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Prevalence and subtype distribution of *Blastocystis* sp. in cattle from Pahang, Malaysia (Article)

Kamaruddin, S.K.^a, Mat Yusof, A.^b, Mohammad, M.^a

^aDepartment of Biomedical Science, Kuliyyah of Allied Health Sciences, International Islamic University Malaysia, Bandar Indera Mahkota, Kuantan, Pahang 25200, Malaysia

^bDepartment of Basic Medical Sciences for Nursing, Kuliyyah of Nursing, International Islamic University Malaysia, Bandar Indera Mahkota, Kuantan, Pahang 25200, Malaysia

Abstract

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Blastocystis sp. is a common enteric protozoan parasite found in humans and various type of animal worldwide. Recently, genotypic distribution of *Blastocystis* sp. was revealed in insects, rodents, avian and mammals, which exposed its potential of transmitting the infections to human. However, very little information on current level of *Blastocystis* sp. infection were reported in cattle from Malaysia. Herein, a total of 120 stool samples of cattles were collected. While the potential risk of infection such as age, gender, body score, diarrheic condition of the cattle were noted, the management of the farms was also recorded. All stool sample were cultured, but 80 samples were selected for PCR sequencing analysis. The cultivation and microscopic examination revealed only 25% of the cattle (30/120) were infected with *Blastocystis* sp.. But, 43.8% of the cattle (35/80) were found positive upon PCR sequencing. The study also found that age, body score condition, diarrheic condition and certain farm were associated with the infection ($p < 0.05$). Six subtypes (STs) that were discovered during the study were ST10 (21.3%;17/35), ST5 (8.8%;7/35), ST3 (7.5%;6/35), ST1 (2.5%;2/35), ST4 (2.5%;2/35) and ST14 (1.3%;1/35). Thus, moderate infections of *Blastocystis* sp. and variants in the genotypic distributions of the cattle suggest its potential for zoonotic transmission. Therefore, this findings could be helpful for further understanding the parasite, which assist studies of its pathogenicity. © 2020, Malaysian Society for Parasitology. All rights reserved.

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🔍 Mohammad, M.; Department of Biomedical Science, Kulliyah of Allied Health Sciences, International Islamic University Malaysia, Bandar Indera Mahkota, Kuantan, Pahang, Malaysia; email:mmoh@iiu.edu.my

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