

SHORT COMMUNICATION

EPIDEMIOLOGY OF BOVINE *TOXOCARA VITULORUM* IN FAECAL AND MILK SAMPLES IN AN ENDEMIC DISTRICT OF KENYA

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Studies of *Toxocara vitulorum* in domestic buffalo have been carried out fairly extensively in Asia but research into *Toxocara spp.* in cattle has been limited. Reports have been made in Australia⁽¹⁾ Nigeria⁽²⁾, Zimbabwe⁽³⁾, Kenya⁽⁴⁾ and Tanzania⁽⁵⁾. It is claimed that *T. vitulorum* infections are responsible for serious economic losses in Nigeria⁽⁶⁾ while a study in Tanzania⁽⁵⁾ revealed mortalities ranging from 21 – 50% in suckling calves.

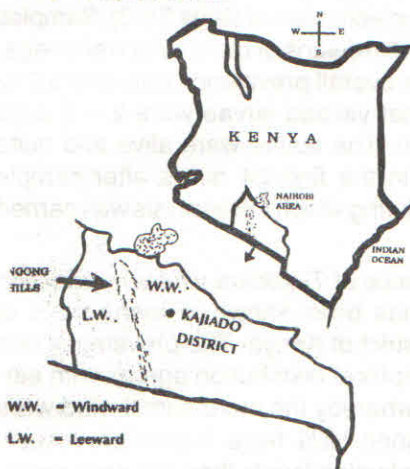
Some authorities maintain that the transmammary route is the most important for transmission with little evidence of uterine transmission⁽⁷⁾. It has been shown that transmission does not occur among calves reared away from their mothers⁽¹⁾. Other authors^(8,9,10) have indicated that uterine infections occur and hence the need for further study on the route(s) of transmission.

Faecal materials were collected from calves under 3 months of age in various herds spread through Kajiado District on the wind-ward and lee-ward sides of Ngong Hills (Figure 1). The wind-ward side is the wettest and most humid and has an annual rainfall of 510 – 760 mm while the other areas are drier with 255 – 510 mm. In all areas, young calves were tethered near the homestead during the day when mature cattle were driven out into open bushes to graze. The calves suckled their dams and never grazed. Faecal samples were analysed for *Toxocara vitulorum* by the McMaster method.

About 500 ml of milk was collected from udders of cows within 3 weeks of calving and analysed using a method modified from Roberts *et al.*⁽¹¹⁾. This modification allowed for larger volumes of milk to be processed while still fresh and at a faster rate. Thus, the sedimentation stage in phosphate buffered saline of Roberts

et al.⁽¹¹⁾ was bypassed and the aperture size of the filters increased. Hence, the milk samples were directly strained through 250 μ m aperture sieve and the filtrate (material left on the filters) was washed into a clean petri-dish using distilled water which had previously been filtered through 25 μ m sieves. This material was then examined under a microscope at X 10 and X 40 objectives for the presence of larvae, a process that was facilitated by the motility of the live larvae.

Figure 1. Vitulorum: Map of Kenya showing the area of study in Kajiado District



Point prevalence rates and infection levels of *Toxocara vitulorum* in calves are presented in Table 1. *T. vitulorum* eggs were encountered in all areas surveyed and were commonest (36.6%) among herds on the wetter wind-ward side of Ngong Hills. The levels of infection followed a trend similar to that of prevalence rates so that the highest eggs per gram (E.P.G.) value was 34,000 recorded from a herd on the wind-ward side compared to an E.P.G. of 800 from a herd on the lee-ward side.