

UNIVERSITÀ DI PISA

PREVALENCE AND RISK FACTORS OF GASTROINTESTINAL PARASITE INFECTIONS IN SHOW JUMPING HORSES IN THE DISTRICT OF PISA, ITALY.

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INTRODUCTION

Gastrointestinal parasites are one of the major threats to equid health and welfare worldwide. Moreover, anthelmintic resistance is frequently observed in horse nematodes. This study was aimed to evaluate the prevalence and risk factors of gastrointestinal parasites in 110 show jumping horses from the district of Pisa.



RESULTS

Identified parasites

Gastrointestinal strongyles (49.00%), *Parascaris* spp. (7.22%), *Giardia duodenalis* (1.80%), *Cryptosporidium* spp. (1.80%)

Identified intestinal strongyle genera: *Cylicocyclus* spp. 80%, *Cylicostephanus* spp. + *Gyalocephalus* spp. 20%.

At statistical analysis, nematode infections were found significantly prevalent ($p < 0.05$) in 1-3 years old foals. Moreover, cyathostomins were found prevalent ($p < 0.05$) in horses maintained outdoor.

FECRT RESULTS

Parasites	Active principle	N. treated animals	N. animals found positive after the treatment	Percentages of Fecal Egg Count Reduction
<i>Parascaris</i> spp.	Ivermectin	3	1	87.5%
<i>Parascaris</i> spp.	Pyrantel pamoate	4	2	0%-50%
Gastrointestinal strongyles	Ivermectin	34	11	-300%-63%
Gastrointestinal strongyles	Pyrantel pamoate	2	2	33-50%
Total		43	16	

MATERIALS AND METHODS

Horse housing	Number of animals
Paddock+ horse stall	50
Horse stall	8
Paddock	52
Total	110

Individual fecal samples were examined by quali-quantitative parasitological techniques (Flotation test, McMaster technique, Sedimentation) and a commercial rapid immunoassay for the detection of *Giardia duodenalis* and *Cryptosporidium* spp. faecal antigens. Moreover, fecal cultures and the Baermann test were performed to obtain the L3 of gastrointestinal strongyles for genera identification. Data were statistically analysed ($p < 0.05$) to assess prevalence variability according to gender and age (< or > 1 year).

Nematode-positive animals were treated with different anthelmintic protocols and examined after the treatment by using the Fecal Egg Count Reduction Test (FECRT).

CONCLUSIONS

Results obtained underline the necessity of effective measures for the control of nematode infections in show jumping horse farms. Moreover, the lack of proper drug efficacy observed in some treated horses may suggest nematode resistance.

