Prevalence of Gastrointestinal parasites in sheep in Sulamani province

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Abstract

550 fecal samples were collected from sheep with different age and sex, around Sulamani province from, Rania, Arbat, Qaradach, Said sadeq and Wana, during the period from September 2009 to June 2010. Direct flotation and microscopic fetal examination was the criteria of diagnosis. The prevalence of GIT parasite was 34.36% (189/550). 5% were showed multiple infestation. The most common type of infestation was Nematodirus spp. Were to alesser extent type was Trichuris ovis. The parasitic infestation was observed includes; Nematodirus, Strongylus, Marshalagia, Trichuris and Coccidia with a percentage of 29.8%, 19.8%, 9.9%, 6% and 21.8% respectively. It was concluded from this study that parasitic infestation of GIT tract in sheep in Sulamani province is high. However, farther studies was required.

نسبة الإصابة بطفيليات الجهاز الهضمي في الأغنام في محافظة السليمانية

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الخلاصة

تم جمع 550 عينة براز من أغنام مختلفة الأعمار والجنس، من مناطق مختلفة من محافظة السليمانية شملت مناطق رانية، عربت، قرداش، سيد صادق ووانا للفترة من أيلول 2009 إلى حزيران 2010. استخدمت طريقة التطويف المباشر والفحص المجهري للعينات كوسيلة للتشخيص. لوحظ ان نسبة الإصابة بالطفيليات الداخلية للأمعاء والمعدة 34.36% (189\550). 5% فقط كانت إصابة متعددة كانت أكثر أنواع الإصابة بالطفيليات شيوعاً هي Nematodirus spp واقل حدوثا هي Trichuris ovis. ان الطفيليات التي تم ملاحظتها تشمل Nematodirus, Strongylus, Marshalagia, Trichuris و Coccidia وبنسبة 29.8%، 19.8%، 9.9%، 6% و21.8% على التوالي. وقد استنتج من الدراسة ان نسبة الإصابة بطفيليات الأمعاء والمعدة عالية في محافظة السليمانية مما يستدعي المزيد من الدراسة حول الموضوع.

Introduction

Parasites in sheep is a substantial problem playing farmers a cross the nation. As the gastrointestinal parasite infection is the most important limiting factor of sheep productivity, parasitism has a highly detrimental effect on the sheep industry(1). Helminthiasis, especially parasitic gastro-enteritis, constitutes to pose a serious health threat and a limitation to the productivity of small ruminants due to associated morbidity, mortality, cost of treatment and control measures (2).parasitic gastroenteritis has been noted as major constraint to ruminants productivity in term of pathology and economic importance (3). Nematodes in small ruminants results in low productivity due to stunted growth, poor weight gain and poor feed utilization (4). The GIT parasites are one of the challenges in the breeding that lead to a large level of economic losses during the randomly annual and semiannual of antithelmentic drugs, although some of them are zoonotic and makes challenges in our Kurdistan region. There fore the survey of GIT

parasite have a great attention to know the types of these parasite which are most common.

Materials and Methods

550 fecal samples were collected from sheep with different age and sex, around Sulamani province, from; Rania, Arbat, Qaradach, Said sadeq and Wana, during the period from September 2009 to June 2010. Direct microscopic examination, centrifugation flotation technique and sedimentation technique (5) were used to investigate fecal samples. Identification of the eggs or cysts mode on the basis of morphology and size of eggs. Saturated solution of NaCl with specific gravity of 1.35(6).

Results and Discussion

Out of 550 fecal samples of sheep examined, 189 samples were detected infected with gastrointestinal parasite with a prevalence of 34.3%. Fecal samples showed multiple infection constitutes 5%. The present study showed that gastrointestinal parasite in fections are high and great attention should be taken in consideration cases of single and multiple infection with GIT parasite were observed most of the samples were found with single infection than multiple infection. This results was lowered than reported by (8) and (7) in Al- Mousl. Although many workers have been observed mixed infection more than single infection (7, 8, 9). Therefore the results disagreed with that reported by other researchers (7, 8, 9, 10). The GIT parasite observed includes; Strongylus, Papillosus, Trichuris ovis, Nematodirus spathiger, Coccidia and Marshalagia Marshalli. Similar observations have been reported in Al-Mousl province (7, 8) and in Pakistan (9, 10). Also the various species of endoparasites during present investigation have been reportedly by various researchers in different parts of the world (2, 4, 10). The variations prevalence in different parts of the worlds might be due to several factors such as grazing methods, management, age of animals and antihelmintic use. The results of this study showed that the most common type of GIT tract egg parasite is Nematodiru and to lesser extent is Trichuris with a prevalence of 29.8% and 6% respectively (Fig. 1). Similar observations have been made by several workers (7, 8, 9, 10). It was concluded from this study that the prevalence of GIT parasite infection is high in Sulamani province, However, further studies were required.

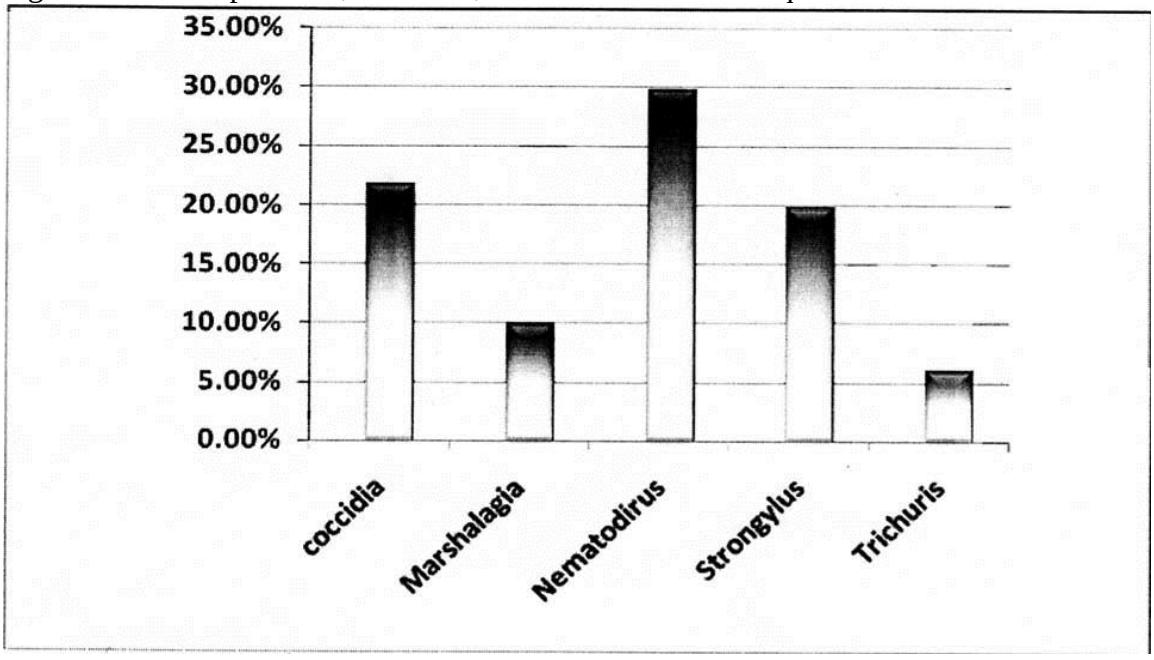

Fig. (1) Percentage rate of the positive results and type of the GIT parasite

References

1. Jones, R. (2001). Sheep parasites and diseases. http:// www/ kt. iger. bbsrc.ac. UK./ FACT %20 sheet %20 PDF %20 files/ kt36. pdf. P. 2.
2. Nwosu, C. O.; Madu, P. P. & Richards, W. S. (2007). Prevalence and seasonal changes in the population of gastrointestinal Nematodes of small ruminants in the semi- aird zone of North- Eastern Nigeria. Vet. Parasitol., 144: 118- 124.
3. Biu, A. A. & Eteng, F. O. (2001). Some parasite causing diarrhea amongst kid goats in Maiduguri, Nigeria. Proc. 6th Annua. Confer. Anim. Sci. Assoc. Nigeria. September 17th – 19th, Univ. Maiduguri Conv. Square, PP. 232- 233.
4. Pedreira, J.; Silva, A. P.; Andrade, R. S.; Suarez, J. L.; Arias, M.; Lomba, C.; Diaz, C.; Lopez, C.; Banos, P. D. & Morrondo, P. (2006). Prevalences of gastrointestinal parasites in sheep and parasites control practices in North- West Spain. Prev. Vet. Med., 75: 56- 62.
5. Urquhart, G. M.; Amour, J.; Duncon, J. L.; Dunn, A. M. & Jennings, F. W. (1987). Veterinary parasitology. Longman group UK. Ltd., England, PP. 19 and 276- 277.
6. Bowman, D. (2009). Georgis parasitology for veterinarian. 9th ed., Saunders, Elsevier, P. 295.
7. Sulaiman, E. G.; Talib, Q.; Daham, E. & Arsalan, S. H. (2005). Study of some eggs and oocysts of internal parasites in sheep in Mosul. Iraqi J. Vet. Sci., 19 (1): 21- 32.
8. Al-Bayati, O. A. S. & Arsalan, S. H. (2009). Clinical and hematological study in sheep infected with gastrointestinal parasites in Mosul. Iraqi J. Vet. Sci., Supplement 23 (1): 93- 100.
9. Gadahi, J. A.; Arshed, M. J.; Ali, Q.; Javaid, S. B. & Shah, S. I. (2009). Prevalence gastrointestinal parasites of sheep and goat in and around Rawalpindi and Islamabad, Pakistan. Vet. World., 2 (2): 51- 53.
10. Lashari, M. H. & Tasawar, Z. (2011). Prevalence of some gastrointestinal parasites in sheep in Southern Punjab, Pakistan. Pakistan Vet. J.; 31 (2): 1- 4.