

Prevalence of gastro-intestinal parasites in Gazelles (*Gazella subgutturosa marica*) in Al-Theabeyafarm in Iraq

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Abstract

This study was conducted to investigate types of gastro intestinal parasites in adult Gazelles (*Gazella subgutturosa*) that prohibited in Al-Theabeyafarm in desert of Al-anbar governorate-west of Iraq. 50 adult animals were included in this study to take fecal samples during winter season. The morbidity rate reached to 52%. Nematodes was the predominant that reported in 36% of infected animals while protozoa 12% and cestodes 4% of total infected animals. Eggs of different types of parasites were identified like the following: *Nematodirus spp.* in 8 gazelles, *Eimeria spp.* in 6 gazelles, *Chabertia spp.* in 3 gazelles, *Trichostrongylus spp.* in 3 gazelles, *Taeniidae spp.* in 2 gazelles, *Haemonchus spp.* in 2 gazelles and *Strongyloides spp.* in 2 gazelles. The morbidity of Gastrointestinal in *gazellussubgutturosa* in this farm it looks high because the owner depending irregular feeding of animals on indigenous plants like *citrulluscolocynthis*. It conclude that gastro intestinal parasites is prevalent in Iraqi Gazelles in winter season.

انتشار الطفيليات المعوية المعدية في غزال الريم في حقل الذيبابية في العراق

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الخلاصة

أجريت هذه الدراسة من اجل تشخيص الإصابات الطفيلية في الغزلان (*Gazellus subgutturosa*) المرباة في محمية الذيبابية في صحراء محافظة الأنبار غرب العراق. تضمنت الدراسة اخذ عينات من البراز لـ 50 غزالا من الغزلان في فصل الشتاء، أظهرت الدراسة ان نسبة الإصابة وصلت إلى 52%، وكانت الديدان الاسطوانية هي الأكثر شيوعا إذ سجلت في 36% من الغزلان المصابة بينما سجلت الاوالي في 12% والديدان الشريطية في 4% من الغزلان المصابة. تم تشخيص بيوض مختلفة لأنواع من الطفيليات كالاتي: جنس نيماتودايرس في 8 غزلان والاييريا في 6 غزلان والجابيرشيا في 6 غزلان والترايكوسترونجلوس في 3 غزلان والتاينيديا في 2 غزال والسترونجيلوس في 2 غزال. ان نسبة الاصابة بالطفيليات المعدية والمعوية بالغزلان في هذا الحقل تبدو عالية بسبب اعتماد المربي على تغذية غير منتظمة للحيوانات على النباتات المحلية مثل الحنظل كطارد للديدان. يستنتج من هذه الدراسة ان الطفيليات المعوية المنتشرة في الغزلان في العراق في فصل الشتاء.

Introduction

It has been reported that parasitic diseases especially helminthes is one of the most important diseases that infect most of zoo animals like Gazelles and Deer which leads to death of some animals rather than its affect on the reproductive performance and production. It is obvious that parasites effected directly on the health situation (1). It is confirmed that there is contrast relationship between body weight and severity of infection (2). The parasites that infected stomach and Intestine are the most important agents that effected Gazelles (3). In view of the fact that parasitic infestation in Gazelles not studied enough especially that Gazelles not breaded widely in Iraq. The present investigation was conducted to distinguish prevalence rates of eggs of gastro intestinal parasite in Gazelles in Iraq.

Material and Methods

50 Healthy apparent Gazelles (*Gazellussubgutturosa*) cultivated or grazing in Al-Theabeya farm in Al-Anbar governorate/ west of Iraq were taken randomly.

- Fecal samples were collected from each of 50 animals directly after defecation in a clean plastic bags prepared for this purpose.
- Flotation test was performed for each one of 50 fecal samples(4).
- Precipitation test was performed for each one of 50 fecal samples(4).
- Describing of parasitic eggs that isolated in this study depending on morphology of eggs under microscope (4, 5, 6).

Results

Morbidity of gastro intestinal parasites was high in this study that reached to 52% of studied gazelles. (26 infected gazelles out of 50 gazelles) Table (1). Nematodes was the highest incidence of infection in 18 of gazelles 36% of studied gazelles (69.23% of infected gazelles). The following types of eggs were reported Nematodirus eggs in 8 gazelles (16%), Chabertia eggs in 3 gazelles (6%), Trichostrongylus eggs in 3 gazelles (6%), Haemonchus eggs in 2 gazelles (4%) and Stronglyloides eggs in 2 gazelles (4%). The protozoal eggs were reported in 6 gazelles (12%). *Eimeriaspp.* eggs were the predominant eggs that reported. While cestode eggs were reported in 2 gazelles (4%).

Table (1)

Parasites	No. of infected animal	% of infestation of total animals in the trial	% of infestation type of total infested animal
<i>Nematodirus spp.</i>	8	16	30.75
<i>Eimeria spp.</i>	6	12	23.06
<i>Chabertia spp.</i>	3	6	11.56
<i>Trichostrongylus spp.</i>	3	6	11.56
<i>Stronglyloides spp.</i>	2	4	7.69
<i>Haemonchus spp.</i>	2	4	7.69
<i>Taeniidae spp.</i>	2	4	7.69
Total	26	52%	100%



Fig. (1) *Nematodirus* spp

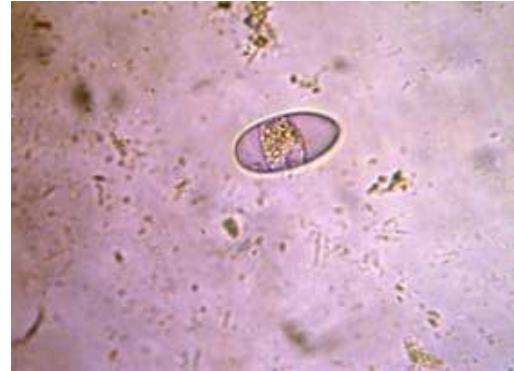


Fig. (2) *Eimeria* spp.

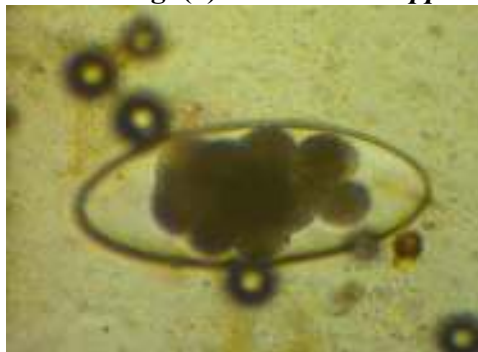


Fig. (3) *Chabertia* spp.



Fig. (4) *Trichostrongylus* spp.



Fig. (5) *Haemonchus* spp.

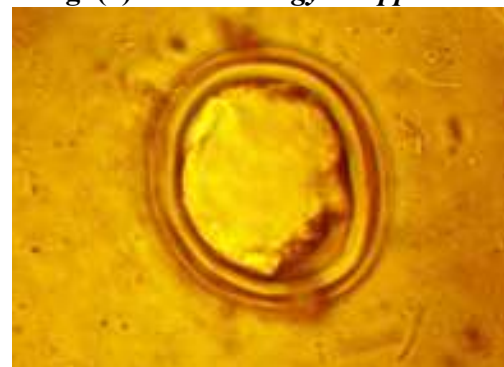


Fig. (6) *Taeniidae* spp.



Fig. (7) *Strongyloides* spp.

Discussion

Several species of gastro intestinal parasites have been reported from gazelles at Al-Theabeya farm with a high morbidity rate; 52%. The reason behind this could be that the owner doesn't used an effective program for controlling parasitic infestation rather than depending of irregular feeding of the animals on indigenous plants (*Citrulluscolocynthis*). It is also reported that using indigenous plants irregularly is ineffective as anthelmintic against gastro intestinal nematodes (7, 8). In spite of the fact that this investigation has done in a desert which has a limitation controлон growing parasites (9), winter season is also have an effect on the level of infestation (9, 10). Table (1) showing that nematodes is the predominant gastro- intestinal parasites that reported in this investigation which is the common parasites in animals especially gazelles (5, 11, 12). Eggs of Nematodes; Nematodirus, Chabertia, Trichostrongylus, Haemonchus and Stronglyloides have been reported in this study which are forming the most important parasites infect the gazelles as well as cattle, sheep and goat (2, 8). Parasites that infect cattle, sheep and goat have ability to infect gazelles (11, 13, 14, 15, 16, 17). Protozoa (*Eimeria spp.*) have been reported in 23.06% of infected animals in this investigation which is agreed with the importance of this parasites as causative agents in gazelles (17, 18). The reason behind this; that this investigation has been done in winter and increasing of humidity which is the most important factor of growing and multiplication of protozoa (10, 19, 20). Cestodal eggs (*Taeniidae spp.*) has been reported in this investigation in two gazelles 7.69% that their feces were soft, which agreed with the fact that animals infected with cestodes suffering from diarrhea and delay of growth (3, 20). Any egg of trematods did not identified in this investigation due to the fact that those animals were tested cultivated in dissert that don't represent the quite suitable media for trematodes infestation (2, 3, 21). Regarding the fact of lack of studies on gazelles in Iraq especially gastro-intestinal parasites (21); It is could be the first time to report infestation of *Stronglyloides spp.*, *Haemonchus spp.* And *Trichostrongylusspp.* in gazelles in Iraq. We conclude that gastro-intestinal parasites are prevalent among gazelles in Iraq. Also we conclude that nematodes are the predominant parasites especially in the farms that depending on indigenous plants without using ant parasitic drags as a part of controlling programs.

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