Update of bovine brucellosis at livestock farms in Punjab, Pakistan

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Brucellosis is a bacterial zoonosis caused by Brucella (B.). It is transmitted either by direct contact or through ingestion of contaminated milk. Diagnosis relies mainly on serology. Eradication programs rely on test and slaughter policy. It is an endemic problem in Pakistan. A total of 828 sera (409 buffalo+419 cattle) were collected from different government livestock farms and experimental stations. Sera were screened by indirect-Enzyme Linked Immunosorbent Assay (iELISA) via ID Screen® Brucellosis Serum Indirect Multi-species (ID. Vet, France) for detection of anti-S-LPS (B. abortus, B. melitensis and B. suis). Positive sera were subjected to DNA extraction and molecular identification by real-time PCR using cyber green method. A total of 3.26% (27/828) were found positive by iELISA. Whereas by real-time PCR 9/27 were found positive for B. abortus. Our study has presented an update of brucellosis at government livestock farms. Isolation and identification of the etiology is necessary for further knowledge. Vaccination at early age could be a preventive solution. Pasteurization of milk is highly recommended. Veterinarians and public health related professionals are recommended to adopt preventive measures. Advanced molecular investigations are highly recommended to understand molecular epidemiology.

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