

Dept. of Clinical Medicine Surgery
Fac. of Agriculture Faisalabad. University, Pakistan
Head of Dept. Prof. Dr. A. Maqbool.

HAEMONCHOSIS IN CAMELS AND ITS TREATMENT WITH IVERMECTIN

(With One Table)

By

A. MAQBOOL; M. ABDEL RAHIM; M. IFTIKHAR

M.N. KHAN and A.A. BUTT.

(Received at 17/5/1994)

الاصابه بديدان الهمونكس في الجمال وعلاجها بالايفرمكتين

أ. مقبول ، م. عبد الرحيم ، م. افتخار
م. ن. خان ، أ. أ. بوت

فحصت عينات براز من عدد (٤١٠) جمل في وحول منطقة لاهور وفيصل آباد بالباكستان وتأكدت الاصابة بديدان الهمونكس في عدد (٧٢) جملا من بينها عشرون حيوانا كانت اصابتهم شديده . عولجت الحيوانات المصابة بحقن عقار الايفرمكتين بجرعة مقدارها ٢ ر مجم / كجم وزن حي الجسم تحت الجلد . كان العلاج ايجابيا في ٩٥ % من الحيوانات المصابة والذي تأكد عن طريق تقدير عدد بويضات الدوده في البراز .

SUMMARY

A total of 410 camels in and around Lahore and Faisalabad were examined for the presence of *Haemonchus longistipes* infection. By faecal examination haemonchosis was confirmed in 72 animals, of which 20 showed heavy infection. These animals were treated with Ivermectin at a dose rate of 0.2 mg per kg. body weight subcutaneously. The results showed that Ivermectin caused 95 per cent reduction in the number of ova discharged after treatment.

Keywords: Haemonchosis, camel, treatment.

INTRODUCTION

The camel (*Camelus dromedarius*) is an economically important multipurpose animal in arid and semiarid areas of the world. The existing population of camel in Pakistan is more than one million (Anonymous, 1992) and is increasing at the rate of 1.62 per cent per year (Qureshi, 1986).

Camel does suffer from a number of ecto and endo parasites especially during rainy season when grass is the main feed. Among endoparasites, *Haemonchus longistipes* adversely affect the nutritional status of the animals. The affected animals thus suffer from anemia, oedema, poor growth and production and even death (Arzoun *et al.*, 1989). Pica in camel is often associated with *Haemonchus longistipes* (Sharma and Satija, 1974).

Keeping in view the importance of this disease, the present project is designed to study the incidence of haemonchosis in camel and also to study the chemotherapeutic effect of Ivermectin against haemonchosis in camels.

MATERIAL AND METHODS

Study was conducted in and around Lahore and Faisalabad. During 3 months study period (August-October, 1993), a total of 410 camels of various ages were examined for the presence of haemonchosis. Of these 164 camels were found positive for various endoparasites. Out of these 72 were found positive for *Haemonchus longistipes*. Of these, 20 animals showed heavy infection and were selected for anthelmintic trials. Identification of eggs was made according to key of Poynter (Soulsby, 1982).

HAEMONCHOSIS, CAMELS & IVERMECTIN

Affected animals were given Ivermectin 1.0% w/v solution (Ivomec injection) at the rate of 0.2 mg per kg. body weight subcutaneously. Animals were fed locally available roughage ad libitum supplement with barley. Water was also freely available.

Coprological examinations by floatation technique (Soulsby, 1982) were done on day zero, 3rd, 7th and 18th after treatment. Eggs were counted by using modified Mc. Master egg counting technique (Coles, 1974).

Effect of drug on general body condition was also recorded. Toxic effects of the drug if any were also recorded.

RESULTS

Incidence: A total of 410 camels were examined for the presence of *Haemonchus longistipes*. Of these 164 were found positive for various endoparasitic infection. Out of total animals examined, 72 were positive for haemonchosis. Infection rate is being 17.5 per cent.

Out of these 72 animals 20 animals showed heavy infection and were given Ivermectin at the rate of 0.2 mg/kg. body weight subcutaneously. The efficacy was calculated on the basis of reduction in faecal egg counts. The results are given in Table 1.

Table 1: Efficacy of Ivermectin against haemonchosis in camel.

Name of the Drug and dose rate.	Efficacy in percentage on different days		
	3rd day	7th day	18th day
Ivermectin 0.2 mg/kg. body weight	36.9	79.6	95

After treatment the efficacy increased with the passage of time and on the 18th day it was 95 per cent. No adverse reactions attributable to treatment were observed in any animal up to four days after treatment. In one trial a reaction was seen at the site of injection in some treated animals. This reaction (Plaque like thickenings or swelling) disappeared spontaneously within three or four days.

The general body condition of all the treated animals improved gradually as animals became free of parasitic burden.

DISCUSSION

A total of 410 camels were examined for the presence of endoparasitic infection especially *Haemonchus longistipes*. Of these 164 animals were found positive for various gastro-intestinal nematodes. Out of total animals examined 17.5 per cent were found positive for haemonchosis. Similar results were recorded by other workers. Lodha et al. (1977) reported that *Haemonchus longistipes* was the most common pathogenic parasite in camels. Arzoun et al. (1983) and Kayum et al. (1991) also recorded similar results.

In the present study, faecal egg count was the only criterion used to assess the efficacy of Ivermectin. Ivermectin was found to be 95 per cent effective against haemonchosis. The results thus obtained are in agreement with the findings of earlier workers. In trials on camel naturally infected with haemonchosis, El-Bihari and Kawasmeh (1980), Selim and Rahman (1972) and Robin et al. (1989) found that Ivermectin was respectively 89, 92 and 98 per cent effective. In the present study reaction (Plaques like swelling) was seen at the site of injection in some treated animals. This reaction disappeared spontaneously within three or four days. Similar reaction was also observed by Robin et al. (1989).

Based on these results, it is recommended that camels be treated at least twice a year with Ivermectin, once during the dry season and once at the beginning of the winter.

REFERENCES

- Anonymous, (1992): Pakistan Economic Survey, Govt. of Pakistan, Finance Division, Econ. Advisers Wing, Islamabad: 67.
- Arzoun, I.H., Hussein, M.S. and Hussein, M.F. (1983): Journal of Comparative Pathology 94: 619.
- Arzoun, I.H.; Hussein, H.S. & Hussein, M.F. (1989): Vet. Parasitology. 14: 43.
- Coles, H.E. (1967): Vet. Clinical Pathology 2nd Ed. W.B. Saunders'Co., Philadelphia.
- El-Bihari, S. and Kawasmeh, Z.A. (1980): Proceeding of the Saudi Biological Society 4: 297.
- Kayum, A.M. Afzal and R. Salman (1991): Gastro intestinal parasites in racing camels. Prevalence and evaluation of different method of faecal examination. Proc. Ist Int. Camel Conf. Abdu Dhabi pp. 85-87.

HAEMONCHOSIS, CAMELS & IVERMECTIN

- Lodha, K.R. Raisinghani, P.M. & Karwasra, R.S. (1977): Indian Journal of Animal Sciences 47: 677.
- Qureshi, M.H. (1986): Population of arabian camels in Pakistan. A review presented at Vet. Seminar at Kuwait pp: 17.
- Robin, B.; K. Konig, and M.D. Antsey. (1989): Efficacy of Ivermectin against intestinal parasites of dromedary. Vet. Bull. 60(1): 312.
- Selim, M.K. and Rahman, M.S. (1972): Egyptian Journal of Vet. Sci. 9: 75.
- Sharma, S.S. and Satija, K.C. (1974): Indian Vet. J. 51-231.
- Soulsby, E.J.I. (1982): Helminth, Arthropodes and Protozoa of Domestic Animals, 7th Ed. Bailliere Tindall London 766.

REFERENCES