mycobacterium tuberculosis* infection in hedgehog by PCR

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