Tropical theileriosis, epidemiology and Molecular diagnosis in cattle in New Valley Province, Egypt

Sotohy Ahmed, Osama Abd El-Hakim, Ahmed Maher, Yasser Elnaker

Abstract:

Abstract: In this study during one year 294 blood samples, collected from cattle showing clinical signs arousing suspicion of theileriosis and apparently healthy neighboring animal (related one) for diagnosis of theileriosis using stained blood film and molecular diagnosis (Semi nested PCR). the result of blood film revealed that 91 out of 294 examined cattle (30.95%) were positive for the piroplasmic form (intra erythrocytic stage) of T. annulate infection, the highest prevalence of infection by theileriosis was (39.50 %) in Summer, and the lowest rate was (13.95 %) in Winter, and the highest prevalence of infection was 39.30 %, in age group1 (1day - 6months) and the lowest rate was 21.40%. in group 5 (> 4 Years). The Tbs-S/Tbs-A primer set was used for PCR amplification of Theileria sp. And the Ta-S/Tbs-A specific primer set was used in semi-nested PCR technique for detection of Theileria annulata. The semi-nested PCR accurately revealed (60%) positive samples The results indicated that Giemsa staining method, having 50% sensitivity, is not suitable for determination of Theileria annulata in carrier cattle, while semi-nested PCR technique can be used as a gold standard method for the mentioned aim and also can be used for screening of Theileria annulata carrier cattle in all regions. The phylogenic analysis of DNA of theileriosis revealed two sequences deposited in the GenBank database under accession numbers MK332380 and MK332382. Copyright of Alexandria Journal for Veterinary Sciences is the property of Faculty of Veterinary Medicine, Alexandria University and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use. This abstract may be abridged. No warranty is given about the accuracy of the copy. Users should refer to the original published version of the material for the full abstract.

Keywords:

Tropical theileriosis, PCR

Published In:

Alexandria Journal for Veterinary Sciences , 63(1) , 31-41