PREVALENCE AND TREATMENT OF GOAT WARBLES IN FORT MUNRO AND RAKNI, PAKISTAN

M. Mazhar Ayaz
Rahman Veterinary Clinic & Laboratory, Block No. 12, Rahman Manzil, Dera Ghazi Khan, PAKISTAN

ABSTRACT

Occurrence of goat warbles (przhevalskiana silenus Brauer) was carried out on eight flocks (n = 1000) in four villages at Fort Munro and six flocks (n = 800) in three villages at Rakni, Dera Ghazi Khan. Study was conducted on animals during 3rd and 4th week of December, 1996. The nodules of goat warble larvae were palpated on the back of infected animals through hand palpation method. The occurrence of goat warbles at Fort Munro and Rakni was 18 and 35 %, respectively. The degree of infestation of goat warbles in animals at Fort Munro and Rakni ranged upto 40 and 50 %, respectively. There were 70 goats at Khar and 120 goats at Rakni with the infestation of number of larvae between 10 to 40. The object of this study was to control goat warbles przhevalskiana silenus Brauer at 1.3 stage in the body of animal with the use of ivermectin. The ivermectin at dose rate of 200 μg/kg was 100 % effective against L_2 and L_3 stages of goat warbles.

INTRODUCTION

Warble fly is a menace spreading in Greece, Italy, Turkey, Iran and other European Countries. It lays its eggs during April to May on the hair of animals and stay for 10 to 12 days having rudimentary mouth parts. It annoys the animal by its frequent attacks. Larvae penetrates through the hair follicles into the body and passes it ecdyses from L_1 to L_2 inside the body and inhabits underneath the skin in the months of October and November. The most pathogenic stage is L_3 that perforates the skin and starts it respiration through posterior spiracles that caused a tremendous loss of 192 million $ per annum and 35 million pounds in 1982 as estimated in USA and UK, respectively (Blood and Rodostits, 1989). This perforation causes major economic loss that lowers the milk production upto 30 % (Solusby, 1982) and weight loss from 0.6 to 6.5 Kg caused by 2 to 36 No. of larvae in young goats (Liakos, 1986). Pakistan is earning a major share of 60.627 millions $ of export money from lathers and skins (Anonymous, 1996). This pest lowers the value of skin up to 70 % in infected animals that is major constraint over economy of the developing countries like Pakistan. The purpose of this study is to control this menace with a unique product like ivermectin (Derived from *Streptomyces avermitis*) that can kill the pest at dose rate of 200 μg/kg live weight, (Badiola *et al.*, 1982). In this area the incidence of warble fly in goats is generally believed to be high. This study presented the prevalence of goat warble (przhevalskiana silenus Brauer) in Rohila Breed of common goats famous for its hard life, long hair and short height mostly rared in areas of Fort Munro and Rakni. Efficacy of ivermectin against goat warble in endemic areas of Fort Munro (North west Punjab) and Rakni (East Balochistan) was also investigated.

MATERIALS AND METHODS

This study was conducted during the 3rd and 4th week of December 1996. The area selected lies latitude 28-30° south and longitude 69-70° East. Total Eight flocks (n=1000) of Rohila breed from four villages at Fort Munro and six flocks (n=800) from three village at Rakni were marked for this study. Larvae were investigated through palpation of skin by hands and number of warbles were recorded. Number of larvae was used to assess the degree of infestation. Infested animals were given 1 % ivermectin (MSD, Netherlands) at dose rate of 200 μg/kg live weight. The treated animals were re-examined for the presence or de-gradation of the nodules after 7 days. All the data was analyzed statistically through percentage and average method.

RESULTS AND DISCUSSION

Area and village wise prevalence of goat warbles at Fort Munro and Rakni is presented in Table 1, respectively. The warbles (nodules) at their maximum were at Khar area that was upto 38 in number and at Rakni upto 40 in number on the back of goats. Skin palpation by hands revealed that most of the animals

Table 1: Prevalence of goat warbles at fort Munro area

Village	No. of Goats			No. of larvae L_2 & L_3 on goats		
	n	Infested	%	More than 10 < 40	More than 40 < 60	Equal to 60 and above
Trimmu	400	40	10	30	10	-
Anari	200	30	15	30	-	-
Khar	200	80	40	70	18	-
Buzkashi	200	30	15	10	10	-
Total	1000	180	*18%	140	38	-

Table 2: Prevalence of goat warbles at Fort Rakni area

Village	No. of Goats			No. of larvae L_2 & L_3 on goats		
	n	Infested	%	More than 10 < 40	More than 40 < 60	Equal to 60 and above
Rakni	300	150	50	120	30	-
Bewata	300	80	27	80	-	-
Chapar	200	50	25	40	10	-
Total	800	280	*35%	240	40	-

*Total percentage of all flocks

were having number of larvae less than 10 per animal. The 50 % of the animals in a flock were having nodules at Rakni area while infestation was 40 % at Khar (Table 1). There were 70 goats at Khar and 120 goats at Rakni with number of larvae between 10 to 40. The high percentage (35 %) of flocks of Rakni Area with goat warble is emphasized for the treatment of warble fly and a comprehensive control programme should be initiated to stop it from further proliferation, while percentage of warbles in Fort Munro was 18 % collectively. In some flocks of Fort Munro infestation was up to 40 % while highest percentage was found in Rakni upto 50 %. The efficacy of ivermectin against warbles was found upto 100 %. Ivermectin degenerated at all the nodules after 7 days and number of larvae approaching upto L_3 were also killed that causes perforation in animals. Bleating after injection was observed in few animals while other side effects like necrosis by ivermectin was not observed. Results of this study regarding infestation and the treatment of goat warbles were similar with the findings observed earlier (Hussain *et al.*, 1981; Bediola *et al.*, 1982; Tassi *et al.*, 1987; Khan *et al.*, 1991; Khan *et al.*, 1994). Warble fly larvae bores the skin of goats that lowers down its price value, by the control of this pest the socio economic position of the people and lather products value will be uplifted. Warble fly control scheme (WFCS) failed in eradication of larvae and fly both in cattle and goats population the reason might be long adjacent areas of North Western Punjab and eastern Balochistan. A simultaneous programme from Punjab and Balochistan in adjoining areas specially in Suleman Range against warble fly would be helpful in eradication and control of this pest. Study revealed a high occurrence of warble fly disease. Its control through ivermectin was ideal.

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