Occurrence of Blastocystis in water of two rivers from recreational areas in Malaysia.

ABSTRACT

This study reports the occurrence of Blastocystis in water from two rivers, Sungai Congkak and Sungai Batu, located in recreational areas in Malaysia. This protozoan was detected in samples from both rivers with an average of 33.3 and 22.1, respectively. It was detected highest at the downstream (73.8 and 33.8) followed by midstream (17.5 and 25.0) and upstream (8.8 and 7.5) stations, with additionally higher detection during holidays (with average 47.5 and 30.8) than week days (with average 19.2 and 13.3), in both rivers, respectively. There was a strong association with the daily activities of locals and visitors, who came for water recreational activities, mainly located between midstream and downstream and was observed to be higher at Sungai Congkak. The detection of Blastocystis in these rivers' water implies that this protozoan could potentially be transmitted to humans by the waterborne route. Pearson correlation analysis showed that their occurrence was significantly correlated with faecal coliforms count; inconsistent correlation with dissolved oxygen, temperature and turbidity and no correlation with pH, conductivity and rainfall for both rivers. The correlation of coliforms and Blastocystis suggests the source of the Blastocystis in the water body is likely to be faecal.

Keyword: Blastocystis; Recreational water.