

Sero-prevalence of Human and Bovine Brucellosis, and Molecular Detection of Brucella species in cattle in three selected pastoral districts of Borena zone, Southern Ethiopia East Africa

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Brucellosis is worldwide distributed disease with significant economic and zoonotic implication for the rural communities of developing countries. It is prevalent in Ethiopia in attributable to farmers and Pastoralist traditional life styles, feeding habits and disease patterns. Cross-sectional study was carried out in Borena zone Oromia regional state, southern Ethiopia to estimate prevalence of Bovine and human brucellosis; and molecularly detected Brucella species circulation in the area. Sero-epidemiological survey was applied on target population and a total of 503 and 161 sera samples were collected from cattle and human for serological analysis of brucellosis respectively. Structured questioner was also applied to assess associated risk factor of Brucellosis in Bovine and Human. Sera samples were

serially tested by RBPT finally confirmed by c-ELISA. In this study, B.abortus detected from blood clot of cattle using molecular assay. This study revealed that human brucellosis prevalence was higher than animals. Prevalence of human brucellosis was 25.6% in pastoral association (PA) whereas 21.3% in hospital with febrile clinical sign. It also provides evidence of high importance of brucellosis in human and animal in the study area. In conclusion, existence of brucellosis, community daily practice, and uncontrolled movement of animals and livelihood nature of pastoralist suggests the need for farther investigation of brucellosis in human and animals to design/develop future prevention and control strategy of the disease in the area.

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