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Effect of Storage on the Infectivity of Vampirolepis Nana var. Nana Eggs to Swiss Albino Mice

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Abstract:

Vampirolepis nana is the most common cestode in humans especially children. Domestic mice and rats can serve as definitive hosts for V. nana. Confusion exists over the species status and host-specificity of this tapeworm. In a previous study done by the same authors it was found that the Egyptian human isolates of V. nana could be used to infect mice for experimental work. Eggs in human feces and in the fecal pellets excreted by mice probably lose their infectivity sooner or later. Such information is very important from the epidemiologic and epizootic points of view. The aim of this work was to study the infectivity of V. nana var. nana eggs isolated from human feces, murine fecal pellets and worm gravid proglottids after storage for different periods of time. According to the results, the transmission potential capacity of the human strain of V. nana by mice can not be ignored. The relative infectivity of the eggs isolated from the murine rectal fecal pellets is higher than that isolated from the worm because some immature eggs are found in the gravid segments. It was clear that storage of eggs had a deteriorating effect and that the egg infectivity was dependent upon storage time. After 2 wk of storage in dechlorinated water some eggs were still viable and infective. Such a group of eggs present a health risk for people living in the wastewater-exposed areas like Egyptian rural areas, or when wastewater is reused for agricultural purposes as in countries with water scarcity.

Keywords:

Vampirolepis nana , Cestode , Swiss albino mice

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