

Abstract

Introduction: Cystic Echinococcosis (CE), a chronic debilitating parasitic disease in humans caused by larval stage of dog tapeworm, *Echinococcus granulosus* has a worldwide distribution. Over time, Turkana in Kenya was the only known endemic region. This study reports status of CE in pastoral communities of Kenya.

Methods: Individuals were screened to identify presence of hydatid cysts. This exercise was done at a health facility, local homestead or school while either lying down or standing up. The study team used a portable ultrasound-imaging machine (Titan Ultrasound system, SonoSite with a 5.2 MHz transducer). Prior to examination, comprehensive information about the disease and its causative agents and ultrasound procedure was provided using pictorial diagrams that showed pictures with different stages of the disease.

Results: 14,088 individuals had full body examination. The prevalence of CE ranged from 23/2577 (0.9 %) in Samburu and 'Maasai Mara' to 188/6512 (2.9%) in Turkana North. Most of the hydatid cysts (65.5%) were found in the liver followed by 18.6% in the kidneys, 11.3% spleen, 2.7% lungs 1.7% and heart 0.2% cysts.

Conclusion: Low prevalence recorded in Samburu (0.9 %) and Maasai Mara communities is surprising compared with Turkana North (2.9 %). This is despite higher infection rates in livestock (>25%) and having more dogs per household. Tharaka and Isiolo had comparatively high numbers of human CE cases. Tharaka North is located at the periphery of Meru National park and often-wild animals' frequent homesteads. People in this area keep large numbers of domestic dogs to keep away wild animals at night, which could contribute to the reported numbers in the area. A possible reason for the numbers in Isiolo (an ethnically mixed community) could be due to cultural and behavioral practices amongst the three major communities (Borana, Samburu and Turkana)