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Genotype Classification of *Blastocystis hominis* Isolates from Subjects with and without Irritable Bowel Syndrome by Polymerase Chain Reaction

Amira B. Mokhtar, Sherif M. Abaza, Hanan Z. Rayan and Rasha M. Soliman Suez Canal University, Egypt

Pathogenicity due to different Blastocystis species is controversial due to its heterogeneous antigenic and genetic characters within different geographic regions. The role of B. hominis in irritable bowel syndrome was demonstrated by its frequent significant detection in IBS patients, which required more investigations in view of its pathogenic and non-pathogenic strains. The main objective of this study is to identify Blastocystis subtypes of clinical isolates obtained from 3 different groups of patients; IBS, non-IBS with and without GIT symptoms. Secondary objective is to evaluate the infectivity and pathogenicity of detected subtypes from each group in experimental rats. This study was designed as a case control study. Stool samples were collected from patients attending Suez Canal University Hospitals. Only positive samples for Blastocystis were included in the study and three groups were identified (No. = 19). Blastocystis subtypes were identified using seven pairs of primers (SB83, SB155, SB227, SB332, SB340, SB336 and SB337) to explore the relation of different subtypes with different clinical presentations of each group. Detected subtypes, from each group, were then used to evaluate the infectivity and pathogenicity in experimentally infected rats monitored by parasitological and histopathological parameters. Subtyping using 7 different sequence-tagged site primers revealed 54 isolates with single infection and 3 isolates with mixed infection. Subtype 3 (ST3) was the most common one in the present Egyptian population (56.1%) followed by ST1 (35.1%), then ST2 (3.5%), while 5.3% were mixed infection (subtypes 1 and 3). Our results showed that blastocystosis is not likely associated with specific ST even if some STs are predominant in the epidemiologic studies.

Biography

Amira Bakr Mokhtar has completed his PhD at the age of 34 years from Suez Canal University, Faculty of medicine. She is an assistant professor of Medical Parasitology, Faculty of medicine, Suez Canal University.

ami_hagag@yahoo.com

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