



Gastrointestinal parasites infestation in military working dogs/ K9 in Al Muthanna Governorate in compare to semi housed dogs

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ARTICLE INFO

Received: 08.04.2017

Revised: 28.04.2017

Accepted: 17.06.2017

Publish online: 19.06.2017

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Abstract

Protection and safety tasks of any country are best achieved with the help of military working dogs (MWDs/ K9). Recently, MWD/ K9 have extensively used in Iraq to help the reinforce security and investigate the explosive devices. A mystifying amount of infective stages of parasites are harbored dogs which can transmit to man and other domestic animals and create a major threat to public health. Therefore, any shortage of diagnosis or treatment against these zoonotic certain diseases can help in spread it. This study designed to determine the prevalence of gastrointestinal parasite in MWD/ K9, which

serve in the department of police academy in Samawah city/Al Muthanna Governorate, and compare it with semi housed dogs (SHD) using different coprological techniques. Totally, 19 MWD/K9/ exotic (pure) breeds which ranging from 4.5 to 8 years old were nominated as dogs of the current study. Moreover, two SHD of local breed around 2 years old were also used in this study. The fecal samples were collected from all dogs and examined by direct and different coprological techniques. The total percentage of the gastrointestinal parasite in all examined fecal samples from MWD/K9 and SHD was 80.95% (17 out of 21). The percentage of the positive samples were 78.94% (15 out of 19) and 100% (2 out of 2) in MWD/ K9 and SHD respectively. In both MWD/ K9 and SHD, the fecal sample of each dog revealed more than one type of parasites. The recognized parasites were *Echinococcus granulosa*, *Dipylidium caninum*, *Ancylostoma caninum*, *Toxocara canis*, *Toxoplasma gondii*, *Strongyloides spp.*, *Iso spora spp.*, *Cryptosporidium spp.* and *Giardia spp.*. The percentages of parasites in MWD/ K9 in descending order were 68.42%, 57.89%, 36.84%, 10.52% and 1% for *Iso spora spp.*, *Cryptosporidium spp.*, *Giardia spp.*, *Toxoplasma gondii* and *Aelurostrongylus abstrusus*. Both SHD revealed all types of parasites except *Aelurostrongylus abstrusus* for the first and *Aelurostrongylus abstrusus* & *Ancylostoma caninum* for the second. A significance differences ($p \leq 0.01$) was seen in the percentages of parasitic infestation between MWD/ K9 and SHD. In conclusion, this study approved that the MWD/ K9 harbored at least one parasite although all these dogs were subjected to regular deworming protocol. In addition, this study approved the high parasitic infestation in SHD than the MWD/K9. The authors recommend to take a strong precautions such as high cleaning level and provide healthy and cooked foods to all dogs accompanied with an effective anti-parasitic treatment and prevention regime according to a plan to reduce the human being risk from the infected dogs the source of parasitic zoonotic diseases.

To cite this article: Al Salihi K A; Shadan Q A Al Zubaydi; Hussien Katah (2017). Gastrointestinal parasites infestation in military working dogs/ K9 in Al Muthanna Governorate in compare to semi housed dogs. MRVSA. 6; (2): 25-38. DOI: [10.22428/mrvsa.2307-8073.2016.00623.x](https://doi.org/10.22428/mrvsa.2307-8073.2016.00623.x)

Keywords: *Echinococcus granulosus*, *Iso spora spp*, Military working dog (MWD)/ K9, SHD, zoonotic disease, parasite.