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Survey on Prevalence of Endo and Ecto-Parasites of Rattus rattus in Mazandaran Province, North of Iran

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Abstract : Background: Rodents act as reservoir host and important potential source for many zoonotic pathogens which pose a public health risk to humans. Therefore, it is necessary to investigate the prevalence of gastrointestinal and ectoparasites among rodents. Materials and Methods: 118 Rattus rattus were captured using snap live traps. Each rat was combed with a fine tooth comb to dislodge ectoparasite and studied. Various samples were collected from feces, examined wet smear, formalin-ether method and stained with modified acid-fast staining and trichrome. Result: The overall prevalence of gastrointestinal parasites of examined rats was 75.4%. Cryptosporidium 30.5%, was the most prevalent protozoan which was followed by Giardia 20.3% and Entamoeba muris 13.5%, Trichomonas muris 10.1% and Spironucleus muris 3.3%. The prevalence of helminth egg was as following Syphacia obvelata 24.5%, Hymenolepis diminuta 10.1% and Trichuris muris 9.3%. 86.4% rodents were found to be infested with ectoparasites including mite 35.6%, flea 28.4%, and lice 42.7%. A significant statistical difference was observed between prevalence and gender of infected individuals. Conclusions: The prevalence of gastrointestinal and ectoparasites of collected rats in studied area is remarkably high. In addition, Rattus rattus can be considered as potential risk for human health.

Keywords : prevalence, rodent, intestinal parasites, ecto-parasites, zoonose
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