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SHORT COMMUNICATION

Increasing incidence of hypodermosis in Kangra valley of Himachal Pradesh

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Abstract

Examination of cattle during December 2001 and January 2003 from Changar area of Kangra Valley, Himachal Pradesh, showed presence of warbles from neck to flank region. Mature larvae collected from nodules were identified as *Hypoderma lineatum*. Regular visits during clinical camps to this area and discussion with farmers suggest that there is an increasing trend of hypodermosis in cattle which is lowering their milk production and weight gain.

Keywords: Himachal Pradesh, Warble, *Hypoderma lineatum*, Larva, Cattle.

Introduction

Hide depreciation is the most important manifestation of *Hypoderma* infection. It also results in reduced weight gain and milk yield. They are a common parasite of cattle in northern hemisphere (Soulsby, 1982). The fly occurs in summer with a short life span. It lays eggs on hairs of legs of the host. Larva wanders in subcutaneous tissue and reaches the back of animal via submucosal connective tissue of oesophageal wall or through spinal canal and epidural fat (Soulsby, 1982). In the present study, 121 cattle of Changar area of Kangra Valley were examined for nodules of hypodermosis.

Materials and Methods

In the December month of 2001, 20 animals were examined at two different places of Changar area and history of production in lactating animals as well body weight were recorded. Similarly, in January month of 2003, 101 animals were examined at 8 different places of Changar area. Nodule examination on animals was made from neck to flank region. In positive *Hypoderma* infection cases, the number of nodules were counted as well as mature larvae were collected and identified.

Results and Discussion

In the year 2001, two animals showed nodules of *Hypoderma* extending from neck region to flank region (Table 1). The mature larvae were collected and identified as *Hypoderma lineatum* (Fig. 1). However, in January, 2003, examination of 101 cattle at 8 different locations in the same area revealed presence of four cases of *Hypoderma* infection. The larva was identified as *H. lineatum*. History recorded from farmers revealed that animal suffering with this infection had marked decline in milk production (50-75%) as well as in weight gain. Andrews (1978) estimated

Table 1. Results of *Hypoderma* examination in cattle

Month	Year	No. of cattle examined	Positive percentage	Average No. of nodules/ larvae collected
December	2001	4	25.00	49
December	2001	16	6.25	32
		20	10.00	
January	2003	19	-	-
January	2003	07	-	-
January	2003	06	-	-
January	2003	21	-	-
January	2003	12	-	-
January	2003	17	-	-
January	2003	05	-	-
January	2003	14	28.50	39.5
		101	3.90	

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Fig. 1. Mature larvae of *Hypoderma lineatum*

loss of milk production due to hypodermosis at 50% in Canada and at 10-15% in Europe. Sharma *et al*. (1999) recorded first case of hypodermosis from Deogram. Sen and Fletcher (1962) also mentioned presence of *H. lineatum* and *H. bovis* from cattle of Punjab and North-West. Recently, Islam *et al*. (2003) also recorded *Hypoderma diana* in hog deers from North-East Himalayan region. Regular visits during clinical camps to this area and discussion with farmers suggest that there is an increasing trend of *Hypoderma* incidence in cattle. The present study suggests that *Hypoderma* fly may be prevalent from March to July, as warble stage is seen from December to February. Suitable methods of control should be adopted to check this infection as it has also zoonotic potential (Sen and Fletcher, 1962). The fly may lay eggs on horse and man if cattle is not available and may result in aberrant migration of larvae with serious results, although larva do not mature in these hosts (Soulsby, 1982). Since equines form the back bone of transportation in Himachal Pradesh to carry loads and also share common pasture with cattle, they are equally prone to this infection, if control measures are not adopted at the earliest.

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